

The Impact of Review Quantity, Olfactory and Mental Imagery Vividness on Perceived Review Helpfulness and Consumers' Perfume Online Purchase Intention

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ARTICLE INFO	ABSTRACT
Received: 29 Dec 2024	<p>This paper explores the influence of review quantity, olfactory cues, and mental imagery vividness on perceived review helpfulness and consumers' intention to purchase perfume online. The study aims to offer insights into consumer behavior within the online perfume industry. Using descriptive quantitative research and non-probability purposive sampling, the study collected data from 377 online perfume consumers familiar with social media platforms. The analysis, conducted using Structural Equation Modelling (SEM) with Smart-Partial Least Square (Smart-PLS), revealed significant associations between olfactory imagery vividness, mental imagery vividness, perceived review helpfulness, and online perfume purchase intention. Olfactory and mental imagery vividness were found to influence perceived review helpfulness and purchase intention positively. However, review quantity significantly influences purchase intention directly but does not impact purchase intention through perceived review helpfulness, contrary to previous literature.</p> <p>Keywords: Online consumer behavior, review quantity, olfactory imagery vividness, mental imagery vividness, perceived review helpfulness.</p>
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INTRODUCTION

The internet and technological advancements since the 1960s have transformed commerce into e-commerce, shifting traditional practices [1]. E-commerce is gaining traction globally, with Indonesia experiencing rapid growth in online transactions [2]. Selling products or services nowadays does not require a physical store. Convenience is a key motivator for online shopping, as seen in the perfume industry, where fragrance enthusiasts increasingly turn to online platforms [3]. However, online shopping for perfumes can be challenging due to the difficulty in conveying scent characteristics if the fragrance is not physically present [4]. A study found that consumers view online perfume shopping favorably for convenience [5], despite initial risk perceptions.

However, consumers struggle to physically experience the scent before purchasing, potentially misinterpreting the scent. Scent is a key product feature essential for the consumer experience, since customers frequently want to smell the goods before purchasing [4]. On the contrary, it is argued that perfume lacks research in online buying, pushing buyers to seek knowledge from other sources [6]. However, there is a significant gap in the influence of customer-generated information, particularly online reviews. Online reviews significantly influence purchase intentions [7]. Technological advances allow reviews not limited to textual data, but to include visual elements such as images and videos. Visual review elements like images and videos could increase appeal and positively influence self-brand

associations [8]. It is demonstrated that sensory information can be conveyed through other modalities, such as translating music to light or color [9].

Perfumes require olfactory involvement [10]. Advertisers struggle to leverage olfactory stimulation without the actual scent, making virtual olfactory imagery crucial [11]. This involves mentally simulating sensory experiences, which can evoke positive or negative reactions based on individual sensitivity [12]. A study found that vivid scent images can lower purchase intention [13]. Mental imagery suggests consumers create vivid images when processing information [14].

Often considered the most evocative sense, Olfaction is challenging to translate digitally. This study aims to understand how vivid olfactory imagery, conveyed through language or visual aids, enhances the impact of online reviews. The study explores the intricate relationship between words, images, and olfactory experiences to provide a richer understanding of online reviews. The goal is to unravel the dynamics influencing perceived helpfulness and consumer behavior, offering valuable insights to academia and the perfume industry. The extent to which online reviews influence purchase intention depends mainly on the perceived usefulness of reviews, measured by the information value of reviews [15]. Existing research primarily examines factors influencing purchase intentions from the seller's perspective. Still, there is a notable gap regarding the influence of customer-generated content, especially online reviews, which include review quantity, olfactory imagery vividness, and mental imagery vividness. This study aims to bridge this void by examining the impact of consumer reviews on consumers' behaviors and intentions regarding online perfume purchases. Bridging this gap is pivotal for perfume brands and advertisers who want to effectively adapt their strategies to different consumer segments and optimize online perfume sales.

LITERATURE REVIEW

Purchase Intention

Predicting or planning a future action or having the intention to believe and convert that belief into a purchasing behavior, is known as purchase intention [16]. Purchase intention, primarily online, has been frequently used as the foundation of many purchasing behavioral studies [17]. When customers develop brand preferences and assessments during the evaluation phase of purchasing decisions, buy intention takes place [18]. When consumers incorporate information into their purchase decision process, it forms a flow that influences their consideration and ultimately leads to purchase intention [19]. However, people's intentions about their purchases may not always match up with their actual behavior, especially when it comes to unplanned purchases that occurred around the time the intentions were examined [20]. In the online environment, individuals are impacted by various factors associated with purchasing and their interactions within internet platforms before purchasing [21].

People always have trust before buying something [22]. Trust is shown in the quality and availability of the seller's product. In contrast, brand trust means that a brand remains reliable and always thrives to satisfy consumers. Researchers state that brand trust is a precursor to willingness to purchase [23]. Purchase intention can play a mediating role in influencing online shopping behavior, including positively influencing purchase decisions [24]. However, consumer-perceived risk concerns include security, financial, product, psychological, and time hazards, which significantly negatively influence online purchase intentions [25].

Review Quantity

Review quantity refers to the total reviews a product received [26]. The number of reviews increases the exposure of market placement and evaluation regarding a product/service, substantially impacting consumers' perceptions of online review usefulness. The more reviews there are, the more likely consumers will find the information they seek [27]. Online reviews influence the adoption of high-risk products because they are regarded as more reliable than firm advertising messaging. For instance, customers' propensity to buy online mental health services is positively impacted by their overall perception of the reliability of online reviews. [28]. According to the current study, the quantity of reviews will favorably affect perceived helpfulness for the following reasons: First, consumers look for further information to lessen ambiguity when they have questions about a product or its effects. Second, the number of reviews shows the popularity of a product, as it implies that more people have purchased the product [30]. Therefore, many reviews increase the review helpfulness.

H1: Review quantity has a significant correlation with review helpfulness

Online reviews from customers who have purchased it influence purchasing decisions [31]. Online reviews reflect consumers' perceptions of product quality and value, which may affect the decision to purchase it online. Many online reviews can decrease consumers' fear and uncertainty while indicating that the product is popular [32]. Review amount substantially affects purchase intention; if there is a high volume of good reviews, which are seen as non-sponsored recommendations, they offer consumers a more positive attitude toward the brand, leading to increased purchase intention [33]. A study found that review quantity affects online purchase intention [34]. This demonstrates that review quantity has a substantial impact on buying intention. However, there is little research on the effect of review quantity, specifically in an online setting for experience products like perfume.

*H2: Review quantity has a significant correlation with perfume online purchase intention***Olfactory Imagery Vividness**

Olfactory imagery involves creating an experience that mirrors the physical sensation of smell, either with or without actual sensory input [35]. In scented products like fragrances, scent is crucial, often being the primary reason for purchase [36]. Marketers strategically manage scent using brand names that convey the product's aroma. However, the naming strategies for these products remain unclear. For example, brands like Caress use abstract names such as "Tempting Whisper," while Herbal Essences uses more specific descriptors like "Rose" and "Passionflower" [13].

Scent perception is influenced by verbal cues, according to olfactory literature [37]. Verbal cues, such as "parmesan cheese" or "vomit," alter perceptions; positive signals, and vice versa enhance pleasant odors [38]. To elicit olfactory imagery, or "the ability to experience the sensation of smell when an appropriate stimulus is absent," the names of this scent brand operate as a positive linguistic cue [11]. Therefore, the review's helpfulness and shared positive verbal cues will increase.

H3: Olfactory imagery vividness has a significant correlation with review helpfulness

This study examines the relationship between olfactory imagery vividness and online perfume purchase intention. Olfactory imagery might be either vague or distinct. Depending on how accurately the perfume names depict the actual aroma, customers will use olfactory images to anticipate the scent. A study found that naming known (vs. unfamiliar) scent brands boosts consumers' olfactory imagery, which leads to purchase intention because general scent names are a safer (and more vivid) choice [13].

*H4: Olfactory imagery vividness has a significant correlation with online perfume purchase intention***Mental Imagery Vividness**

Mental imagery is crucial for influencing consumer behavior through perceptions of information [39]. It involves visual processing, where product visuals help consumers vividly imagine abstract objects [40]. With its visual emphasis, social media leverages mental imagery more than other forms of information [41].

A study found that mental imagery from sensory product experiences aids decision-making by affecting emotions and perceived ownership [42]. Mental imagery impacts decision-making more than sensory experience, boosting purchase likelihood—a concept applicable to perfume through consumer reviews [43].

H5: Mental imagery vividness has a significant correlation with review helpfulness

Mental imagery quality includes vividness, intensity, and clarity of the images. Higher mental imagery quality will cause stronger feelings and positive behavior. A more positive brand perception will increase purchase intention [45]. Mental imagery has a mediating role in product presentation, specifically video, in consumers' purchase intention [46]. This supports the idea that mental imagery vividness will increase online purchase intention.

*H6: Mental imagery vividness has a significant correlation with online perfume purchase intention***Perceived Review Helpfulness**

Perceived review helpfulness is the tendency of a review to assist readers in assessing the information [47]. Purchase intention is when consumers are interested in purchasing a product [48]. A study found that online reviews' usefulness in the context of travel app usage could boost attitudes and trust and motivate behavioral intention toward

the product [49]. The study showed that positive online reviews, which improve attitudes and levels of trust, positively influenced consumers' inclinations to use platforms.

H7: Perceived review helpfulness has a significant correlation with online perfume purchase intention

Even though many customers look to reviews for advice before purchasing, not all suggestions are trustworthy. Studies have shown that source, text congruence, customer ratings, and review valence influence purchasers' evaluations of a review's reliability and utility. Despite having access to many reviews and tools for identifying popular ones, nothing is known about the relationship between a review's reliability and purchase intention [50]. Consumers frequently use reviews to justify purchases, and their intention to buy increases as the number of reviews rises.

H8: Perceived review helpfulness mediates review quantity on online perfume purchase intention

What consumers perceive with their senses may be interpreted differently. However, more objective inputs exist, such as the product's quality features [51], description, and technical details [52]. Studies have shown that more specific reviews are more helpful [53]. Prior research has revealed that review attributes that boost consumer approval are primarily objective and include the tangible qualities and features [54]. Conversely, some contended that consumers' perceptions, judgement, and behavior are not always influenced by their sense [55]. We propose that buyers expect subjective sensory reviews, which lowers the helpfulness of the reviews and subsequent purchase intention.

H9: Perceived review helpfulness mediates olfactory imagery vividness on online perfume purchase intention

Online customer reviews and purchase intention correlate, with the product's mental image as a mediator. Another study found that mental imagery mediates the effect of product presentation visuals on purchase intention [46]. This study believed that mental imagery would increase visual information in consumers' reviews, increasing review helpfulness and, in turn, purchase intention.

H10: Perceived review helpfulness mediates mental imagery vividness on online perfume purchase intention

Conceptual Model

The conceptual model depicted in Figure 1 highlights the relationships between variables influencing purchase intention. The model examines how Review Quantity, Olfactory Imagery Vividness, and Mental Imagery Vividness Impact Perceived Review Helpfulness, which affects Purchase Intention. Hypotheses (H1–H10) represent the potential direct and indirect effects among these variables, with pathways connecting the constructs to demonstrate these interrelations.

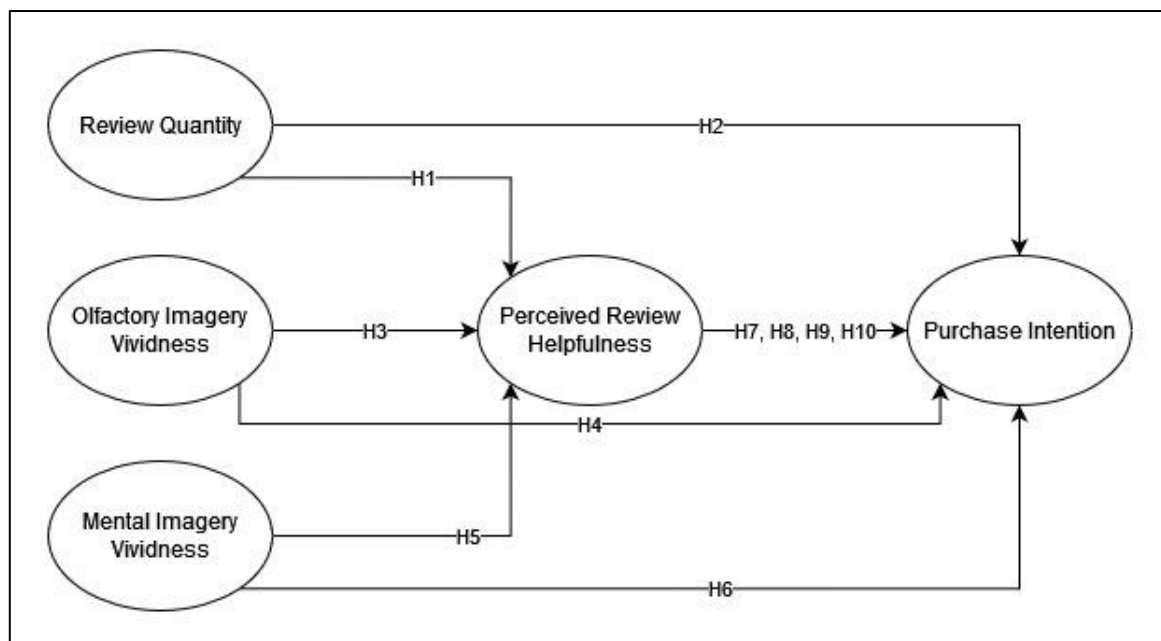


Figure 1 Conceptual Model

METHODOLOGY

The study aims to examine the impact of olfactory imagery vividness and hybrid reviews on the helpfulness of reviews and the intention to purchase perfume online. Using a quantitative, descriptive approach guided by post-positivism, this research will explore the relatively understudied area of perfume purchasing.

The study will employ a descriptive methodology in a typical environment with little intervention. Using a quantitative technique, the studied phenomenon will be described, explained, predicted, or controlled [56]. The data collection will be cross-sectional and non-contrived to minimize bias, collecting information just once. A questionnaire will be utilized to quantify consumers' responses [57] to ensure systematic data collection for statistical validity.

Proposed Sampling Method/ Procedures and Sample Size

This study employs non-probability purposive sampling due to limited accessible data, targeting online perfume buyers who base decisions on olfactory imagery. Participants must be at least 17 years old, live in JABODETABEK, and be active on social media platforms like Instagram and TikTok. The focus is on those with online shopping experience who have considered purchasing perfume online at least once. With Indonesia's social commerce rapidly growing, reaching an estimated GMV of \$25 million in 2022 [58], the study aims at least 300 participants to gain key insights into the impact of hybrid reviews and olfactory imagery vividness on review helpfulness and purchase intentions.

Method of Data Collection and the Technique of Data Collection

The primary application of questionnaires is data collection from previous studies [59]. The questionnaire have two sections: the first will cover demographics, internet shopping, social media use, and online perfume purchases, while the second will measure the tested variables, including items modified for review quantity and online purchase intention from Cheong et al. [60], mental imagery vividness from Huang & Ha [41], olfactory imagery vividness from Alkasasbeh & Ghinea [61] with additional review examples, and review helpfulness from Li et al. [53]. The items will be evaluated using a five-point Likert scale, with the scale from strongly disagree to strongly agree. The questionnaire will be sent via email and social media to ensure a wider audience.

Proposed Data Analysis

The questionnaire is pre-tested on 40 online perfume purchasers to ensure clarity. Before data analysis and hypothesis testing, the study will evaluate reliability and validity. Reliability assesses coherence and consistency [62], while validity determines whether the scale's expressions produce measurements appropriate for the study's purpose. [63]. Data is analysed using Smart-PLS, a variation-based SEM model [64]. Smart-PLS is suitable for this study as the sample size is considered small [65].

RESULTS AND DISCUSSION

Data Validation and Analysis

Respondents' characteristics

Table 1 displays the profiles of the respondents who completed the questionnaire. A total of 377 responses were received; however, only 311 were processed further, as 66 respondents were excluded for providing incorrect replies. The bulk of respondents (61%) were female. Their ages ranged from 23 to 30 (73%). They worked as private employees (47%), and their average monthly expenses were between IDR 5 and 10 million (42%).

Table 1 Respondents Demographics

Demographics		
Variables	Number	Percentage (per cent)
<i>Gender</i>		
Male	122	39
Female	189	61
<i>Age (years)</i>		
17-22	56	18
23-30	227	73
31-40	19	6
>40	9	3
<i>Occupation</i>		
Student	62	20
Entrepreneur	56	18
Government Employee	28	9
Private Employee	147	47
Others	18	6
<i>Monthly Expenses</i>		
< IDR 5 mil.	118	27
IDR 5 mil. - IDR 10 mil.	116	42
IDR 10 mil. - IDR 20 mil.	53	3
> IDR 20 mil.	24	22

Table 2 displays the respondents' preferences for social networking, online shopping, and e-commerce. According to 64% of respondents, Instagram is the most popular social networking platform, and 60% prefer Shopee for online shopping. Furthermore, 89% of respondents preferred internet shopping to offline shopping (11%).

Table 2 Respondents' Preferences

Preferences		
Variables	Number	Percentage (per cent)
<i>Social Media</i>		
Facebook	8	3
Instagram	200	64
TikTok	94	30
Twitter	9	3
<i>E-commerce</i>		

Preferences		
Variables	Number	Percentage (per cent)
Lazada	5	2
Shopee	186	60
Tokopedia	120	39
<i>Shopping Method</i>		
Offline	34	11
Online	277	89

Table 3 shows the respondents' online exposure to perfume. Based on the results, 39% of respondents often explore perfume in social media, 28% opted for occasionally, 23% opted for very often, 9% opted for rarely, while the rest never explore perfume in social media (1%). In the meantime, 43% of the respondents often explore perfume in e-commerce, while 25% of them occasionally explore, 20% very often, 11% rarely, and 1% never explore perfume in e-commerce. The results also show that most of the respondents who have purchased perfume online (92%) feel motivated to purchase after being exposed to a review in social media.

Table 3 Online Exposure to Perfume

Perfume Online Exposure		
Variables	Number	Percentage (per cent)
<i>Explore Perfume in Social Media</i>		
Very often	73	23
Often	121	39
Occasionally	86	28
Rarely	28	9
Never	3	1
<i>Explore Perfume in E-commerce</i>		
Very often	62	20
Often	134	43
Occasionally	79	25
Rarely	34	11
Never	2	1
<i>Social Media Reviews to Purchase Motivation</i>		
Yes	287	92
No	24	8

Figure 2 illustrates that 257 respondents to the poll stated that product reviews were the most crucial consideration when purchasing perfume online. While competitive price and convenience in online shopping also play a role, Figure 3 shows that 239 respondents thought trust in online reviews and recommendations were the primary reasons for purchasing perfume online. Figure 4 shows respondents' concerns about purchasing perfume online, with the inability to smell the fragrance before buying.

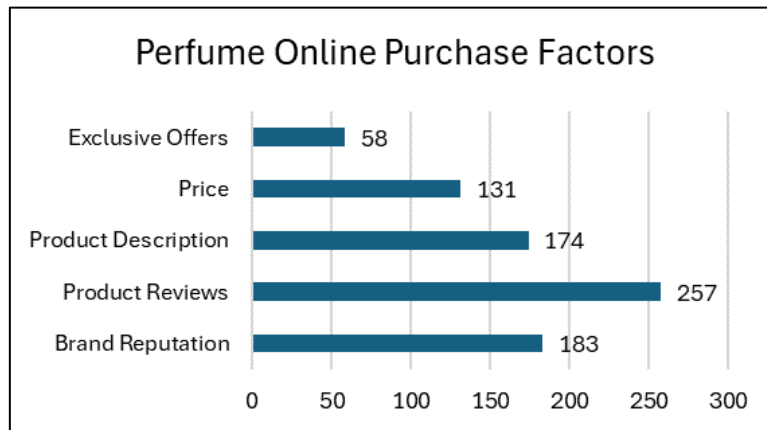


Figure 2 Perfume Online Purchase Factors

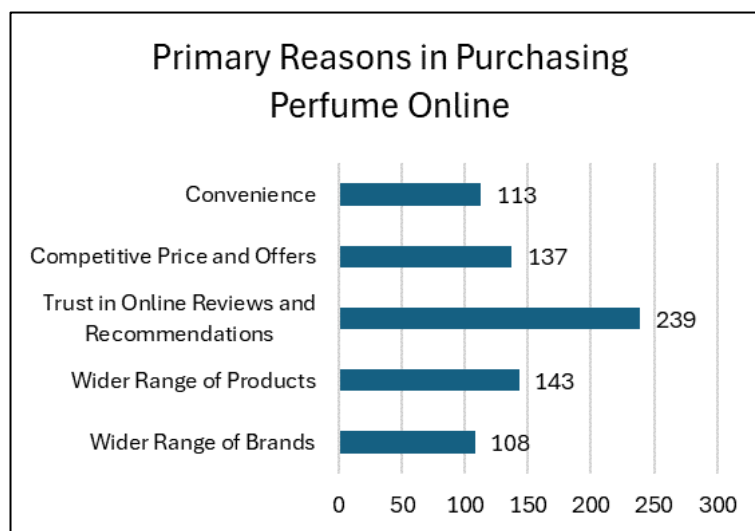


Figure 3 Primary Reasons in Perfume Online Purchase

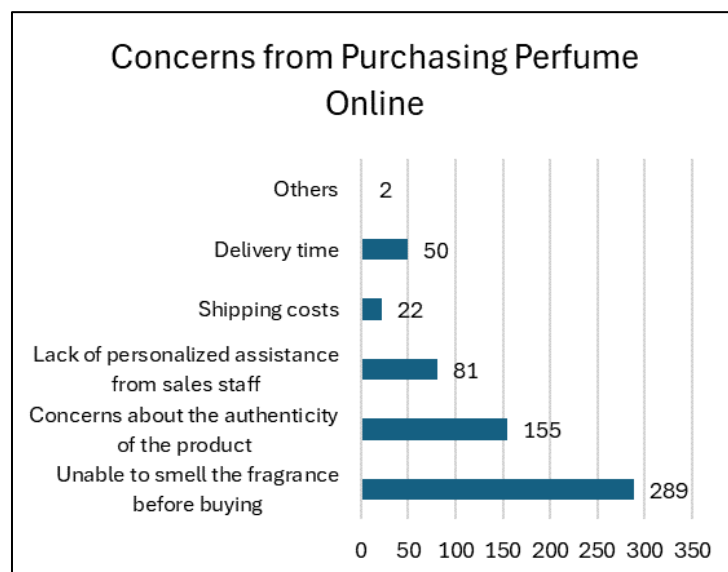


Figure 4 Concerns from Purchasing Perfume Online

When assessing the measurement model's validity and reliability, the first step is using a reflective measurement model, [66]. This involves examining: (1) construct reliability, (2) indicator reliability (loadings), (3) convergent validity, and (4) discriminant validity. A loading indicator with score above 0.7 illustrates that the construct explains over 50% of the variance [67]. In Table 4, most items exceed 0.708, but two items MIV2 (0.663) and RQ1 (0.679) fall below 0.705 but remain above 0.5.

Table 4 Outer Loadings

Indicator	MIV	OIV	PI	PRH	RQ
MIV 1	0.739				
MIV 2	0.663				
MIV 3	0.766				
MIV 4	0.761				
MIV 5	0.817				
OIV 1		0.79			
OIV 2		0.74			
OIV 3		0.77			
OIV 4		0.75			
OIV 5		0.84			
PI 1			0.8		
PI 2			0.74		
PI 3			0.8		
PI 4			0.73		
PI 5			0.82		
PRH 1				0.84	
PRH 2				0.83	
PRH 3				0.78	
RQ 1					0.68
RQ 2					0.71
RQ 3					0.81
RQ 4					0.71
RQ 5					0.82

The mean of the squared loadings for each indicator that is affixed to the build yields the value of AVE [67]. If both items' AVE values exceed or equal to 0.5, they are still considered legitimate. Item MIV2 and RQ1 are deemed genuine since all the AVE values in Table 5 are more than 0.5. All the items are considered as valid because, on the whole, the outer loadings and AVE values have satisfied the convergent validity criterion.

Table 5 Convergent Validity

Construct	Average variance extracted (AVE)
Mental Imagery Vividness	0.564
Olfactory Imagery Vividness	0.603
Purchase Intention	0.609
Perceived Review Helpfulness	0.664
Review Quantity	0.56

The minimum acceptable Cronbach's alpha must reach 0.7 or greater to indicate whether all items are reliable [68]. Each variable in Table 6 is deemed reliable if it has a composite reliability of more than 0.7 and a Cronbach's alpha value of more than 0.7.

Table 6 Construct Reliability

Construct	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)
Mental Imagery Vividness	0.807	0.808	0.866
Olfactory Imagery Vividness	0.835	0.837	0.883
Purchase Intention	0.839	0.844	0.886
Perceived Review Helpfulness	0.747	0.754	0.856
Review Quantity	0.801	0.808	0.863

Structural Model Assessment

The discriminant validity approach quantifies how well indicators represent variables and their correlations [67]. It can be assessed using the Fornell-Larcker criterion and by examining cross-loadings [69]. Under Fornell-Larcker conditions, each variable's AVE root value must exceed its correlation with other variables. Table 7 shows that all constructs' AVE root values are higher than their correlations, thus meeting the Fornell-Larcker criteria and confirming their validity.

Table 7 Discriminant Validity – Fornell-Larcker

Construct	MIV	OIV	PI	PRH	RQ
MIV	0.751				
OIV	0.607	0.777			
PI	0.645	0.698	0.781		
PRH	0.614	0.677	0.689	0.815	
RQ	0.489	0.666	0.649	0.513	0.748

Another measure for assessing the discriminant validity of variables is the Heterotrait-Monotrait Ratio (HTMT). For the HTMT test criteria, any value beyond 0.90 suggests the existence of discriminant validity issues [70]. Table 8 demonstrates that every construct is considered valid since none of the values exceed 0.90.

Table 8 Discriminant Validity – HTMT

Construct	MIV	OIV	PI	PRH	RQ
MIV					
OIV	0.723				
PI	0.753	0.83			
PRH	0.777	0.854	0.866		

RQ	0.583	0.81	0.789	0.659
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Bootstrapping with 5,000 subsamples at a 0.05 significance level was performed using an accelerated and bias-corrected method. Table 10 shows direct effects between latent variables. To determine if Perceived Review Helpfulness (PRH) mediates, assess the direct impact from the independent variable to PRH and from PRH to the dependent variable. Significant mediation is indicated if both effects are substantial.

Path coefficients fall within the range of -1 to +1, with values near +1 indicating a strong positive relationship and near -1 reflecting a strong negative relationship [67]. All paths, except from Review Quantity (RQ) to PRH, have a t-value above 1.645 and a p-value below 0.05, indicating significance. Valid hypotheses show positive path coefficients in the 'Original Sample' column as seen on Table 9, signifying a significant positive effect, except for RQ to PRH.

Table 9 Path Coefficients

Effect	Original Sample	T statistics	P values
MIV -> PI	0.223	3.752	0.000
MIV -> PRH	0.313	4.33	0.000
OIV -> PI	0.194	2.35	0.019
OIV -> PRH	0.444	6.41	0.000
PRH -> PI	0.285	4.456	0.000
RQ -> PI	0.264	4.547	0.000
RQ -> PRH	0.064	0.911	0.362

Table 10 demonstrates that two mediation hypotheses exhibit significant effects, as indicated by t-values greater than 1.645 and p-values less than 0.05. Both demonstrate a strong positive influence, as indicated by the positive coefficients in the "Original Sample" column as shown in Table 10. However, there's no direct effect from RQ to PRH, and PRH does not mediate the relationship between RQ and PI.

Table 10 Special Indirect Effects

Effect	Original Sample	T statistics	P values
MIV -> PRH -> PI	0.089	2.798	0.005
OIV -> PRH -> PI	0.127	4.03	0
RQ -> PRH -> PI	0.018	0.917	0.359

Research Findings

Overall findings

As shown in the Research Final Model (Figure 5), the quantity, scent description, and vividness of reviews significantly influence online perfume purchase intentions among Indonesians aged 17 and above in the JABODETABEK area. The model explains 64.7% of the variation. Meng et al. [13] and Al-Abbadi et al. [45] study supported this finding, showing that perceived review helpfulness is the most significant factor influencing purchase intention, with a coefficient of 0.245. Researchers Turulja & Činjurević [49] and Huyen & Costello [33], who validated the results and asserted that the perceived helpfulness of the review had a significant influence on purchase intention.

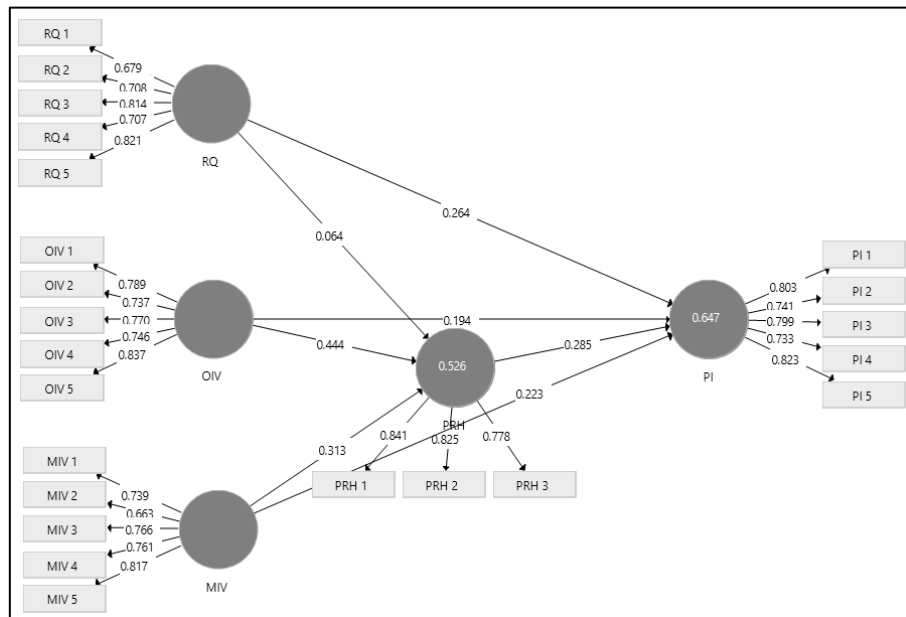


Figure 5 Final Model

Among the five indicators of the dependent construct, PI5, or "Greater number of helpful reviews," scored the highest at 0.823, making it the most influential factor in customers' online perfume purchases. This was followed by "Reading reviews" (0.803), "Detailed and informative reviews" (0.799), "Favorable reviews" (0.741), and "Product knowledge from reading reviews" (0.733). This suggests that consumers are more likely to buy perfumes with numerous detailed reviews. Therefore, e-commerce sites should prioritize review quality and quantity to build customer trust and boost conversion rates.

Status of Findings

The research findings do not support Hypothesis 1, as review quantity does not impact perceived helpfulness, with a p-value of 0.354. This contradicts previous studies by Lee & Koo [29] and Jeong & Koo [30]. However, findings supported Hypothesis 2, showing that review quantity significantly correlates with perfume online purchase intention (0.264). According to Table 10, review quantity positively affects purchase intention, aligning with studies by Aljahdali et al. [32], Huyen & Costello [33], and Lee et al. [34]. However, previous results are not in the olfactory or experience product like perfume in online settings.

The research findings supported Hypothesis 3, "Olfactory imagery vividness has a significant correlation with review helpfulness." The findings indicated that olfactory imagery vividness emerged as the most significant construct (0.444) that contributes to perceived review helpfulness. Table 10 shows that vivid olfactory imagery has a significant positive effect on review helpfulness. This finding is aligned with previous studies conducted by Herz & Von [38] and Stevenson & Case [11], where a verbal cue highlights the scent's brand name and activates olfactory imagery vividness.

The research findings supported Hypothesis 4: "olfactory imagery vividness significantly correlates with online perfume purchase intention." However, the results indicated that olfactory imagery vividness was the least significant construct (0.194) contributing to online perfume purchase intention. As shown in Table 10, olfactory imagery vividness has demonstrated a positive and significant impact on online perfume purchase intentions, aligning with findings from a previous study [13], where assigning scent brand names increases consumers' formation of olfactory imagery and perceived as a safer choice, which will lead to purchase intention.

The research findings supported Hypothesis 5: "Mental imagery vividness significantly correlates with review helpfulness." The results indicated that mental imagery vividness was the second most significant construct (0.313) contributing to perceived review helpfulness. As shown in Table 10, mental imagery vividness has a significant positive effect on perceived review helpfulness. This finding aligns with a previous study conducted by Kim et al. [42], Huang & Ha [41], and Shahriari et al. [43]. All previous findings are not in the context of perfume products; therefore, they cannot be applied to perfume marketing strategies through consumers' reviews.

The research findings supported Hypothesis 6, “Mental imagery vividness has a significant correlation with online perfume purchase intention.” The results revealed that mental imagery vividness was the third most significant construct (0.223) contributing to online perfume purchase intention. As shown in Table 10, mental imagery vividness has a significant positive effect on online perfume purchase intention. This finding corresponds with a study conducted by Ha et al. [44] and Al-Abbadi, et al. [45], where a higher mental imagery vividness will lead to a stronger purchase intention.

The research findings supported Hypothesis 7, showing that “Perceived review helpfulness has a significant correlation with online perfume purchase intention.” The results indicated that perceived review helpfulness (0.285) is the most significant factor influencing online perfume purchase intention. This result aligns with a previous study [49], which found that review helpfulness positively affects consumer intention to download travel apps. Despite the industry difference, this consumer perspective applies to perfume marketing strategy.

The research findings did not support Hypothesis 8, “Perceived review helpfulness mediates review quantity on online perfume purchase intention.” Table 10 indicated that perceived review helpfulness does not have an impact on mediating the relationship between review quantity and online perfume purchase intention. This finding has been shown to contradict a previous study where several reviews determined the product’s popularity and the intention to buy the product by telling themselves, “Many other people also bought the product.” [50].

The research findings supported Hypothesis 9, “Perceived review helpfulness mediates olfactory imagery vividness on online perfume purchase intention.” Table 10 confirms that perceived review helpfulness significantly mediates this effect. This aligns with Li et al. [53] and Huang & Liang [54], who found that concrete reviews are more helpful. Consumers often rely on reviews over their senses, making reviews crucial in shaping consumer perceptions [55].

The research findings supported Hypothesis 10, “Perceived review helpfulness mediates mental imagery vividness on online perfume purchase intention.” Table 10 reveals that perceived review helpfulness has a significant positive effect in mediating the relationship between mental imagery vividness and online perfume purchase intention. This finding is consistent with a previous study [45], which suggests that the mental image of a product serves as a mediator linking online consumer reviews and purchase intention. The finding also aligns with another study [46], where mental imagery mediates the relationship between visual product presentation and purchase intention.

Contribution to Theory

With a focus on perfume as an olfactory product with its limits, this study significantly advances previous theory by evaluating the interaction between several components in the context of online customer behavior. This study, which focuses on perfume purchases online, clarifies results of other research [33] [46] in a different context, focusing on perfume online purchases. Therefore, this study will provide valuable insights to enrich existing theories related to consumer behavior, online reviews, sensory imagery, and purchase intention.

Limitations

Non-probability purposive sampling may introduce bias and not fully represent online perfume buyers. Cross-sectional data collection prevents determining causal links over time, highlighting the need for future longitudinal studies. Focusing specifically on the JABODETABEK area in Indonesia may restrict the findings' generalizability to other regions that exhibit different consumer behaviors and cultural contexts.

Recommendation for Future Research

Future research should address the study limitations and expand understanding of online customer behavior and perfume purchase intention. Researchers could adopt mixed methods that combine qualitative and quantitative approaches to gain deeper insights. Longitudinal studies tracking consumer behavior changes could establish causal relationships and identify trends. Expanding the study's geographic reach and considering cultural backgrounds will enhance external validity. Additionally, exploring how individual differences, such as personality traits or sensory preferences, affect online perfume purchasing could provide valuable insights for targeted marketing.

CONCLUSION

This research revealed the complex dynamics of online perfume purchases, emphasizing the influence of review quantity and olfactory imagery vividness. Significant correlations and mediating effects among the variables were found, highlighting the role of perceived review helpfulness and olfactory imagery in purchase decisions. The research explained the interplay between olfactory and mental imagery vividness, review helpfulness, and purchase intention, enhancing our understanding of customer decision-making in online perfume purchases.

While review quantity impacts purchase intention, review helpfulness is more influential. Mental imagery vividness strongly predicts review helpfulness and purchase intention, highlighting the importance of cognitive processes in consumer engagement and decision-making. The findings validate hypotheses and clarify mediating effects, providing marketers with actionable insights to refine their online strategies and enhance consumers' sensory and cognitive experiences.

Author Contributorship

Elvira Maidiono: Conceptualization, Writing – original draft, Supervision, Project administration. **Lisa Riandi:** Data curation, Formal analysis, Writing – review & editing. **Naufal Wiratama:** Investigation, Literature review, Writing – review & editing. **Dr. Evi Rinawati Simaniuntak, MM.:** Supervision, Methodology, Critical review, Final editing.

Data Availability

The authors: Elvira Maidiono, Lisa Riandi, Naufal Wiratama, and Dr. Evi Rinawati Simanjuntak, MM. we demonstrate our commitment to data openness and transparency. To facilitate further research, we have made the data used in their study publicly available.

Dataset is available from the Zenodo Repository, DOI: 10.5281/zenodo.15019564

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