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Researching the factors and benefits in increasing the use of AI color cosmetics

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ABSTRACT

The recent developments in smartphone technology and social media platforms have led to a growth in the popularity of artificial intelligence (AI) color cosmetics as an innovative solution to promote branded color cosmetics and improve consumer decision-making, especially as a trial purpose. The objective of this research is to examine and analyze the factors that will increase and also the benefits resulting from AI Color Cosmetic Usage. The survey of research design was used to test the 8 research hypotheses. This research is using purposive sampling technique and data collected from 349 respondents. Furthermore, the research model was analyzed using PLS-SEM. The results of data processing show all significant hypotheses. It is proven that Body Esteem, Price Sensitivity, Social Media Addiction have positively influence on AI Color Cosmetic Usage, which in turn also positively influence Trust in Artificial Intelligence, eWOM Engagement, Consumer Satisfaction, Purchase Intention. The findings of this research is add to the empirical development of the literature on AI Color Cosmetic Usage and have managerial implications for promotion managers working for cosmetic brand as well as AI color cosmetics application developers who are attempting to advertise and reach a broader market segment.



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Introduction

According to the findings of the survey conducted by Ipsos, Indonesia is the nation that has the greatest number of people who shop online throughout the globe. This is because consumers in Indonesia believe that buying online is simpler than shopping in physical stores. The majority of responders (73%) agree that purchasing online is simpler. Meantime, just 24% of respondents expressed the opinion that this statement is incorrect. In line with the findings of a survey conducted by the agency DataIndonesia.id, the shopping patterns of internet users in Indonesia show that the majority, as many as 43.2% of respondents, have stated that the frequency of which they engage in online shopping has not changed at this time when compared to when the Covid-19 case was still at a high rate. In point of fact, 37.7% of those who responded claimed that they were doing increasing amounts of their shopping online at this moment.

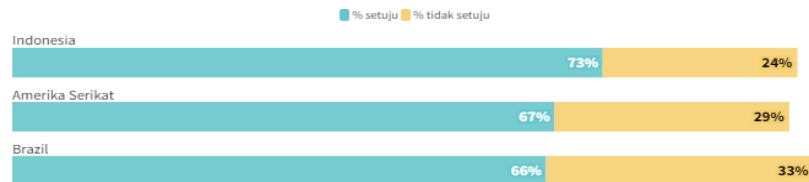


Figure 1. Graph of Comparison of Offline and Online Consumers

Source: IPSOS (2021)

The number of people who use the internet in Indonesia is growing significantly each year as we can see in the Figure 1.2. According to the findings of a study conducted in the years 2021 and 2022 by Asosiasi Penyelenggara Jasa Internet Indonesia (APJII), there are 210,03 million people in this nation who use the internet. This number climbed by 6.78 percent over the previous period, which totaled 196.7 million individuals.

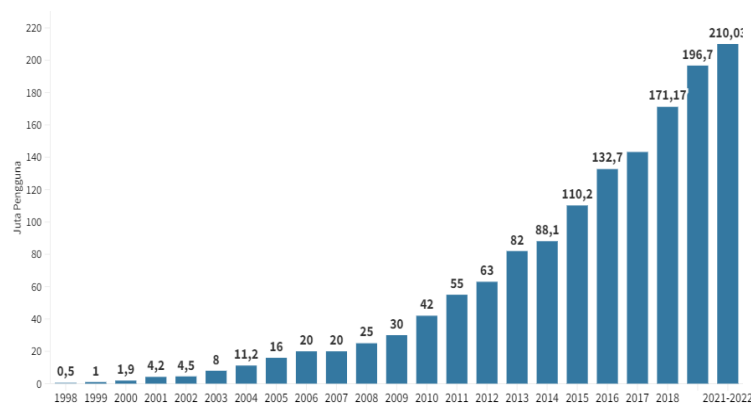


Figure 2. Graph of Internet Users in Indonesia

Source : APJII (2021 – 2022)

The internet also changes the lifestyles in purchasing product especially for those who were before used to purchasing offline have led to a significant growth of the e-commerce business. Electronic commerce (also known as e-commerce) refers to the practice of conducting commercial transactions via the use of digital mediums such as the internet, websites, and mobile apps, as well as browsers that are supported by mobile devices. E-commerce may be defined more formally as any business transaction that takes place digitally between companies and individuals (Laudon & Traver, 2020). According to the findings of the research conducted by GoodStats in 2022, one of the numerous e-commerce platforms that can be accessed in Indonesia is the Shopee marketplace, which has managed to rank first in 2022 despite having a lot of competition. Shopee is fairly well-known and is used by a lot of Indonesian people and it provides a variety of online shopping options to fulfill the demands of the community.

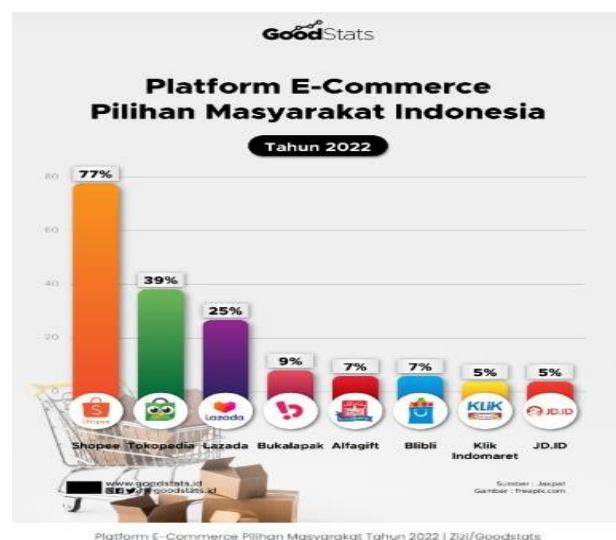


Figure 3. Graph of E-commerce Users in Indonesia

Source: Goodstats (2022)

The outbreak of COVID-19 and the effects it has had on society and change in buying habit in various sectors (Vázquez-Martínez et al., 2021) and one of the considerations that habits is consumers are doing online shopping, it stands to reason that those involved in business will need to make some effort in order to be able to resolve the concerns of consumers when they are engaged in this new era. The creation of artificial intelligence elements is one of the things that is being worked on as part of these efforts (Haleem et al., 2022). When artificial intelligence is used in e-commerce, consumers can feel like they are shopping in real life. This is a new way to solve all the problems that come up when shopping online because consumers can try out the product and make judgments on it. Artificial intelligence is also being used more and more by large companies like Sephora and Benefit. L'Oréal is the first company to use artificial intelligence to virtually promote its products to consumers (L'Oréal 2017: Augmented reality is revolutionising the beauty experience. (n.d.). In addition, L'Oréal stated they are the first cosmetics brand in Indonesia that provide Artificial intelligence (AI) experience to consumers through an e-commerce platform. One of these platforms is Shopee and is known as "Virtual Try-On." As a player in the beauty industry, L'Oréal can recognize this opportunity and aim to attract the Indonesian market by developing product ideas that meet consumer demands.

Previous studies found that selfie-editing behavior was connected to users' self-esteem (Fastoso et al., 2021; Gioia et al., 2021). One of the subcategories that corresponds to the overall concept of "self-esteem" is referred to as "body esteem," and it refers to a person's feelings towards his or her own physical attractiveness (Mendelson et al. in Halliwell, 2015). Body esteem is a relevant concept in this research because the color cosmetics industry and its extension (i.e., artificial intelligence color cosmetics) are built on the promise of increasing women's confidence and physical appearance. Furthermore, beauty advertisements frequently exploit women's insecurity about their physical appearance to market their products (Musetti et al., 2020), and hence the relevance of this research.

The adoption of the Internet and fast technical improvement are linked with the rise of e-commerce (Karim & Qi, 2018). According to Zhang & Dahu (2019), applications for artificial intelligence-powered color cosmetics have the potential to serve as e-commerce platforms. When users have completed modifying their selfies by adding virtual color cosmetics, the artificial intelligence might then connect users to the trustworthy e-commerce platforms of companies, particularly those selling color cosmetics. Nonetheless, cosmetics are high-involvement products that necessitate not only quality but also careful price comparisons (Chiou in Martínez & Del Bosque, 2013); Whelan & Davies in Dikcius et al., 2013). To get the best deals or discounts, smart shoppers are usually willing to spend their time and energy looking for the best prices on different online shopping platforms. Moreover, a previous study by Feng & Mueller (2019) on artificial intelligence content and promotion suggests that artificial intelligence users are price conscious. Therefore, apart from body esteem, price consciousness is a highly relevant concept to discuss and investigate within the area of artificial intelligence color cosmetics.

Research on the use of social media is particularly interested in methods to enhance one's look in order to increase the likelihood of receiving favorable comments from other users. TikTok, Instagram, and Facebook use has been connected to the incorporation of artificial intelligence color cosmetic services like filters and virtual makeup (Barker in Cohen et al., 2014). As a consequence of this, we hypothesize that the frequency of social media usage and perhaps addiction to it plays a role in determining how likely consumers are to try out AI-powered color cosmetics. There is a dearth of research on the individual elements that determine how much a person is willing to utilize artificial intelligence color cosmetics, despite the fact that academics have a significant interest in the topic of the adoption of new technology. In this research, we investigate the factors that influence the usage of artificial intelligence in color cosmetics, including body esteem, price sensitivity, and social media addiction. The present research also aims to disprove the findings of Simay et al. (2023), who were unable to establish a relationship that exists between body esteem, price sensitivity, and social media addiction and AI Color Cosmetics Usage.

Despite the critical role of users' trust, little is known about how it is formed in artificial intelligence technology in general and for artificial intelligence color cosmetics in particular. Alam et al. (2023) stated that there is still a significant lack of trust in the uses of artificial intelligence in companies, so this study aims to fill this gap by providing an in-depth understanding of consumers' trust in their actual use of an artificial intelligence especially in color cosmetics. Consumers are used to searching for information before purchasing products on online shopping sites, including by looking at information that can be accessed in e-commerce (Shopee) such as reviews or writings given by previous consumers about the products they have already purchased, from the specifications, advantages and disadvantages of the product, as well as whether artificial intelligence technology fits the product they want or not. So, this research aims to fill this gap by providing an in-depth understanding of consumers' trust in their actual use of an artificial intelligence, especially in color cosmetics will lead them to do eWom engagement.

Not only eWOM engagement, trust also has been found to significantly influence consumer satisfaction (Tončev & Podovac, 2016). Consumer satisfaction is considered an important variable due to its high effects on consumers' future behavior and attitudes about certain products or services (Jani & Han, 2014). Few researchers have conducted empirical studies on the specific operationalization of eWOM engagement behaviors and consumer satisfaction in the interaction. Some research suggested eWOM engagement and consumer satisfaction literature need to be explore more for further research to examine the consequences of eWOM engagement behaviors and consumer satisfaction in terms of consumer behavior outcomes (e.g., purchase intention) (Alam et al., 2023) (Bi et al., 2019) and organization outcomes(e.g., user growth) (Li and Han, 2021). We particularly focus on this area due to the lackof research on the effect of eWOM engagement and consumer satisfaction in the contextof artificial intelligence color cosmetic usage to purchase intention. We found some research on the function of trust in artificial intelligence, which may serve as a mediator to promote the connection between the use of artificial intelligence color cosmetics and eWOM engagement. Likewise Teng et al. (2017) stated that new consumers are more likely to engage in eWOM to get more reviews, which leads to their intention to use the product or service. Alam et al. (2023) stated that the review from the previous consumer has a greater impact on trust and eWOM engagement, also artificial intelligence (AI) applications in organizations are still influenced by a lack of trust, and it is essential to determine strategies to enhance customers' trust in artificial intelligence in order to increase consumer purchase intentions.

In addition, prior research was conducted during the Covid-19 in China, but the current research would be undertaken in Indonesia. From July 2021 to August 2021, the sample of data that was utilized in the previous research was obtained only via the usageof social media platforms (Tiktok & WeChat), however in this research, the investigatorwill focus on Instagram users in Indonesia. The questionnaire was also sent to consumerswith prior experience using artificial intelligence in the previous research, however this research focuses on consumers with no prior experience using artificial intelligence. A study conducted by Ramadina & Riorini (2023) found that the use of AI color cosmetics did not have a positive impact on e-WOM intention. This study seeks to explore the utilization of artificial intelligence (AI) in the domain of branded color cosmetics. This research aims to elucidate the ways in which AI may improve consumer decision-making and promote the utilization of color cosmetics by examining its potential advantages and the contributing aspects to its success.

Method

The research was carried out with the purpose of gaining an understanding of the influence of certain factors (Body Esteem, Price Sensitivity, and Social Media Addiction) on Artificial intelligence color cosmetic usage and Trust in artificial intelligence on the intention to purchase cosmetics products in the e-commerce marketplace (Shopee), with the mediation of eWOM engagement and Consumer Satisfaction. The research's model was built by developing the model that Simay et al. (2023) had previously designed. The research's model was created by developing the model by Simay et al. (2023). The current research utilizes the research design established by Simay et al. (2023).

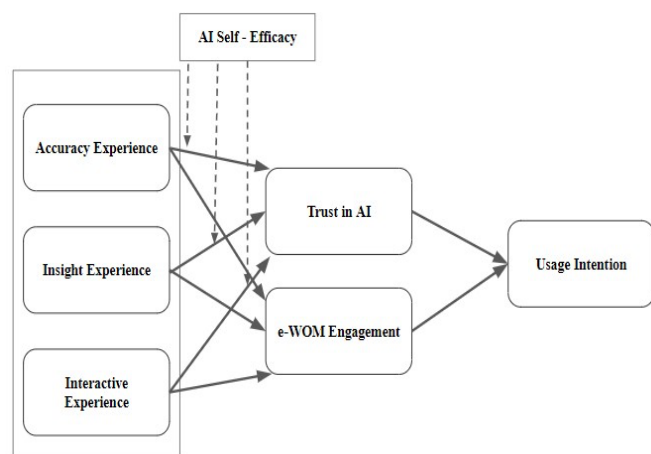


Figure 4. Research Model of Simay et al (2022)

According to research conducted by Simay et al. (2023), relationships among the variables Body Esteem, Price Sensitivity, and Artificial color cosmetic usage, as well as the relationship between Artificial intelligence color cosmetic usage and eWOM Intention, were not discovered. In this research, we will examine the relationship amongBody Esteem, Price Sensitivity, and the Artificial color cosmetic

usage, as well as the relationship between Artificial intelligence color cosmetic usage and eWOM Intention. The research will concentrate on Artificial color cosmetic usage, in which we will modify with the previous model using the research model by Alam et al. (2023).

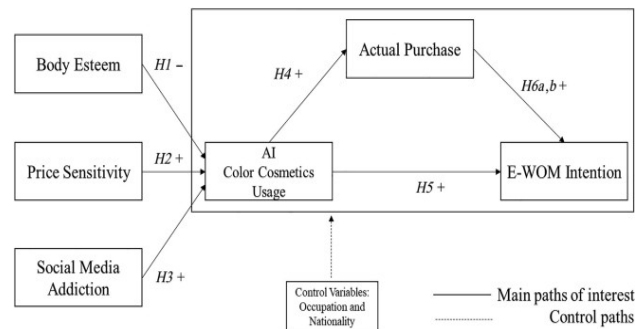


Figure 5. Research Model of Alam. S et al (2023)

Figure 3.2 showed the research by Alam et al. (2023), that examined more about Experience, Trust, eWOM Engagement and Usage Intention of AI Enabled Services and focused on people who already have experience using Artificial intelligence, while in this current research we want to determine if new consumers who want to use AI (Artificial color cosmetic usage) but have never made a purchase can generate variable levels of Trust in artificial intelligence.

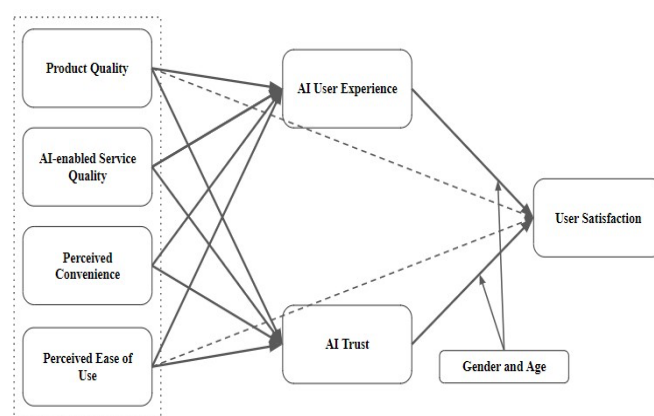


Figure 6. Research Model of Uzir et al (2023)

According to the research conducted by Alam et al. (2023) in the Figure 3.2 & Uzir et al. (2023) in the Figure 3.3, the variable Trust in artificial intelligence may result in two distinct variables: eWOM engagement and Customer Satisfaction, as well as some research indicating that eWOM engagement and Consumer Satisfaction have an impact on Purchase Intention, the research model is constructed as shown in Figure 3.4.

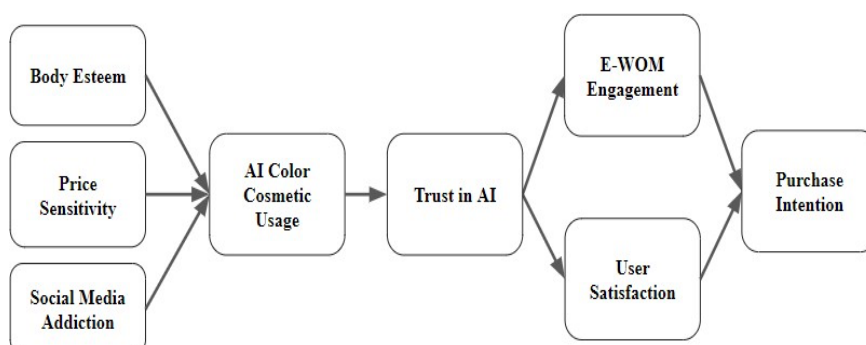


Figure 7. Final Research Model

Source: adaptation of Simay et al. (2023), Alam et al. (2023) and Uzir et al. (2023)

Results from the development of various research in accordance with Figure 3.4 Body Esteem, Price Sensitivity, and Social Media Addiction, which is a factor that can influence Artificial intelligence color cosmetic usage and Trust in artificial intelligence on the intention to purchase cosmetics product in the e-commerce marketplace (Shopee) with eWOM engagement and Consumer Satisfaction as mediators.

Results and Discussions

Execution of Research

The researchers in the present research will begin by conducting a wording test to 10 respondents as the first phase. The purpose of this test is to ascertain to what extent the potential responder has an understanding of the significance of the research question and regardless of whether there are any mistakes in the drafting or translation of the question. The findings of the wording test are used in the evaluation of the questionnaire. After the corrections have been made, it is anticipated that respondents will have a better understanding of the items included within the questionnaire. This will ensure that the responses provided are representative and may serve as a starting point for further research.

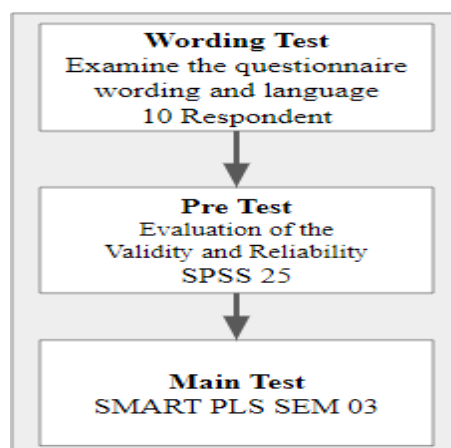


Figure 8. Execution of Research

According to the results of the wording test that was carried out, some of the responses from the respondents suggested that there was uncertainty or ambiguity e.g "saya terlihat seperti orang lain", the researchers decided to alter the term to "terlihat berbeda dari sebelumnya" so that there would be fewer possibilities for misinterpretation. The pre-test is the next phase in the process, which follows the wording test. During the pre-test of the research, the researchers sent questionnaires to 45 participants through Google Forms. The participants received links to the questions on WhatsApp and Instagram, which they used to complete the questionnaires. The pre-test was successfully completed by a total of 45 of the respondents. The purpose of this pretest is to determine the validity and reliability of the statement items included in the questionnaire for this research, with the end goal of reducing the likelihood of making any mistakes. After this step, the gathered information is processed with the help of the SPSS 25 software. The last stage of this data collecting process consists of carrying out a main test. In order to carry out the main test, the researchers disseminated the questionnaire via online through

Preliminary Testing (Pre-Test)

The preliminary testing of the research will be conducted with a total of 8 variables and 30 indicators, and it will be carried out by gathering responses to self-administered questionnaires using Google Forms from a total of 45 participants. The data was sanitized by using the Statistical Package for Social Science (SPSS) software version 25 developed by IBM. The outcomes of the preliminary testing are outlined in Table 4.1, which may be seen below.

The findings of SPSS data processing show that all variables fulfill the validity and reliability testing requirements: (1) Kaiser-Meyer-Olkin (KMO) : minimum 0.5 and Bartlett's test of Sphericity < 0,05 (sig < 0,05). (2) Anti Image Matrice (MSA) > 0,5 (anti image > 0,5). (3) Factor Loading: minimum 0.5. (4) Cronbach's alpha : minimum 0.6. Then, based on the results of the pre-test, it was determined that all of indicators are valid and reliable for further respondents to compile and analyze all indicators for the main test.

Main Test

Screening Process

There were a total of 430 respondents to the survey. However, prior to the analysis, it is necessary to conduct a screening procedure that seeks to obtain respondents for the research who meet the necessary criteria.

Table 1. Result of Screening Questions

Question 1	Categories	Frequency
Apakah anda aktif menggunakan internet?	Yes	430
	No	0
Total of match respondents	430	
Question 2		
Apakah anda pernah membeli produk kosmetik brand L'oreal melalui e-Commerce Shopee?	Yes	411
	No	19
Total of match respondents	411	
Question 3		
Apakah anda mengetahui bahwa iklan Brand L'oreal di e-Commerce Shopee menggunakan teknologi AI atau yg biasa disebut "Virtual Try On" ?	Yes	62
	No	349
Total of match respondents	349	

Sources: processed by researchers (2023)

According to the findings of the screening data collected from 430 various respondents. The outlier analysis was performed, and it found 81 data that were required to be deleted because it was deemed insufficient to carry out the analysis of the next stage as respondents knew about the brand L'oreal who used AI because this research will focus on respondents who did not know about AI and intended to buy the product L'oreal after learning about the use of AI. The final results were produced using 349 data points from respondents, which will be analyzed further.

Demographic Profile of Respondent

The questionnaires were delivered to 430 but only 349 respondents and screened based on the requirements specified by the respondent demographic profile discussed previously in chapter 3. The following is a distribution table of respondents who have completed the questionnaire.

Descriptive Statistical Analysis

Descriptive Analysis of the Construct Body Esteem

Likert scale 1 to 5 is used in measuring all measurement items. The analysis that follows is descriptive of the Body Esteem construct.

Table 2. Descriptive of Construct Body Esteem

Items	Min.	Max	St. Deviation	Mean	Mean of Construct
BE1	1	5	0.987	3.593	3.527
BE2	1	5	0.952	3.447	
BE3	1	5	1.002	3.542	
BE4	1	5	1.041	3.410	
BE5	1	5	0.933	3.645	

Sources: processed by researchers (2023)

Descriptive Analysis of the Construct Price Sensitivity

Likert scale 1 to 5 is used in measuring all measurement items. The analysis that follows is descriptive of the Price Sensitivity construct.

Table 3. Descriptive of Construct Price Sensitivity

Items	Min.	Max	St. Deviation	Mean	Mean of Construct
PS1	1	5	1.219	3.183	3.325
PS2	1	5	1.121	3.456	
PS3	1	5	1.138	3.335	

Sources: processed by researchers (2023)

Descriptive Analysis of the Construct Social Media Addiction

Likert scale 1 to 5 is used in measuring all measurement items. The analysis that follows is descriptive of the Social Media Addiction construct.

Table 4. Descriptive of Construct Social Media Addiction

Items	Min.	Max	St. Deviation	Mean	Mean of Construct
SMA1	1	5	0.883	3.619	3.630
SMA2	1	5	0.943	3.719	
SMA3	1	5	0.917	3.576	
SMA4	1	5	1.003	3.607	

Sources: processed by researchers (2023)

Descriptive Analysis of the Construct AI Color Cosmetic Usage

Likert scale 1 to 5 is used in measuring all measurement items. The analysis that follows is descriptive of the AI Color Cosmetic Usage construct.

Table 5. Descriptive of Construct AI Color Cosmetic Usage

Items	Min.	Max	St. Deviation	Mean	Mean of Construct
CCU1	1	5	0.969	3.438	3.354
CCU2	1	5	1.037	3.424	
CCU3	1	5	0.959	3.473	
CCU4	1	5	1.025	3.223	
CCU5	1	5	0.925	3.212	

Sources: processed by researchers (2023)

Descriptive Analysis of the Construct Trust in AI

Likert scale 1 to 5 is used in measuring all measurement items. The analysis that follows is descriptive of the Trust in AI construct.

Table 6. Descriptive of Construct Trust in AI

Items	Min.	Max	St. Deviation	Mean	Mean of Construct
T1	1	5	0.845	3.871	4.011
T2	1	5	0.856	3.854	
T3	1	5	1.061	4.309	

Sources: processed by researchers (2023)

Descriptive Analysis of the Construct eWOM Engagement

Likert scale 1 to 5 is used in measuring all measurement items. The analysis that follows is descriptive of the eWOM Engagement construct.

Table 7. Descriptive of construct eWOM Engagement

Items	Min.	Max	St. Deviation	Mean	Mean of Construct
EE1	1	5	0.821	4.524	4.311
EE2	1	5	0.874	3.963	
EE3	1	5	0.874	4.447	

Sources: processed by researchers (2023)

Descriptive Analysis of the Construct Consumer Satisfaction

Likert scale 1 to 5 is used in measuring all measurement items. The analysis that follows is descriptive of the Consumer Satisfaction construct

Table 8. Descriptive of Construct Consumer Satisfaction

Items	Min.	Max	St. Deviation	Mean	Mean of Construct
CS1	1	5	0.727	4.281	4.325
CS2	1	5	0.847	4.126	
CS3	1	5	0.793	4.567	

Sources: processed by researchers (2023)

Descriptive Analysis of the Construct Purchase Intention

Likert scale 1 to 5 is used in measuring all measurement items. The analysis that follows is descriptive of the Purchase Intention construct.

Table 9 Descriptive of Construct Purchase Intention

Items	Min.	Max	St. Deviation	Mean	Mean of Construct
PI1	1	5	0.746	4.444	4.450
PI2	1	5	0.733	4.189	
PI3	1	5	0.821	4.576	
PI4	1	5	0.787	4.590	

Sources: processed by researchers (2023)

Hypotheses Testing

The method known as structural equation modeling, or SEM, is used in order to test hypotheses and conduct analyses on models depicting relationships or effects. Analysis of the SEM consists of two steps, the first of which is the analysis of the measurement model (also known as the outer model), and the second of which is the study of the structural model (also known as the inner model). The evaluation of the reliability and validity of the indicators that were used as a measurement tool in this research is known as measurement model analysis. This evaluation includes reliability indicators and composite reliability to determine internal consistency, convergence validity (Average Variance Extracted), and discriminatory validities (Fornell-Larcker criterion), among other things. In the next step, an analysis of the structural model will be carried out. This will include assessing the relationship between the latent variables and analyzing the hypothesis by looking at the t-value, the p-value, and the R2 value. The version 03 of SmartPLS was used to do the structural equation modeling for this research.

Outer Model Analysis

A viewable outer model analysis is comprised of the values, construct validity, convergent validity, discriminant validity, and composite reliability.

Convergent Validity Analysis

Validity testing involves understanding the indicator's capability and constructing the variable to be measured (Usman dan Sobari, 2013). According to Hair et al. (2013), an instrument is valid if its load factor is greater than 0.5. Results of validity tests by factor loading:

Table 10. Factor Loading Value

Latent Variable	Indicator	Factor Load	Average Variance Extracted (AVE)	Criteria	Details
Body Esteem	BE1	0.693	0.539	> 0,50	Valid
	BE2	0.680			
	BE3	0.778			
	BE4	0.737			
	BE5	0.775			
Price Sensitivity	PS1	0.908	0.798	> 0,50	Valid
	PS2	0.881			
	PS3	0.891			
Social Media Addiction	SMA1	0.780	0.635	> 0,50	Valid
	SMA2	0.843			
	SMA3	0.802			
	SMA4	0.759			
AI Color Cosmetic Usage	CCU1	0.694	0.589	> 0,50	Valid
	CCU2	0.815			
	CCU3	0.789			
	CCU4	0.805			
	CCU5	0.728			
Trust in AI	T1	0.727	0.655	> 0,50	Valid
	T2	0.754			
	T3	0.931			
eWOM Engagement	EE1	0.830	0.667	> 0,50	Valid
	EE2	0.816			
	EE3	0.803			
Consumer Satisfaction	CS1	0.711	0.652	> 0,50	Valid
	CS2	0.873			
	CS3	0.830			
Purchase Intention	PI1	0.710	0.598	> 0,50	Valid
	PI2	0.717			
	PI3	0.830			

PI4	0.828
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Source: SMARTPLS, 2023

The preceding table depicts the factor loading value of the entire indicator on a latent variable greater than 0.5, at which point all such indicators are able to be declared valid. In the table above, a value greater than 0.50 indicates that the entire variable structure has a high correlation (Fornell and Larcker, 1981; Bagozzi and Yi, 1988; Chin and Dibbern, 2009). The variable construction for Price Sensitivity has the highest Average Variance Extracted (AVE) value, at 0.798 and Body Esteem variable structure had the lowest Average Variance Extracted (AVE) value of 0.539.

Reliability Analysis

In this investigation, a total of 349 respondents were utilized for the construction reliability test. Cronbach Alpha > 0.6 and Composite Reliability > 0.7 are the criteria for the reliability test (Hair et al., 2014). Results of reliability testing using version 03 of the software Smart PLS:

Table 11. Result of Reliability

Variable Construct	Cronbach's Alpha(>0,6)	Composite Reliability(>0,7)	Details
Body Esteem	0.802	0.853	Reliable
Price Sensitivity	0.875	0.922	Reliable
Social Media Addiction	0.809	0.874	Reliable
AI Color Cosmetic Usage	0.825	0.877	Reliable
Trust in AI	0.776	0.849	Reliable
eWOM Engagement	0.751	0.857	Reliable
Consumer Satisfaction	0.740	0.848	Reliable
Purchase Intention	0.775	0.856	Reliable

Source: SMARTPLS, 2023

Based on the above table, the entire structure must have a cronbach's alpha > 0.60 before it is deemed reliable. If the composite reliability value is greater than 0.70, then the reliability of the entire variable is high. The following research hypotheses may be shown to be accurate and valid by using the findings of the hypotheses:

H1. Body Esteem positively influence Artificial Intelligence color cosmetics usage

The test results for hypothesis 1 demonstrated that Body Esteem influences AI Color Cosmetic Usage. This is demonstrated by a T-statistics value of 7.555 and P-value value or level of significance of 0.000; therefore, hypothesis 1 (H1) is acceptable. Meaning that Body Esteem has a positive, significant, or direct influence on AI Color Cosmetic Usage, the first hypothesis has been proven. The results of this research respond to previous research by Simay et al. (2023) where they were not able to demonstrating that body esteem is a significant indicator of the use of artificial intelligent color cosmetics usage. In this research, positive-view of body esteem refers to questions with positive responses that might point to respondents' self-acceptance regardless of their physical appearance.

Considering the total mean of this construct, which is 3,527, it can be concluded that respondents concur and believe that the greater their body esteem, the more positively they react to AI Color Cosmetic Usage. When viewed from the load value of the construct factor BE, the highest value was on the BE 3 "I wish I looked better." with the 0.778 most high value representing the construct BE as compared to the construct level AI Color Cosmetic Usage, specifically on the load factor CCU 2 "I will recommend using the AI provided by the L'Oreal brand on Shopee to my friends." with a score of 0.815.

H2. Price Sensitivity positively influence Artificial Intelligence color cosmetics usage

The results of the second test indicate that Price Sensitivity influences AI Color Cosmetic Usage. This is supported by a T-statistics value of 6,143 and P-value value or significance level of 0.000, so the second hypothesis (H2) is acceptable. Price Sensitivity has a positive, significant, or direct effect on AI Color Cosmetic Usage. Therefore, the second hypothesis has been proven. The results of this research also respond to previous research conducted by Simay et al. (2023) where they were not able to demonstrating that price sensitivity is a significant indicator of the use of artificial intelligent color cosmetics usage. Because consumers are able to test out a wide range of branded color cosmetics with AI Color cosmetics usage, the risks that are normally connected with making the incorrect purchase are considerably reduced. We claim that artificial intelligence color cosmetics usage have the potential to serve as a less expensive alternative to branded cosmetics (L'Oreal), and as a result, are appealing to consumers who are price-sensitive.

Considering the total mean of this construct, which is 3.325 The respondents agreed and believed that the

greater the price sensitivity of consumers, the greater their positive response to AI Color Cosmetic Usage. In terms of the filling value of the construct factor of PS, PS 1 has the highest value "I usually buy L'Oreal products when they are on sale or discounted." with the score 0,907 as the most high value representing the construct PS as compared to the construct AI Color Cosmetic Usage, specifically on the load factor CCU 2 "I will recommend using the AI provided by the L'Oreal brand on Shopee to my friends." with the score 0,815.

H3. Social Media Addiction positively influence Artificial Intelligence color cosmetics usage

The findings of hypothesis 3's tests reveal that Social Media Addiction has an effect on AI Color Cosmetic Usage. This is proved by a T-statistics value of 3,325 with P-value or degree of significance of 0,001, indicating that hypothesis 3 (H3) is acceptable. That is, the third hypothesis is validated if Social Media Addiction has a positive significant or direct influence on AI Color Cosmetic Usage. This is in accordance with the findings of Simay et al. (2023), who stated that people who are addicted to social media and follow other people need to look more attractive online. Considering the total mean of this construct, which is 3.630 The respondents concurred and believed that the more positive consumers' attitudes toward social media addiction, the more positively they respond to AI Color Cosmetic Usage. Regarding the load factor value of SMA construct, SMA 2 has the highest value "Using social media influences my other activities." with the score 0,843 as most high value representing the construct SMA as compared to the construct AI Color Cosmetic Usage, specifically on the load factor CCU 2 "I will recommend using the AI provided by the L'Oreal brand on Shopee to my friends." with the score 0,815.

H4. Artificial Intelligence color cosmetics usage positively influence Trust in Artificial Intelligence

The findings of hypothesis 4a's tests revealed that AI Color Cosmetic Usage affected the Trust in AI variable. This is indicated by a T-statistics value of 2.594 with P-value or degree of significance of 0.010, indicating that hypothesis 4(a) is acceptable. The findings of this research agree on the positive correlation between AI Color Cosmetic Usage and Trust in AI. From this finding, we argue that consumer who are more frequently do AI Color Cosmetic Usage will helps them find their preferred cosmetic products (L'oreal Products) using AI Camera that L'oreal implies in Shopee platform or we called "Virtual Try On". This can be caused the accuracy of AI technologies affects how easy it is for consumer to find the right cosmetic products and makes them more trustworthy in AI. This shows that people think AI Color Cosmetic usage can make a big difference in building Trust in AI.

If viewed from the total mean of this construct, which is 3,354, it means that respondents agreed and felt that the more positive consumer on AI Color Cosmetic Usage, the more positively they responded to Trust in AI. When viewed from the load factor of the CCU construct, the highest value is at CCU 2 "I will recommend using the AI provided by the L'Oreal brand on Shopee to my friends." with the score 0,815 as the highest representation of CCU construct compared to the Trust in AI construct, specifically on the load factor T3 "Even without testing the accuracy of the AI, I believe that the AI provided by the L'Oreal Brand on Shopee is always accurate." with the score 0,932.

H5. Trust in Artificial Intelligence positively influence eWOM engagement

The results of the 5-hypothesis test indicate that Trust in AI affects the eWOM Engagement variable. This is supported by a T-statistics value of 7,792 and P-value or significance level of 0.000; therefore, the 5 hypothesis is acceptable. This indicates that AI trust has a positive and significant effect on eWOM engagement, thus proving the hypothesis 5. This result supports and confirm earlier studies by Marmaya et al. (2020) that trust influences eWOM engagement in the context of AI. This demonstrates that human-computer interactions are not straightforward. The reason could be that present AI technology does not meet consumers' requirements for individualized and empathetic communication, or that consumers are unaware of its capabilities (Alam et al., 2023).

Considering the total mean of this construct, which is 3,527, it indicates that respondents concur and believe that the greater their trust in AI, the greater their positive response to Ewom Engagement. When viewed from the load value of the construct factor T, the highest value was on the T 3 "Even without testing the accuracy of the AI, I believe that the AI provided by the L'Oreal Brand on Shopee is always accurate." with the score 0,932 as most high value representing the construct Tas compared to the construct Ewom Engagement, as compared to the construct EE1 "eWOM (reviews of other consumer products) makes it easier for me to make purchasing decisions." with the score 0,830.

H6. Trust in Artificial Intelligence positively influence Consumer satisfaction

The findings of hypothesis 6's tests reveal that trust in AI has an effect on the variable of consumer satisfaction. A T-statistics value of 8,103 with a P-value or degree of significance of 0,000 indicates that the 6 hypothesis is acceptable. That is, trust in AI has a positive significant influence on consumer satisfaction; hence, the hypothesis 6 is verified. This finding is in line with the earlier numerous studies (Marinkovic & Kalinic, 2017; Daud et al., 2018) that have demonstrated the significant relationship between trust and consumer satisfaction. This finding

is in line with the earlier numerous studies (Marinkovic & Kalinic, 2017; Daud et al., 2018) that have demonstrated the significant relationship between trust and consumer satisfaction. Trust in this current research can be accumulated through previous interactions, or the recommendation of other customers that can give an impression and help develop a perception about their satisfaction in using AI among consumers.

Considering the total mean of this construct, which is 4.011, it indicates that respondents concur and believe that the greater their Trust in AI, the greater their positive response to consumer satisfaction in the context of AI. When viewed from the load value of the construct factor T, the highest value was on the T3 "Even without testing the accuracy of the AI, I believe that the AI provided by the L'Oreal Brand on Shopee is always accurate." with the score 0,932 as most high value representing the construct T as compared to the construct Consumer Satisfaction, specifically on the load factor CS2 "The AI provided by the L'Oreal brand on Shopee is very good." with the score 0,873.

H7. eWOM engagement positively influence purchase intentions

The hypothesis 7 test findings suggest that eWOM engagement influences the Purchase Intention variable. When a T-statistics value of 4.599 is combined with a P-value or level of significance of 0,000, the 7 hypothesis is accepted. That is, eWOM engagement has a positive and significant effect on Purchase Intention, proving the hypothesis 7. Further, it was proved that eWOM engagement influences purchase intention. The findings align with previous research (Filieri et al., 2022; Wang et al., 2018) and validate the AI-enabled are used for shopping. This means that a positive eWOM engagement about the AI will likely trigger the purchase intentions of consumers. Considering the total mean of this construct, which is 4.311, it indicates that respondents concur and believe that the more positive consumer respond on ewom engagement in the context of AI, the higher the purchase intention from consumers. When viewed from the load value of the construct factor EE, the highest value was on the EE 1 "eWOM (reviews of other consumer products) makes it easier for me to make purchasing decisions." with the score 0,830 as most high value representing the construct CS as compared to the construct Purchase Intention, specifically on the load factor PI3 "I will try branded products online (L'oreal)" with the score 0,830.

H8. Consumer Satisfaction positively influence Purchase Intentions

The test results for hypothesis 8 indicate that consumer satisfaction has an effect on the variable Purchase Intention. The 8 hypothesis is acceptable given a T-statistics value of 11,822 and a P-value or significance level of 0.000. Therefore, consumer satisfaction has a positive and significant effect on Purchase Intention, and the 8a hypothesis can be considered proven. This means that consumer satisfaction in the context of AI had a positive effect on the intention to purchase. Therefore, this research provides valuable insight into our understanding of AI in this context while extending research on AI and purchase intention (e.g. Rauschnabel et al., 2019; Stoyanova et al., 2015). These findings begin to bridge the knowledge gap on how consumer perceptions of AI can be optimized to enhance purchase intention of these cosmetic products. As previously mentioned, recognizing how AI can influence consumer satisfaction and purchase intention is important for companies and AI developers to collaborate in developing effective marketing strategies that enrich and enhance consumer experience (Poushneh & Vasquez-Parraga, 2017).

Considering the total mean of this construct, which is 4.325 it indicates that respondents concur and believe that the more positive respond on consumer satisfaction in the context of AI, the greater their chance to have purchase intention from consumers. When viewed from the load value of the construct factor CS the highest value was on the CS 2 "The AI provided by the L'oreal Brand on Shopee is very good" with the score 0,873 as most high value representing the construct CS as most high value representing the construct Purchase Intention, specifically on the load factor PI3 "I will try branded products online (L'oreal)" with the score 0,830.

Conclusions

In additional, this research also analyzes the benefits of using Artificial Intelligence Color Cosmetics in the midst of the growing cosmetics industry market, including trust in Artificial Intelligence, employee engagement, and consumer satisfaction. We can also see that all of these factors can influence purchase intentions. So the conclusion of the aim of this research is based on the results of the analysis and discussion carried out, namely that AI Color Cosmetic Usage has a positive and significant influence on trust in AI, which shows that the respondents in this study agree and accept the hypothesis that AI Color Cosmetic Usage has a positive influence on trust in AI. In this research, trust in AI has a positive influence on eWOM engagement and consumer satisfaction. These findings support previous research theories that trust influences eWOM engagement in the AI context, as well as other literature findings that show a significant relationship between trust and consumer satisfaction in the AI context. eWOM engagement influences purchase intention. These findings are in line with previous research, which states that positive eWOM engagement with AI is likely to trigger consumer purchase

intentions. Consumer satisfaction influences purchase intentions. These findings support valuable insights in the context of AI and purchase intention, where consumer satisfaction can influence purchase intention.

References

- Alam, S. S., Masukujjaman, M., Mohamed Makhbul, Z. K., Helmi Ali, M., Ahmad, I., & Al Mamun, A. (2023). Experience, Trust, eWOM Engagement and Usage Intention of AI Enabled Services in Hospitality and Tourism Industry: Moderating Mediating Analysis. *Journal of Quality Assurance in Hospitality & Tourism*, 1–29.
- Bi, N. C., Zhang, R., & Ha, L. (2019). Does valence of product review matter? The mediating role of self-effect and third-person effect in sharing YouTube word-of-mouth (vWOM). *Journal of Research in Interactive Marketing*, 13(1), 79–95.
- Cohen, S. A., Prayag, G., & Moital, M. (2014). Consumer behaviour in tourism: Concepts, influences and opportunities. *Current Issues in Tourism*, 17(10), 872–909.
- Daud, A., Farida, N., Andriansah, A., & Razak, M. (2018). Impact of customer trust toward loyalty: The mediating role of perceived usefulness and satisfaction. *Journal Of Business and Retail Management Research (JBRMR)*, 13(2), 235–242.
- Dikcius, V., Seimiene, E., & Zaliene, E. (2013). Congruence between brand and consumer personalities. *Economics and Management*, 18(3), 526–536.
- Fastoso, F., González-Jiménez, H., & Cometto, T. (2021). Mirror, mirror on my phone: Drivers and consequences of selfie editing. *Journal of Business Research*, 133, 365–375.
- Feng, Y., & Mueller, B. (2019). The state of augmented reality advertising around the globe: A multi-cultural content analysis. *Journal of Promotion Management*, 25(4), 453–475.
- Filieri, R., Lin, Z., Li, Y., Lu, X., & Yang, X. (2022). Customer emotions in service robot encounters: A hybrid machine-human intelligence approach. *Journal of Service Research*, 25(4), 614–629.
- Gioia, F., McLean, S., Griffiths, M. D., & Boursier, V. (2021). Adolescents' selfie-taking and selfie-editing: A revision of the photo manipulation scale and a moderated mediation model. *Current Psychology*, 1–17.
- Haleem, A., Javaid, M., Qadri, M. A., & Suman, R. (2022). Understanding the role of digital technologies in education: A review. *Sustainable Operations and Computers*, 3, 275–285.
- Halliwell, E. (2015). Future directions for positive body image research. *Body Image*, 14, 177–189.
- Jani, D., & Han, H. (2014). Personality, satisfaction, image, ambience, and loyalty: Testing their relationships in the hotel industry. *International Journal of Hospitality Management*, 37, 11–20.
- Karim, M. T., & Qi, X. (2018). E-commerce development in Bangladesh. *International Business Research*, 11(11), 201–211.
- Laudon, K. C., & Traver, C. G. (2020). *E-commerce 2019: Business, technology, society*. Pearson.
- Marinkovic, V., & Kalinic, Z. (2017). Antecedents of customer satisfaction in mobile commerce: Exploring the moderating effect of customization. *Online Information Review*, 41(2), 138–154.
- Marmaya, N., Razak, N. A., Wee, M., Alias, N. E., Tuah, S. A., Talib, N. C., & Marmaya, E. A. (2020). Determinant Factors Influencing EWOM among generation Y in Malaysia. *International Journal of Academic Research in Business and Social Sciences*, 10(4), 459–467.
- Martínez, P., & Del Bosque, I. R. (2013). CSR and customer loyalty: The roles of trust, customer identification with the company and satisfaction. *International Journal of Hospitality Management*, 35, 89–99.
- Musetti, A., Brazzi, F., Folli, M. C., Plazzi, G., & Franceschini, C. (2020). Childhood trauma, reflective functioning, and problematic mobile phone use among male and female adolescents. *The Open Psychology Journal*, 13(1).
- Poushneh, A., & Vazquez-Parraga, A. Z. (2017). Discernible impact of augmented reality on retail customer's experience, satisfaction and willingness to buy. *Journal of Retailing and Consumer Services*, 34, 229–234.
- Ramadina, A. A., & Riorini, S. V. (2023). Tindakan E-WOM Akibat Artificial Intelligence Warna Kosmetik Pada Kalangan Pengguna Sosial Media di Indonesia. *Jurnal Ilmiah Wahana Pendidikan*, 9(19), 112–130.
- Rauschnabel, P. A., Felix, R., & Hinsch, C. (2019). Augmented reality marketing: How mobile AR-apps can improve brands through inspiration. *Journal of Retailing and Consumer Services*, 49, 43–53.
- Simay, A. E., Wei, Y., Gyulavári, T., Syahrivar, J., Gaczek, P., & Hofmeister-Tóth, Á. (2023). The e-WOM intention of artificial intelligence (AI) color cosmetics among Chinese social media influencers. *Asia Pacific Journal of Marketing and Logistics*, 35(7), 1569–1598.
- Stoyanova, J., Brito, P. Q., Georgieva, P., & Milanova, M. (2015). Comparison of consumer purchase intention between interactive and augmented reality shopping platforms through statistical analyses. *2015 International Symposium on Innovations in Intelligent Systems and Applications (INISTA)*, 1–8.
- Teng, S., Khong, K. W., Chong, A. Y. L., & Lin, B. (2017). Persuasive electronic word-of-mouth messages in social media. *Journal of Computer Information Systems*, 57(1), 76–88.

- Tončev, M. J., & Podovac, M. (2016). A survey on factors influencing tourists decision to visit spa destination. *Tourism International Scientific Conference Vrnjačka Banja-TISC*, 1(1), 122–138.
- Uzir, M. U. H., Bukari, Z., Al Halbusi, H., Lim, R., Wahab, S. N., Rasul, T., Thurasamy, R., Jerin, I., Chowdhury, M. R. K., & Tarofder, A. K. (2023). Applied artificial intelligence: Acceptance-intention-purchase and satisfaction on smartwatch usage in a Ghanaian context. *Heliyon*, 9(8).
- Vázquez-Martínez, U. J., Morales-Mediano, J., & Leal-Rodríguez, A. L. (2021). The impact of the COVID-19 crisis on consumer purchasing motivation and behavior. *European Research on Management and Business Economics*, 27(3), 100166.
- Wang, P., Li, K., Du, Q., & Wang, J. (2018). Customer experience in AI-enabled products: Scale development and validation. *Journal of Retailing and Consumer Services*, 76, 103578.
- Zhang, X., & Dahu, W. (2019). Application of artificial intelligence algorithms in image processing. *Journal of Visual Communication and Image Representation*, 61, 42–49.