International Review of Management and Marketing

ISSN: 2146-4405

available at http: www.econjournals.com

International Review of Management and Marketing, 2026, 16(6), 250-264.

The Effect of Perceived Ease of Use and Perceived Usefulness on E-WOM and Buying Intentions on Wardah Virtual Try on in Indonesia (Mediation Role of Cognitive and Emotional)

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Received: 28 March 2026 **Accepted:** 17 July 2026 **DOI:** https://doi.org/10.32479/irmm.24335

ABSTRACT

The development of digital technology has driven brands to continuously evolve and innovate, influencing consumer shopping experiences and consumption patterns. The world of digital technology continues to develop rapidly, with advances in artificial intelligence (AI), 5G networks, the internet of things (IoT), augmented reality (AR), virtual reality (VR), big data, and mixed reality (MR). This study aims to examine the influence of perceived ease of use and perceived usefulness on e-word of mouth (e-WOM) and buying intentions in Wardah virtual try-on in Indonesia with the mediating role of cognitive and emotional factors. Based on the technology acceptance model (TAM) and the technology-enabled engagement (TEE) process, this study contributes by providing empirical evidence and helping to clarify the understanding of technology acceptance and consumer behavior in interactive digital marketing, as well as providing practical benefits for companies in improving user experience in order to encourage positive e-WOM and increase consumer purchase intent. The method used in this study is a descriptive quantitative research method, using purposive sampling and non-probability sampling techniques. Data was collected using a survey method with questionnaires to gather data from respondents who were users of Wardah Virtual Try On. Data analysis was performed using the partial least squares–structural equation modeling (PLS-SEM) method.

Keywords: Buying Intentions, Cognitive, Emotional, e-WOM, Perceived Ease of Use, Perceived Usefulness
JEL Classifications: M15, M31, M37, O33

1. INTRODUCTION

The development of the digital technology landscape continues to accelerate rapidly, and the field of marketing has now entered the era of Marketing 6.0. According to Philip et al. (2025) in the book Marketing 6.0: The future is immersive, immersive marketing has become a key strategy for attracting consumer attention. Technologies such as artificial intelligence (AI), 5G networks, the Internet of Things (IoT), augmented reality (AR), virtual reality (VR), big data, and mixed reality (MR) have driven significant transformations in the marketing sector. These technologies enable companies to interact with consumers in a more personalized, interactive, and efficient manner. During the event entitled "B-Universe Presents Beritasatu Economic Outlook 2025: Strategies for Addressing National Economic Opportunities and Challenges Through Technological Innovation to Accelerate Digital Transformation," Edwin Hidayat, Director General of the Digital Ecosystem at Komdigi, stated that "technological innovation can serve as a driver of efficiency, while the development and adoption of technologies such as AI and IoT can directly accelerate transformation in productivity improvement and logistics efficiency sectors" (Edwin Hidayat, 2025).

Currently, Indonesia is implementing technological advancements to enhance its economic, social, and industrial sectors. The government encourages industrial sectors to maximize the

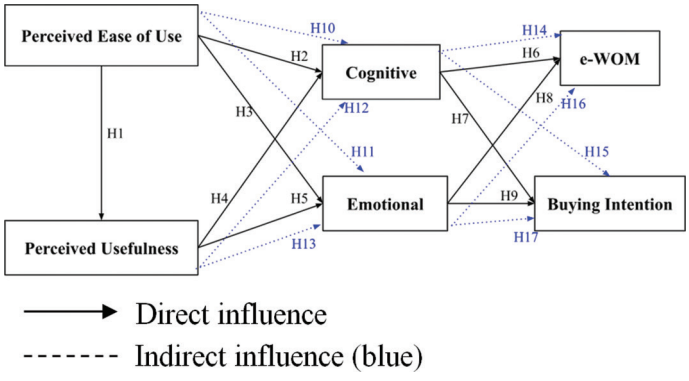
use of advanced technologies in order to strengthen global competitiveness. Indonesia is undergoing a digital transformation, as evidenced by the continuously increasing number of internet users each year. This indicates that internet access is becoming more evenly distributed across society. Internet penetration refers to the percentage of the population connected to the internet nationally.

Consumer behavior in today's digital era has undergone significant changes, as consumers now tend to search for information about products or services through the internet before making purchasing decisions. Consumers no longer evaluate products solely based on their quality, but also assess the digital experiences provided by brands through the technologies they utilize. According to Asrul (2024), technological advancements have driven major changes in consumer behavior, including the growth of online purchasing, increasing demand for personalized experiences, and heightened consumer awareness of sustainability. One of the technological innovations implemented in this context is virtual try-on (VTO), which is based on augmented reality (AR) technology.

Technologies such as augmented reality in virtual try-on applications enable consumers to virtually try products, particularly makeup items such as lipstick, cushion, foundation, and other cosmetics, through digital devices such as smartphones without having to physically purchase the products by visiting a store directly. According to Calderia (2021) on the think with Google website, changes in consumer shopping behavior and the increasing frequency of internet usage have encouraged consumers to seek digital product trial experiences, making virtual try-on technology a practical solution without requiring consumers to visit physical stores.

The development of the cosmetic and beauty industry in Indonesia continues to experience significant growth. During the Female Daily Network 2025 event, Reni Yanita, Director General of Small, Medium, and Miscellaneous Industries, stated that "the national cosmetic industry has demonstrated rapid growth, with market potential projected to reach USD 9.7 billion in 2025 and continue growing annually by 4.33% until 2030" (Reni, 2025). Based on data from Statista presented in Figure 1, revenue in Indonesia's cosmetics market in 2025 reached US$2.09 billion and is projected to continue increasing annually by 4.73% through 2030. This indicates that the Indonesian cosmetics market is expanding rapidly, driven by the growth of the middle class and increasing demand for halal beauty products.

Figure 1: Conceptual model



Virtual try on (VTO) technology remains relatively new within the understanding of Indonesian consumers, both in terms of user awareness and comprehension of virtual try-on features that may significantly influence purchasing decisions. The engagement process supported by Technology-Enabled Engagement (TEE) has been proposed as a framework for describing augmented reality (AR)-based services such as virtual try-on (VTO). Technology-enabled engagement (TEE) conceptualizes engagement as a process that enables users to understand the value added by virtual try-on technology to the shopping experience.

In Indonesia, the local brand Wardah has become one of the pioneers in implementing augmented reality technology through virtual try-on applications. Tessi Fathia as Senior Head of Digital Transformation at Wardah, stated that "Wardah continuously strives to provide the most enjoyable experience for consumers." (Ibonk, 2024) This commitment has been demonstrated through Wardah's collaboration with Perfect Corp., a provider of AI- and AR-based beauty and fashion technology solutions. Following the implementation of virtual try-on technology, Wardah reported a 134.41% increase in website traffic. This indicates that prior to the introduction of virtual try-on technology, the number of website visits for product trials was significantly lower.

In 2025, Wardah organized the event Skinverse Clinic 2025: Discover the Non-Invasive Skin Tech Clinic Experience from July 18 to August 03, 2025, at Grand Atrium, Kota Kasablanka Mall, Jakarta. During this event, Wardah successfully received a MURI record for the largest utilization of AI technology in a skincare event in Indonesia. This achievement positioned Wardah as a pioneering innovation leader in the beauty industry by integrating halal beauty, advanced technology and science, as well as dermatological expertise. In 2025, Wardah also received the title of MMA Smarties Awards 2025 Brand of the year 2025. This success was driven by a comprehensive, innovative, and adaptive marketing approach aligned with modern beauty trends, particularly halal beauty-tech.

Theoretically, according to Davis (1989), within the context of consumer behavior and the technology acceptance model (TAM), the use and acceptance of new technology are explained through two cognitive variables, namely perceived ease of use and perceived usefulness, which influence users' understanding of why individuals accept or reject a particular technology. According to Nawaz et al. (2025), by referring to the technology-enabled engagement (TEE) framework, consumer interactions with technology evolve into cognitive and emotional engagement, which ultimately lead to behavioral engagement. However, the TAM theory has not extensively incorporated how consumers' emotional and cognitive engagement contribute to the experience of using emerging technologies such as virtual try-on, particularly in the context of beauty product marketing.

In the use of technologies such as virtual try-on, perceived ease of use and perceived usefulness become two important factors

influencing how consumers evaluate digital service technologies. Perceived ease of use plays a role in shaping consumers' perceptions that virtual try-on features are easy to use, easy to understand, and do not require substantial effort in their utilization. In this context, the use of virtual try-on technology not only affects perceptions of perceived usefulness but also encourages both cognitive and emotional engagement among users. From a cognitive perspective, when users perceive the technology as highly convenient and easy to use, they tend to pay closer attention to products in greater detail and become more focused. From an emotional perspective, users experience enjoyment and pleasure throughout the process of virtually trying products.

Perceived ease of use, according to Nawaz et al., (2025), refers to the extent to which users perceive virtual try-on (VTO) service technology as easy to understand, easy to operate, and requiring minimal effort to use. According to Adawiyah et al., (2024), perceived ease of use represents a determining attitude toward AI- or AR-based technologies in e-commerce. In the context of Wardah virtual try-on, the feature can be accessed through any device equipped with internet access and a camera. Wardah's virtual try-on technology was developed to assist consumers in selecting products and assessing color compatibility without having to physically test products by visiting a physical store. The Wardah virtual try-on feature is designed using augmented reality technology to provide a more interactive and efficient experience. Many Wardah users have expressed that the virtual try-on feature is helpful and facilitates product selection.

Cognitive and emotional engagement play important roles in enhancing electronic word of mouth (e-WOM). From a cognitive perspective, users who feel assisted and satisfied by the technology are more likely to share positive experiences regarding virtual try-on technology through social media, personal recommendations, and online reviews. Cognitive and emotional engagement not only influence electronic word of mouth (e-WOM), but also serve as mediating variables between perceived ease of use and perceived usefulness.

Consumer cognitive engagement, according to Nawaz et al. (2025), refers to the level of awareness, thought, attention, and intellectual interest that emerges when using virtual try-on services. Users actively think about, seek to understand, and become curious about the use of virtual try-on technology. Among Wardah consumers, this can be observed through their thought processes and attention toward both the virtual try-on feature and Wardah products. Users who perceive Wardah's virtual try-on feature as sufficiently accurate generally demonstrate higher levels of cognitive engagement. They tend to try multiple colors, compare shades, pay attention to compatibility with their skin tone, and consider which products are the most suitable and compatible with their personal preferences. These activities encourage users to become cognitively engaged in the product selection process. However, when the feature is perceived as less accurate, the level of user attention and seriousness toward the feature tends to decline.

According to Nawaz et al., (2025), the subsequent stage of engagement consists of electronic word of mouth (e-WOM) and buying intention. In the context of using Wardah virtual try-on technology, users who feel satisfied tend to share their experiences through social media and online reviews. They often recommend specific shades and products and describe their experiences while using the Wardah virtual try-on feature. Conversely, when users are dissatisfied, they are more likely to leave negative comments, such as complaints regarding color inaccuracies in the virtual try-on results. This demonstrates that experiences with virtual try-on technology directly influence how actively users disseminate their opinions digitally through electronic word of mouth (e-WOM).

In addition to influencing electronic word of mouth, cognitive and emotional engagement also play important roles in shaping buying intention. Consumers who read or observe positive reviews regarding virtual try-on technology and perceive the technology as easy to use and beneficial may experience a direct increase in their buying intention. The mediating role of consumers' cognitive and emotional engagement further strengthens the generation of electronic word of mouth (e-WOM) and buying intention. When the results produced by Wardah virtual try-on technology appear suitable and convincing, users tend to proceed to the purchasing stage. They feel more confident in selecting particular shades, colors, and products because they perceive that they have virtually tried the products beforehand. However, when the virtual try-on results are perceived as inaccurate, consumer uncertainty increases, resulting in lower purchase intention.

2. LITERATURE REVIEW AND HYPOTHESIS

2.1. Perceived Ease of Use on Perceived Usefulness

Perceived ease of use refers to an individual's belief that a technology can be used with minimal effort. Within the technology acceptance model (TAM), Davis (1989) argued that technologies perceived as easy to operate are more likely to be viewed as useful because they enable users to perform tasks more efficiently and effectively.

Previous studies have consistently demonstrated a positive relationship between perceived ease of use and perceived usefulness. Castillo and Bigné (2021), in their study of augmented reality (AR)-based self-service technologies, found that ease of use significantly enhances users' perceptions of usefulness. Similar findings were reported by Huang (2021), who showed that technologies perceived as easy to use are also perceived as more beneficial. Wibisono and Rokhim (2019) as well as Adawiyah et al. (2024) further confirmed that perceived ease of use positively contributes to perceived usefulness across various technology adoption contexts.

H_1: Perceived ease of use has a positive and significant effect on perceived usefulness.

2.2. Perceived Ease of Use on Cognitive and Emotional Engagement

Cognitive engagement refers to the degree of users' mental involvement when interacting with a technology, including

attention, concentration, and information processing activities. According to Castillo and Bigné (2021), technologies that are simple and intuitive to use can reduce cognitive effort, allowing users to devote greater attention to exploring and evaluating available information. In the context of Wardah's virtual try-on technology, an easy-to-use interface may help users focus on assessing product shades, textures, finishing results, and compatibility with their facial features. Supporting this argument, Lopes et al. (2025) found that perceived ease of use positively influences cognitive engagement in online retail environments. Furthermore, Nawaz et al. (2025) suggested that cognitive engagement plays a crucial role in shaping psychological engagement and value creation, which subsequently leads to favorable behavioral outcomes such as purchase intention and positive recommendations.

Emotional engagement reflects the emotional connection users develop while interacting with a technology, including feelings of enjoyment, excitement, and satisfaction. Castillo and Bigné (2021) argued that seamless navigation and user-friendly AR features enhance consumers' emotional experiences. In the case of virtual try-on applications, a smooth and effortless experience can generate positive emotions, thereby strengthening users' emotional engagement with the technology.

H_2: Perceived ease of use has a positive effect on cognitive engagement
H_3: Perceived ease of use has a positive effect on emotional engagement.

2.3. Perceived Usefulness on Cognitive and Emotional Engagement

Perceived usefulness reflects the extent to which individuals believe that a technology can improve their performance or assist them in achieving desired outcomes. When users perceive a technology as beneficial, they are more likely to invest cognitive resources in exploring its features, evaluating information, and interacting with it more intensively. Nawaz et al. (2025) noted that the perceived benefits of virtual try-on technology encourage users to engage more deeply in the product evaluation process. Likewise, Zhou et al. (2021) found that perceived usefulness significantly influences technology adoption through its impact on cognitive engagement. Earlier research by Chakraborty et al. (2008) also supported the positive association between perceived usefulness and cognitive engagement.

In addition to influencing cognitive involvement, perceived usefulness can also strengthen emotional engagement. Technologies that effectively support users in accomplishing their goals often generate positive emotional responses, such as satisfaction and enthusiasm. Nawaz et al. (2025) reported that users who perceive virtual try-on technology as useful tend to experience more favorable emotions during their interactions. Similar conclusions were reached by Wang et al. (2021), who highlighted the importance of perceived usefulness in fostering positive user experiences and purchase intentions. Rahaman et al. (2022) and Liu et al. (2025) further demonstrated that perceived usefulness serves as a significant predictor of positive emotional engagement with technology. Juhri et al. (2017) define perceived usefulness as the degree to which an individual believes that using a technology improves the performance or effectiveness of their activities.

H_4: Perceived usefulness has a positive effect on cognitive engagement
H_5: Perceived usefulness has a positive effect on emotional engagement.

2.4. Cognitive and Emotional Engagement on e-WOM

Cognitive engagement encourages users to process information more thoroughly, resulting in stronger evaluations and attitudes toward a technology. Individuals who are cognitively engaged are more likely to communicate their experiences, share information, and provide recommendations to others. Castillo and Bigné (2021) found that higher levels of cognitive engagement in AR environments increase users' willingness to share their experiences through digital platforms. Similarly, Pi et al. (2016) demonstrated that cognitive attitudes, which are shaped by information-seeking motivations and beliefs, positively influence consumers' intentions to participate in electronic word of mouth (e-WOM).

Emotional engagement also plays a significant role in stimulating e-WOM behavior. Positive emotions experienced during technology usage can motivate consumers to express their satisfaction and share their experiences with others. Silalahi et al. (2022) reported that emotional engagement significantly contributes to e-WOM activities. Likewise, Jamaludin and Hashim (2025) found that hedonic emotions, such as excitement and sentimental attachment, increase customers' willingness to engage in positive online recommendations and reviews.

H_6: Cognitive engagement has a positive effect on e-WOM
H_7: Emotional engagement has a positive effect on e-WOM.

2.5. Cognitive and Emotional Engagement on Buying Intention

Consumers who are cognitively engaged generally possess a better understanding of products, thereby increasing their confidence in making purchase decisions. In the context of Wardah virtual try-on (VTO), consumers who conduct in-depth evaluations of product shades become more confident that their choices are appropriate, which subsequently increases their buying intention. Research conducted by Zheng et al. (2025) demonstrated that cognitive engagement plays an important role in enhancing buying intention. The study by Chua et al. (2007) found that higher levels of interactivity increase cognitive engagement, which positively affects purchase intention. Furthermore, research conducted by Yujiao and Jianhua (2021) indicated that cognitive engagement strengthens the effect of attribute framing, which significantly influences purchase intention.

Emotional engagement can encourage users to purchase products because positive emotions strengthen attraction, trust, and enjoyment toward a brand. In the context of Wardah, users' favorable feelings toward virtual try-on results may stimulate their intention to purchase products such as lipstick, foundation, or blush. Research conducted by Azizah et al. (2024) demonstrated that positive emotions such as happiness, excitement, and

satisfaction significantly increase purchase intention. Similarly, the study conducted by Pappas et al. (2014) found that positive emotions significantly influence purchase intention. Furthermore, research by Ruiz et al. (2019) indicated that positive emotional responses have a greater influence on purchase intention than negative emotions.

H_8: Cognitive engagement has a positive effect on buying intention
H_9: Emotional engagement has a positive effect on buying intention.

2.6. The Mediating Role of Cognitive and Emotional Engagement in the Relationship between Perceived Ease of Use, e-WOM, and Buying Intention

Within this approach, users' initial perceptions regarding the ease of use of technology do not directly generate positive behavioral outcomes; instead, they first influence two forms of psychological engagement, namely cognitive engagement and emotional engagement, which subsequently serve as bridges toward consumer behavior. Research conducted by Fan et al. (2020) demonstrated that cognitive experience moderates the relationship between perceived ease of use and perceived usefulness, as well as the relationship between perceived privacy risk and perceived usefulness. In the study conducted by Nofal et al. (2022), perceived value and enjoyment were found to mediate the relationship between electronic word of mouth (e-WOM) and purchase intention. Furthermore, research by Yang (2022) indicated that cognitive engagement mediates the relationship between e-WOM and purchase intention.

Research conducted by Matiukaite et al. (2024) found that emotions play a mediating role in the relationship between e-WOM and purchase intention. In addition, the study by Park and Kim (2023) demonstrated that the use of advanced technologies such as augmented reality (AR) and virtual reality (VR) on retail websites shows that cognitive elaboration mediates the effects of these technologies on purchase intention, particularly among consumers who browse products casually rather than actively search for them.

H_{10a-d}: Cognitive and emotional engagement mediate the relationship between perceived ease of use, e-WOM, and buying intention

2.7. The Mediating Role of Cognitive and Emotional Engagement in the Relationship between Perceived Usefulness, e-WOM, and Buying Intention

Perceived usefulness refers to the belief that a technology provides benefits in completing tasks, improving effectiveness, and assisting users in achieving specific goals. From a cognitive perspective, when users perceive a technology as highly beneficial, they tend to become more intellectually engaged. This high level of cognitive engagement encourages users to share their knowledge or experiences through electronic word of mouth (e-WOM), as they perceive the information as valuable and worthy of being shared with others.

Research conducted by Yang (2022) found that emotional evaluation, which involves assessing the usefulness and credibility of e-WOM, mediates the relationship between e-WOM and purchase intention. Furthermore, research by Nawaz et al. (2025) demonstrated that emotional engagement mediates the relationship between perceived usefulness, e-WOM, and buying intention.

H_{11a-d}: Cognitive and emotional engagement mediate the relationship between perceived usefulness, e-WOM, and buying intention.

3. METHODOLOGY

3.1. Research Design and Data Collection

This study employed a quantitative approach using explanatory research to analyze the influence of perceived ease of use and perceived usefulness on electronic word of mouth (e-WOM) and buying intention, with the mediating roles of cognitive engagement and emotional engagement among Wardah virtual try on users in Indonesia. A quantitative approach was chosen because this study aims to examine the relationships among variables and empirically measure the effects between constructs.

The data used in this study were primary data collected through an online questionnaire distributed using Google Forms. The questionnaire was distributed through several social media platforms, including Instagram, TikTok, WhatsApp, and other digital platforms. The respondents in this study were users of Wardah virtual try on in Indonesia who had used the virtual try on feature at least once.

The sampling technique used in this study was non-probability sampling with a purposive sampling method. This technique was selected because the researcher determined several criteria that were relevant to the objectives of the study. The criteria for respondents were: (1) living in Indonesia, (2) having used the Wardah virtual try on feature, and (3) being at least 17 years old. The sample size was determined based on the requirements of Structural Equation Modeling (SEM), which requires a minimum sample of 5–10 times the number of indicators used in the study. Since this study employed 32 indicators, the minimum required sample size was 160 respondents.

3.2. Research Variables and Measurement

This study consisted of two independent variables, two mediating variables, and two dependent variables. The independent variables were perceived ease of use and perceived usefulness. The mediating variables were cognitive engagement and emotional engagement. The dependent variables were electronic word of mouth (e-WOM) and buying intention.

Perceived ease of use refers to the extent to which users believe that Wardah virtual try on is easy to understand and operate without requiring significant effort. Perceived usefulness refers to users' beliefs that virtual try on technology can improve effectiveness in selecting cosmetic products. Cognitive engagement describes users' levels of attention, thinking, and interest while using virtual try on, whereas emotional engagement reflects positive feelings, comfort, and enthusiasm experienced during the use of the technology. Electronic word of mouth (e-WOM) refers to users' tendencies to share experiences and provide recommendations

online, while buying intention refers to consumers' intentions to purchase products after using Wardah virtual try on.

The variables were measured using a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. The indicators for perceived ease of use and perceived usefulness were adapted from Davis (1989) and Nawaz et al. (2025). Meanwhile, the indicators for cognitive engagement, emotional engagement, e-WOM, and buying intention were adapted from Nawaz et al. (2025) and previous studies related to virtual try on and augmented reality technology.

The measurement items used in this study are presented in Table 1. The questionnaire items were developed to measure consumers' perceptions, cognitive and emotional engagement, as well as behavioral responses toward the Wardah virtual try-on (VTO) application. Each construct was represented by several indicators that reflect the characteristics of the variables examined in this study.

3.3. Data Analysis Technique

The data analysis technique used in this study was structural equation modeling (SEM) based on partial least square (PLS) using SmartPLS software. The PLS-SEM method was selected because it is capable of analyzing complex relationships among latent variables, testing mediating relationships, and can be applied to research models that do not require normally distributed data.

The analysis was conducted in two stages, namely the outer model and inner model evaluation. The outer model evaluation was performed to assess the validity and reliability of the research constructs. Convergent validity was evaluated through factor loading values and average variance extracted (AVE), while construct reliability was assessed using Composite Reliability and Cronbach's Alpha. An indicator was considered valid if it had a loading factor value >0.70 and an AVE value >0.50. A construct was considered reliable if the composite reliability and Cronbach's Alpha values exceeded 0.70.

The inner model evaluation was conducted to examine the relationships among the research variables. The evaluation included the assessment of R-square values, predictive relevance (Q-square), path coefficients, and hypothesis testing using the bootstrapping procedure. The hypotheses were considered accepted if the *t*-statistic value was greater than 1.96 and the P-value was <0.05. In addition, this study examined the mediating effects of cognitive engagement and emotional engagement on the relationships between perceived ease of use, perceived usefulness, e-WOM, and buying intention.

3.4. Conceptual Framework

This study was based on the technology acceptance model (TAM) developed by Davis (1989) and the technology-enabled engagement (TEE) framework developed by Heller et al. (2021) and Nawaz et al. (2025). TAM explains that perceived ease of use and perceived usefulness influence users' acceptance of technology. Furthermore, the technology-enabled engagement framework explains that user interaction with technology can develop into cognitive and emotional engagement, which subsequently influences behavioral engagement such as e-WOM and buying intention.

Based on these theories, this study examined the influence of perceived ease of use and perceived usefulness on e-WOM and buying intention through the mediating roles of cognitive engagement and emotional engagement among Wardah virtual try on users in Indonesia.

4. RESULTS

4.1. Data Collection

This study employed a quantitative approach using an online questionnaire distributed through Google Forms to respondents

Table 1: Measurement items

Construct	Statements
Perceived ease of use	1. The use of the Wardah VTO application is clear when operated. 2. The Wardah VTO application is easy to operate. 3. My interaction with the Wardah VTO application does not require much mental effort. 4. I feel it is easy to use the Wardah VTO application to do what I want to do.
Perceived usefulness	1. Using the Wardah VTO application improves my shopping experience (for example, saving time or money). 2. Using the Wardah VTO application increases my shopping productivity (for example, making purchase decisions or searching for product information in a short time). 3. Using the Wardah VTO application improves the effectiveness of my shopping activities (for example, getting the best offers or finding maximum discount information on products).
Cognitive	1. Using the Wardah VTO application makes me think about its services. 2. I often think about the Wardah VTO application when using its products. 3. Using the Wardah VTO application triggers my interest to learn more about its services.
Emotional	1. feel very positive about Wardah when using its VTO application. 2. Using the Wardah VTO application makes me happy and excited. 3. I feel comfortable when using the Wardah VTO application.
e-WOM	1. I always say positive things about the Wardah VTO application to others. 2. I would recommend the Wardah VTO application to others if they ask for my suggestion. 3. I would encourage my friends or relatives to use the Wardah VTO application.
Buying intention	1. After using the Wardah VTO application, I plan to purchase the brand in the future. 2. I would recommend others to purchase Wardah and enjoy using its VTO application. 3. I am willing to pay to purchase Wardah and use its VTO application.

who met the predetermined research criteria. The questionnaire was designed to measure respondents' perceptions regarding perceived ease of use, perceived usefulness, cognitive engagement, emotional engagement, e-word of mouth, and buying intention toward Wardah virtual try on in Indonesia. The distribution process was conducted online to reach respondents from various regions efficiently and to facilitate broader participation.

A total of 429 questionnaires were distributed to potential respondents. However, after the data screening process, four responses were excluded because they did not meet the required criteria established in this study. As a result, 425 questionnaires were declared valid and suitable for further analysis. The valid responses were then processed using SEM-PLS analysis through SmartPLS software.

Based on Table 2, the number of valid questionnaires indicates that the data collection process was successful and provided sufficient data for statistical analysis. The sample size of 425 respondents is considered adequate for SEM-PLS analysis because it exceeds the minimum recommended sample size for structural equation modeling. Therefore, the collected data are expected to provide reliable and representative results regarding consumer perceptions and behavioral intentions toward Wardah virtual try on technology.

4.2. Respondent Characteristics

This section explains the demographic characteristics of respondents involved in this study. Respondent profiles are important to understand the background of the participants and to support the interpretation of research findings more accurately. The demographic characteristics analyzed in this study include gender, age, occupation, monthly income, and domicile region.

Based on Table 3, female respondents dominated the sample, accounting for 92.9% of the total respondents. This finding indicates that women are the primary users of Wardah virtual try on technology, which is reasonable considering that Wardah products mainly target female consumers. In terms of age, respondents aged between 20 and 30 years old represented the majority of participants, suggesting that young adults are more familiar with and interested in digital beauty technologies.

Table 2: Research questionnaire distribution results

Questionnaire classification	Total
Distributed questionnaires	429
Invalid questionnaires	4
Valid questionnaires	425

Source: Processed by the researcher (2026)

Table 3: Respondent characteristics

Characteristics	Category	Frequency	Percentage
Gender	Female	395	92.9
	Male	30	7.1
Age	20-30 years old	354	83.3
Occupation	Student	208	49
Monthly income	Rp 1,000,000-Rp 2,000,000	138	32.5
Region	Java	209	49.2

Source: Processed by the researcher (2026)

Furthermore, students constituted the largest occupational group, indicating that younger and technology-oriented consumers are more likely to engage with virtual try on applications. Most respondents also had monthly incomes ranging from Rp 1,000,000 to Rp 2,000,000, reflecting that the application is widely used among middle-income consumers. Additionally, respondents from Java dominated the sample distribution, which may be influenced by higher internet penetration and digital technology adoption in the region.

Overall, the respondent characteristics demonstrate that Wardah virtual try on users are predominantly young female consumers who are relatively familiar with digital technology and online shopping activities. These demographic findings support the relevance of virtual try on technology in enhancing consumer shopping experiences in the beauty industry.

4.3. Descriptive Analysis

Descriptive analysis was conducted to examine respondents' perceptions regarding the variables used in this study, namely perceived ease of use, perceived usefulness, cognitive engagement, emotional engagement, e-word of mouth, and buying intention. The analysis was based on respondents' answers to each questionnaire item using a Likert scale. The descriptive results help illustrate how respondents perceive the implementation and usefulness of Wardah virtual try on technology.

Overall, the descriptive analysis showed that all research variables obtained positive responses from respondents. Most variables achieved total criteria response (TCR) scores ranging from 74% to 78%, indicating that respondents generally agreed with the statements presented in the questionnaire. This finding suggests that respondents positively perceived the usability and benefits of Wardah virtual try on technology.

Respondents considered the application easy to operate and useful for supporting shopping activities. In addition, the application was able to stimulate cognitive and emotional engagement among users, which further encouraged positive electronic word of mouth behavior and buying intention. These findings indicate that virtual try on technology plays an important role in shaping consumer experiences and behavioral responses in the digital beauty market.

The positive descriptive results also demonstrate that Wardah virtual try on technology has been successfully accepted by users. The application not only facilitates product exploration but also creates emotional connections and encourages consumers to share positive experiences with others. Consequently, the technology contributes to strengthening consumer purchase intention and online brand engagement.

4.4. Measurement Model Evaluation (Outer Model)

The measurement model evaluation aims to assess the validity and reliability of the constructs used in this study. The outer model analysis explains the relationship between latent variables and their indicators. In SEM-PLS analysis, the measurement model is evaluated through convergent validity, discriminant validity, and

reliability testing to ensure that the indicators accurately measure the intended constructs.

Based on Figure 2, the outer model illustrates the relationship between latent variables and their indicators. The yellow rectangles represent the indicators, while the blue circles represent the latent variables. The values displayed on the arrows indicate the loading factor values of each indicator toward its respective construct.

The figure demonstrates that all indicators have relatively high loading values, indicating strong relationships between the indicators and the latent constructs they measure. This result suggests that the indicators are capable of representing their corresponding variables appropriately. Therefore, the measurement model can proceed to further validity and reliability testing.

In general, the outer model results indicate that the constructs used in this study have satisfactory measurement quality. The indicators successfully represent perceived ease of use, perceived usefulness, cognitive engagement, emotional engagement, e-word of mouth, and buying intention constructs in the context of Wardah virtual try on technology.

4.4.1. Convergent validity

Convergent validity testing was conducted to evaluate whether the indicators used in this study were able to measure their respective constructs adequately. According to Ghozali and All (2023), indicators are considered valid when the loading factor values exceed 0.70. In addition, average variance extracted (AVE) values above 0.50 indicate that the construct explains more than half of the variance of its indicators.

Based on Table 4, presents the results of convergent validity testing as well as reliability testing using composite reliability (CR) and Cronbach's Alpha (α). The results show that all loading factor values exceeded the recommended threshold of 0.70, indicating that all indicators are valid in measuring their respective constructs. The loading factor values ranged from 0.767 to 0.863. The highest loading factor value was found in indicator BI.1 of the buying intention construct with a value of 0.863, indicating that the indicator strongly represents consumers' purchase intentions toward Wardah products after using the virtual try-on feature. Meanwhile, the lowest loading factor value was found in indicator PEU.2 with a value of 0.767, which still fulfilled the acceptable validity criteria.

Furthermore, all AVE values exceeded 0.50, ranging from 0.632 to 0.674. The Emotional and Buying Intention constructs obtained the highest AVE value of 0.674, followed by Perceived Usefulness with an AVE value of 0.672. These findings indicate that the constructs are capable of explaining more than half of the variance of their indicators and therefore possess satisfactory convergent validity.

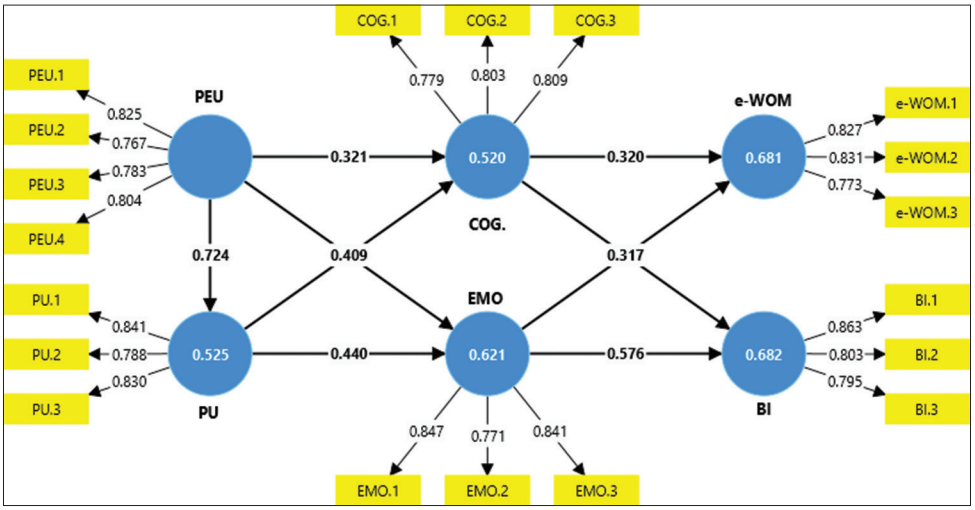
In addition, the reliability testing results demonstrate that all constructs achieved composite reliability (CR) values above 0.70 and Cronbach's Alpha (α) values above 0.70. The highest

Table 4: Convergent validity and reliability results

Constructs	Items	Factor Loading	AVE	CR	α
Perceived ease of use	PEU.1	0.825	0.632	0.873	0.806
	PEU.2	0.767			
	PEU.3	0.783			
	PEU.4	0.804			
Perceived usefulness	PU.1	0.841	0.672	0.860	0.756
	PU.2	0.788			
	PU.3	0.830			
Cognitive	COG.1	0.779	0.636	0.840	0.714
	COG.2	0.803			
	COG.3	0.809			
Emotional	EMO.1	0.847	0.674	0.861	0.758
	EMO.2	0.771			
	EMO.3	0.841			
e-Word of mouth	e-WOM.1	0.827	0.658	0.852	0.739
	e-WOM.2	0.831			
	e-WOM.3	0.773			
Buying intention	BI.1	0.863	0.674	0.861	0.757
	BI.2	0.803			
	BI.3	0.795			

Source: Processed by the researcher (2026)

Figure 2: SEM-PLS outer model results



Source: Processed by the researcher (2026)

Composite Reliability value was obtained by the Perceived Ease of Use construct with a value of 0.873, while the highest Cronbach's Alpha value was also found in the same construct with a value of 0.806. These results indicate that all constructs have strong internal consistency and reliability.

The convergent validity and reliability test results confirm that the measurement model used in this study possesses satisfactory validity and reliability. Therefore, the research instrument can be considered appropriate and consistent for evaluating consumer perceptions and behavioral intentions toward Wardah virtual try-on technology.

4.4.2. The Fornell-Larcker criterion

The Fornell-Larcker criterion is a model used to test discriminant validity, which emphasizes that a construct must be able to explain the variance of its own indicators better than the variance of other constructs. The square root value of AVE must be greater in explaining the variance of its own indicators compared to the variance of indicators from other constructs (Hair et al., 2002).

Based on Table 5, the square root of AVE for each construct is greater than the correlation between that construct and the other constructs. Therefore, it can be concluded that all constructs in this model fulfill the discriminant validity criteria. In other words, each construct in the model is able to explain the variance of its own indicators better than the variance of indicators from other constructs.

4.5. Structural Model Evaluation (Inner Model)

The structural model evaluation, also known as the inner model analysis, was conducted to examine the causal relationships between the latent variables in this study. The evaluation of the inner model in SEM-PLS aims to determine how well the exogenous variables explain the endogenous variables within the research framework. In this study, the structural model assessment was performed using SmartPLS 4.1.0.3 through several analyses, including the R-Square test, F-Square test, Q-Square test, Goodness of Fit evaluation, and hypothesis testing.

Table 5: Square root of AVE (Fornell-Larcker criterion)

	BI	COG	EMO	PEU	PU	e-WOM
BI	**0,821**					
COG	0,711	**0,797**				
EMO	0,793	0,683	**0,821**			
PEU	0,734	0,650	0,727	**0,795**		
PU	0,735	0,686	0,736	0,724	**0,820**	
e-WOM	0,781	0,711	0,792	0,715	0,754	**0,811**

Based on Figure 3, the blue circles represent the latent variables, while the yellow rectangles represent the indicators used to measure each construct. The arrows connecting the variables indicate the hypothesized relationships between constructs, and the numerical values displayed on the paths represent the path coefficients obtained from the SEM-PLS analysis. These coefficients indicate the strength and direction of the relationships among the variables examined in this study.

4.5.1. R-square test

The R-Square test was conducted to evaluate the explanatory power of the structural model in predicting endogenous variables. According to Imam Ghozali, an R-Square value above 0.75 is considered substantial, values between 0.50 and 0.75 are categorized as moderate, and values above 0.25 are categorized as weak. A higher R-Square value indicates that the independent variables have a stronger ability to explain the dependent variables in the model

Based on Table 6, all endogenous variables in the study have R-Square values categorized as moderate. The Buying Intention variable obtained an R-Square value of 0.682, indicating that 68.2% of the variance in buying intention can be explained by the variables included in the model, while the remaining 31.8% is influenced by other variables outside the scope of this study. This result demonstrates that the model has a relatively strong ability to explain consumers' intentions to purchase Wardah products after using the virtual try-on feature.

Furthermore, the Cognitive variable obtained an R-Square value of 0.520, meaning that 52.0% of the variance in cognitive

Figure 3: Inner model results

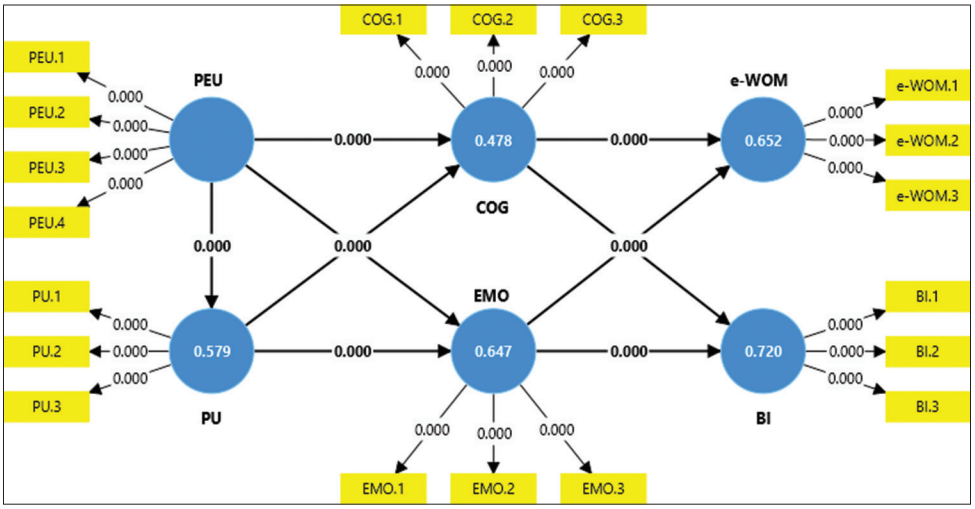


Table 6: R-square results

Variable	R-Square	Category
Buying intention	0.682	Moderate
Cognitive	0.520	Moderate
Emotional	0.621	Moderate
Perceived usefulness	0.525	Moderate
e-Word of mouth	0.681	Moderate

Source: Processed by the researcher (2026)

engagement is explained by the predictor variables in the model. Similarly, the Emotional variable achieved an R-Square value of 0.621, indicating that the model explains 62.1% of the emotional engagement experienced by users when interacting with the Wardah virtual try-on application. These findings suggest that perceived ease of use and perceived usefulness contribute meaningfully to users' cognitive and emotional responses.

In addition, the Perceived Usefulness variable obtained an R-Square value of 0.525, showing that perceived ease of use explains 52.5% of the variance in perceived usefulness. Meanwhile, the e-Word of Mouth variable achieved an R-Square value of 0.681, indicating that cognitive and emotional engagement are able to explain 68.1% of consumers' willingness to share positive information and recommendations online. Overall, these findings indicate that the research model has adequate explanatory power and is capable of explaining consumer behavior toward the Wardah virtual try-on feature effectively.

4.5.2. F-square test

According to Hair et al. (2022), F-square is a measure used to evaluate the effect size of independent variables on dependent variables. The F-square values can be categorized as small (0.02), medium (0.15), and large (0.35).

Table 7 presents the results of the F-square test. The results show that cognitive has a medium effect on buying intention (0.169) and e-WOM (0.171). Emotional demonstrates a large effect on buying intention (0.558) and e-WOM (0.550), indicating a strong contribution to both variables.

Furthermore, perceived ease of use has a small effect on Cognitive (0.102), a medium effect on emotional (0.209), and a large effect on perceived usefulness (1.105). In addition, perceived usefulness shows a medium effect on cognitive (0.204) and emotional (0.243).

These findings indicate that most relationships in the research model have medium to large effect sizes, suggesting that the model has a sufficiently strong contribution in explaining the relationships among the variables studied.

4.5.3. Q-square test

Q-square is an analysis used to evaluate the predictive relevance of a model. Q-square measures the extent to which the model can predict the values of unobserved dependent variables based on the existing independent variables. The Q-square calculation process was carried out using the blindfolding procedure. If $Q^2 > 0$, it indicates that the model has predictive relevance, meaning that the model is capable of predicting the dependent variables effectively.

Table 7: F-square test results

Relationship	f-square	Category
COG -> BI	0.169	Medium
COG -> e-WOM	0.171	Medium
EMO -> BI	0.558	Large
EMO -> e-WOM	0.550	Large
PEU -> COG	0.102	Small
PEU -> EMO	0.209	Medium
PEU -> PU	1.105	Large
PU -> COG	0.204	Medium
PU -> EMO	0.243	Medium

Source: Processed by the researcher (2026)

Table 8: Q-square test results

Variables	Q^2predict	Category
BI	0.522	Predictive
COG	0.413	Predictive
EMO	0.522	Predictive
PU	0.518	Predictive
e-WOM	0.497	Predictive

Source: Processed by the researcher (2026)

Table 8 presents the results of the Q-square test. The results show that all variables obtained Q^2 values >0, indicating that the model has predictive relevance. Buying Intention and Emotional obtained the highest Q^2 values of 0.522, indicating that the model has strong predictive ability in explaining consumers' purchase intentions and emotional responses.

Furthermore, perceived usefulness and e-WOM also demonstrated high predictive relevance values of 0.518 and 0.497, respectively. These findings indicate that the variables in the model are effective in predicting consumers' perceived usefulness and their tendency to share information or recommendations online.

Meanwhile, the cognitive variable obtained a Q^2 value of 0.413, which was slightly lower compared to the other variables but still indicated good predictive relevance. This means that the model remains capable of predicting consumers' cognitive responses adequately.

The Q-square test results confirm that the research model has good predictive capability and is able to explain consumer behavior effectively.

4.5.4. Goodnes of fit

Goodness of fit is a measurement used to evaluate how well the model fits the data. In the goodness of fit test, indicators such as SRMR, Chi-square, and NFI are used to assess the suitability of the model. A lower SRMR value, an NFI value close to 1, and a lower Chi-square value indicate that the model has a good fit with the data.

Table 9 presents the results of the goodness of fit test. The SRMR value of the estimated model was 0.076, which is below the recommended threshold of 0.08, indicating that the model has a good level of fit with the data. Furthermore, the NFI value of the estimated model was 0.761, indicating that the model has an acceptable level of fit, although it is not yet close to 1. Compared to the saturated model value of 0.770, the difference is relatively

small, suggesting that the model is still appropriate for explaining the relationships among variables.

In addition, the Chi-square value of the estimated model was 1078.029, while the d_ULS and d_G values were 1.112 and 0.485, respectively. These results indicate that the model demonstrates an acceptable level of fit and can be used for further analysis. The Goodness of Fit test results confirm that the research model has a sufficiently good fit and is appropriate for further structural model analysis.

4.5.5. Hypothesis testing

Hypothesis testing was conducted using the bootstrapping procedure in SmartPLS 4.1.0.3 to evaluate the significance of the relationships among variables. This study employed a one-tailed test with a significance level of 5% and a t-table value of 1.65. A hypothesis is considered supported if the T-statistics value exceeds 1.65 and the $P < 0.05$. The results of the direct and indirect effect testing are presented in Tables 10 and 11.

Based on Table 10, all direct relationships proposed in the research model were statistically significant and supported. The relationship between perceived ease of use and perceived usefulness produced the highest T-statistics value of 18.702, indicating a very strong positive effect. This finding suggests that users who perceive the Wardah virtual try-on application as easy to use are more likely to perceive the technology as useful and beneficial for their shopping activities.

In addition, perceived ease of use significantly influenced both cognitive and emotional engagement. This indicates that a user-friendly virtual try-on system is capable of stimulating consumers' thoughts, attention, and emotional responses during the shopping experience. Similarly, perceived usefulness was found to significantly affect cognitive and emotional engagement, suggesting that consumers who perceive the application as useful tend to become more cognitively and emotionally involved with the technology.

The results also revealed that cognitive engagement and emotional engagement significantly influenced both buying intention and e-word of mouth. Emotional engagement showed the strongest influence on buying intention and e-word of mouth, as reflected by the high T-statistics values of 12.144 and 13.847, respectively. These findings indicate that emotional experiences play an important role in encouraging consumers to purchase products and share positive recommendations regarding the Wardah virtual try-on application.

Furthermore, Table 11 shows that all indirect relationships were statistically significant, as all T-statistics values exceeded 1.65 and all P-values were below 0.05. Emotional engagement demonstrated stronger mediation effects compared to cognitive engagement, particularly in the relationships between perceived usefulness and e-WOM, as indicated by the highest T-statistics value of 6.305.

These findings indicate that cognitive and emotional engagement significantly mediate the relationships between perceived ease of use, perceived usefulness, buying intention, and e-WOM. Therefore, consumers' perceptions regarding the ease and usefulness of the Wardah virtual try-on application are able to encourage positive behavioral outcomes through users' cognitive and emotional involvement with the technology.

Table 9: Goodness of fit test results

Goodness of Fit	Saturated model	Estimated model
SRMR	0.065	0.076
d_ULS	0.810	1.112
d_G	0.439	0.485
Chi-square	1037.148	1078.029
NFI	0.770	0.761

Source: Processed by the researcher (2026)

Table 10: Direct effect results

Relationship	T-Statistics	P-Values	Result
PEU→PU	18.702	0.000	Supported
PEU→COG	4.597	0.000	Supported
PEU→EMO	6.404	0.000	Supported
PU→COG	7.079	0.000	Supported
PU→EMO	7.039	0.000	Supported
COG→BI	6.486	0.000	Supported
EMO→BI	12.144	0.000	Supported
COG→e-WOM	6.976	0.000	Supported
EMO→e-WOM	13.847	0.000	Supported

Source: Processed by the researcher (2026)

Table 11: Indirect effect results

Relationship	T-Statistics	P-values	Result
PEU→EMO→BI	5.360	0.000	Supported
PEU→COG→BI	3.599	0.000	Supported
PU→EMO→BI	5.880	0.000	Supported
PU→COG→BI	4.782	0.000	Supported
PEU→EMO→e-WOM	5.682	0.000	Supported
PEU→COG→e-WOM	3.693	0.000	Supported
PU→EMO→e-WOM	6.305	0.000	Supported
PU→COG→e-WOM	4.825	0.000	Supported

Source: Processed by the researcher (2026)

5. DISCUSSION

5.1. The Effect of Perceived Ease of Use on Perceived Usefulness

The results of this study indicate that perceived ease of use has a positive and significant effect on perceived usefulness. This finding shows that the easier the Wardah virtual try-on (VTO) application is to use, the more users perceive the technology as useful in supporting their shopping activities. Users tend to feel that a technology provides greater benefits when it can be operated easily without requiring excessive effort or technical skills.

Based on the hypothesis testing results, the relationship between perceived ease of use and perceived usefulness obtained a T-statistics value of 18.702 and a $P = 0.000$, indicating a highly significant relationship. This result suggests that users who perceive the VTO feature as simple, understandable, and easy to operate are more likely to recognize its usefulness, such as helping them make purchase decisions, saving time, and improving shopping efficiency.

This finding is consistent with the technology acceptance model (TAM) proposed by Fred Davis, which explains that perceived ease of use positively influences perceived usefulness. In the context of Wardah Virtual Try-On, consumers who can easily access and utilize the feature are more likely to perceive the application as beneficial in enhancing their online shopping experience.

5.2. The Effect of Perceived Ease of Use on Cognitive Engagement

The findings show that perceived ease of use has a positive and significant effect on cognitive engagement. This means that users who perceive the Wardah VTO application as easy to use tend to become more cognitively involved when interacting with the technology. Ease of use encourages users to explore features, understand product information, and pay greater attention to the services offered through the application.

The hypothesis testing results show a T-statistics value of 4.597 and a P = 0.000, confirming that perceived ease of use significantly affects cognitive engagement. This finding indicates that a user-friendly interface and uncomplicated interaction process can stimulate users' curiosity and encourage them to think more deeply about the products and services provided by Wardah.

The results support previous studies which state that technology simplicity and convenience increase user involvement and attention toward digital platforms. In this study, consumers who experienced minimal difficulty while using the virtual try-on feature became more engaged cognitively, especially in evaluating products and exploring cosmetic alternatives before making purchase decisions.

5.3. The Effect of Perceived Ease of Use on Emotional Engagement

The results reveal that perceived ease of use positively and significantly affects emotional engagement. This indicates that consumers who find the Wardah VTO application easy to use are more likely to experience positive emotions such as comfort, excitement, satisfaction, and enjoyment while interacting with the platform.

The statistical analysis produced a T-statistics value of 6.404 and a P = 0.000, demonstrating a significant relationship between perceived ease of use and emotional engagement. A smooth and simple user experience contributes to positive emotional responses because consumers do not feel confused or frustrated during the interaction process.

This finding suggests that ease of use not only influences users cognitively but also affects their emotional attachment to the technology. In the context of online beauty shopping, positive emotional experiences can increase consumer satisfaction and strengthen their connection with the Wardah brand. Therefore, creating an easy-to-use virtual try-on feature becomes essential in encouraging favorable emotional reactions among consumers.

5.4. The Effect of Perceived Usefulness on Cognitive Engagement

The findings indicate that perceived usefulness has a positive and significant effect on cognitive engagement. This means that consumers who perceive the Wardah VTO application as useful are more likely to think critically about the products and services provided. The usefulness of the application motivates users to seek information, compare products, and evaluate purchasing alternatives more carefully.

The hypothesis testing results show a T-statistics value of 7.079 and a P = 0.000, indicating a significant relationship between perceived usefulness and cognitive engagement. This result demonstrates that when users recognize the practical benefits of the technology, such as improving shopping effectiveness and simplifying decision-making, they become more mentally engaged with the application.

This finding supports previous research emphasizing that perceived usefulness enhances users' involvement and attention toward digital technologies. In this study, the Wardah VTO feature successfully encouraged consumers to become more cognitively involved because the application was perceived as capable of supporting more efficient and informed shopping decisions.

5.5. The Effect of Perceived Usefulness on Emotional Engagement

The results demonstrate that perceived usefulness positively and significantly affects emotional engagement. This finding implies that consumers who perceive the Wardah VTO application as beneficial tend to experience positive emotional responses while using the platform.

The hypothesis testing results obtained a T-statistics value of 7.039 and a P = 0.000, confirming the significant relationship between perceived usefulness and emotional engagement. When consumers feel that the technology genuinely helps them in selecting products, reducing uncertainty, and improving shopping experiences, they are more likely to feel satisfied, comfortable, and emotionally connected to the application.

This finding indicates that the practical benefits offered by the Wardah VTO feature are not limited to functional aspects but also contribute to emotional satisfaction. Consumers who perceive high usefulness are more likely to develop positive feelings toward the brand and technology, which may strengthen long-term consumer relationships.

5.6. The Effect of Cognitive Engagement on e-Word of Mouth

The findings show that cognitive engagement has a positive and significant effect on e-word of mouth. This means that consumers who are cognitively involved with the Wardah VTO application tend to share positive information and recommendations about the application with others through online platforms.

The statistical analysis resulted in a T-statistics value of 6.976 and a P = 0.000, indicating a significant relationship between cognitive engagement and e-word of mouth. Users who actively think about

and evaluate the application are more likely to communicate their experiences, provide reviews, and recommend the technology to friends or relatives.

This finding suggests that cognitive involvement encourages consumers to participate in online discussions and information sharing activities. Consumers who perceive the application as informative and engaging are more motivated to spread positive electronic word of mouth, which can strengthen the brand image and influence other potential consumers.

5.7. The Effect of Cognitive Engagement on Buying Intention

The results indicate that cognitive engagement positively and significantly affects buying intention. This finding shows that consumers who are more cognitively engaged with the Wardah VTO application tend to have stronger intentions to purchase Wardah products.

The hypothesis testing results show a T-statistics value of 6.486 and a P = 0.000, confirming a significant relationship between cognitive engagement and buying intention. Consumers who actively process product information and explore the virtual try-on feature become more confident in making purchase decisions.

This finding demonstrates that cognitive engagement plays an important role in shaping consumer purchase intentions. The Wardah VTO application successfully supports consumers in understanding products better, reducing uncertainty, and increasing confidence before making purchases.

5.8. The Effect of Emotional Engagement on e-Word of Mouth

The findings reveal that emotional engagement positively and significantly affects e-word of mouth. Consumers who experience positive emotions while using the Wardah VTO application are more likely to share favorable experiences and recommendations through digital platforms.

The statistical analysis produced a T-statistics value of 13.847 and a P = 0.000, indicating a very strong relationship between emotional engagement and e-word of mouth. Positive emotions such as happiness, excitement, and comfort encourage consumers to express their experiences and recommend the application to others.

This result indicates that emotional experiences are highly influential in encouraging online communication behavior. Consumers who feel emotionally satisfied tend to become advocates for the brand by voluntarily sharing positive opinions and experiences regarding the Wardah VTO application.

5.9. The Effect of Emotional Engagement on Buying Intention

The results show that emotional engagement positively and significantly affects buying intention. This indicates that consumers who feel emotionally connected to the Wardah VTO application tend to have stronger intentions to purchase Wardah products.

The hypothesis testing results obtained a T-statistics value of 12.144 and a P = 0.000, demonstrating a highly significant relationship between emotional engagement and buying intention. Positive emotional experiences create greater consumer confidence and increase the likelihood of future purchases.

This finding suggests that emotional engagement is one of the strongest factors influencing consumer purchase intention in this study. Consumers who feel comfortable, excited, and emotionally satisfied while using the VTO feature are more likely to develop positive purchase intentions toward Wardah products.

5.10. The Mediating Role of Cognitive and Emotional Engagement

The mediation analysis demonstrates that cognitive and emotional engagement significantly mediate the relationship between perceived ease of use, perceived usefulness, e-word of mouth, and buying intention. Both mediating variables strengthen the influence of technological perceptions on consumer behavioral outcomes.

The indirect effect results show that all mediation relationships have T-statistics values greater than 1.65 and P-values below 0.05, indicating significant mediation effects. Emotional engagement showed stronger mediation effects compared to cognitive engagement, particularly in influencing e-word of mouth and buying intention.

These findings imply that consumers' perceptions regarding the ease and usefulness of the Wardah VTO application can encourage positive behavioral intentions when users become cognitively and emotionally engaged with the technology. Therefore, companies should focus not only on improving the technical functionality of virtual try-on technology but also on creating enjoyable and emotionally satisfying user experiences to strengthen consumer engagement and purchasing behavior.

6. CONCLUSION

This study examined the influence of perceived ease of use and perceived usefulness on e-word of mouth and buying intention toward the Wardah virtual try-on (VTO) application in Indonesia through the mediating roles of cognitive and emotional engagement. The findings demonstrate that perceived ease of use significantly influences perceived usefulness, cognitive engagement, and emotional engagement. Consumers who perceive the Wardah VTO application as easy to operate tend to recognize greater benefits from the technology and become more cognitively and emotionally involved during the shopping experience. These findings are consistent with the technology acceptance model introduced by Fred Davis, which explains that ease of use enhances users' perceptions of technology usefulness and acceptance.

Furthermore, the results reveal that perceived usefulness significantly affects both cognitive and emotional engagement. Consumers who consider the Wardah VTO application beneficial in supporting shopping activities tend to become more involved in evaluating products and experience more positive emotional responses while using the platform. In addition, cognitive and

emotional engagement were found to significantly influence e-word of mouth and buying intention. Emotional engagement demonstrated the strongest effect, indicating that positive emotional experiences such as comfort, excitement, and satisfaction encourage consumers to recommend the application to others and increase their intention to purchase Wardah products.

The mediation analysis also confirmed that cognitive and emotional engagement significantly mediate the relationship between perceived ease of use, perceived usefulness, e-word of mouth, and buying intention. These findings suggest that positive perceptions of technology alone are insufficient to directly shape consumer behavioral outcomes unless they are accompanied by strong cognitive and emotional involvement. Therefore, companies should not only focus on improving the functional quality and usability of virtual try-on technology but also prioritize creating engaging and emotionally satisfying digital experiences. Overall, this study contributes to the understanding of consumer behavior in the digital beauty industry and highlights the important role of virtual try-on technology in strengthening customer engagement, electronic word of mouth, and purchase intention.

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