

## Measuring tools for analyzing influencing social media marketing and EWOM via TIKTOK application on purchase intention

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### Abstract

Social media marketing refers to brand-driven efforts to engage with audiences through digital platforms, while eWOM represents consumer-generated opinions and experiences shared online, which are often perceived as more authentic and trustworthy. This study aims to develop and conduct a pilot test of a measuring tool designed to analyze the influence of social media marketing (SMM) and electronic word of mouth (eWOM) through the TikTok application on consumer purchase intention. A total of 30 participants were selected for the pilot test to evaluate the reliability and validity of the instrument. The pilot test reveals in measuring the material data which consist of 7 constructs and 33 items proposed that are valid and reliable. This study can be proposed measurement material for further.

**Keyword:** Social Media Marketing; eWOM, Tiktok; Purchase Intention; Pilot Test

### 1. Introduction

The rapid evolution of social media platforms has fundamentally reshaped the landscape of consumer-brand interaction. Among these platforms, TikTok has emerged not merely as a social entertainment space but as a highly influential marketing channel, especially within the beauty and skincare sectors. With its unique algorithm and short-form video format, TikTok enables brands to reach vast audiences and foster community engagement in real time. In Indonesia, where the platform enjoys one of the largest user bases globally, the potential for digital marketing—particularly in the beauty industry is significant. However, despite these opportunities, the actual conversion of social media engagement into purchase behaviour remains inconsistent and, in some cases, underwhelming.

The case of Skin Game, a local skincare brand with an active presence on TikTok, illustrates this dilemma. Although the brand has implemented various social media marketing strategies, such as educational content and inclusive campaigns, it has yet to achieve sales figures commensurate with its digital engagement levels. This disparity signals a broader issue that is insufficiently addressed in existing scholarship: what mechanisms underpin the relationship between social media marketing efforts, electronic word of mouth (eWOM), and actual purchase intention.

Previous studies have established that social media marketing (SMM) and electronic word of mouth (eWOM) can influence purchase intention, yet the mechanisms through which these variables interact—especially within the specific context of TikTok—remain under-researched (Erkan & Evans, 2016; Salhab et al., 2023). This approach not only enhances the adoption of information but also contributes to strengthening consumers' purchase intentions (Prasetyo et al., 2024). For instance, the study on Traveloka, a leading e-Tourism platform in Indonesia, demonstrates that social media marketing through platforms like Instagram effectively enhances brand awareness, brand image, and consumer loyalty, which are mediating factors influencing purchase decisions (Daffa et al., 2024).

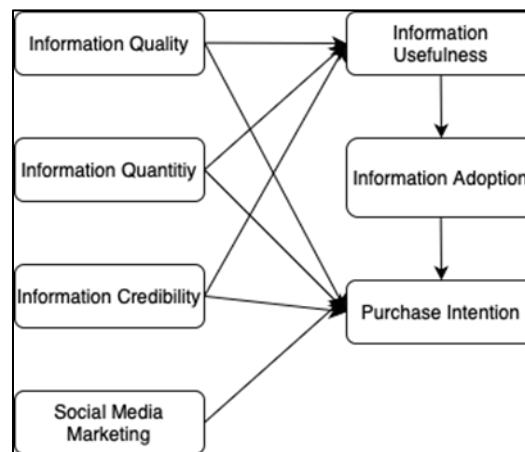
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Recent studies, including the article by (Rachmat Ramadhani & Ariyanti, 2024), emphasize that social media marketing strategies—such as content entertainment, interactivity, trend participation, and personalized communication—play a crucial role in shaping brand perception and consumer intention. The article highlights that TikTok's features, including user-generated challenges and viral trends, amplify the dissemination of e-WOM, which directly impacts consumers' attitudes and behaviors toward brands and products. Much of the existing literature relies on generalized social media models, without accounting for platform-specific dynamics such as algorithmic exposure, user-generated content, and short-form video consumption. Moreover, there is limited empirical focus on the integration of SMM and eWOM with established theoretical frameworks such as the Information Adoption Model (IAM), particularly in emerging markets.

The research extends the IAM by incorporating relevant constructs from social commerce literature, offering both theoretical insights and practical tools for brands aiming to improve their digital marketing effectiveness. The study also proposes a measurement model tailored to the characteristics of TikTok-based consumer behaviour, enabling a more accurate assessment of marketing performance in this evolving digital environment.

## 2. Literature Review

The author uses and modified the theory Information Adoption Model (IAM) by Indrawati et al., (2023) explains how individuals process and adopt online information based on perceived usefulness and credibility. While IAM has been widely applied in digital contexts, it does not fully capture the dynamic and interactive nature of social media platforms such as TikTok. TikTok blends brand-generated content and user-generated content, creating a unique environment where consumer decisions are shaped not only by information quality but also by social influence. To address this, the present study extends the original IAM by incorporating Social Media Marketing (SMM) as an additional construct and focusing on electronic word of mouth (eWOM) as a central form of peer influence. This integrated approach is designed to better reflect how both brand-driven strategies and peer communication jointly influence purchase intention, particularly within the beauty sector. Figure 1 shows the proposed the antecedents and consequences model of this research.



**Figure 1** Research Framework

## 3. Methodology

To support the development of a robust measurement tool within this extended framework, this study conducts a series of validity and reliability tests. Validity testing includes content validity, face validity, reability, and a pilot test. According to Indrawati (2015), content validity assesses the logical correspondence between the items used and the variables being measured, and is conducted by adopting and modifying items previously published in relevant literature. Face validity was established through expert judgement by inviting feedback from specialists in marketing. Reability was tested by evaluating respondents' understanding of the questionnaire, ensuring clarity and comprehension prior to full-scale data collection. These steps aim to ensure that the measurement instrument is both theoretically sound and practically applicable for analyzing consumer behaviour on TikTok. Table 1 shows the items of questionnaire.

**Table 1** Items of Questionnaire

Variable	Items	Item Code
Information Quality	I can understand the information about Skin Game on TikTok	IQ1
	The information about Skin Game on TikTok is relevant to my needs	IQ2
	I believe the information about Skin Game on TikTok is based on facts	IQ3
	The information about Skin Game on TikTok explains the product characteristics	IQ4
	I think the information about Skin Game on TikTok is clear	IQ5
Information Quantity	I can rely on the large amount of information about Skin Game on TikTok	IQN1
	The quantity of information about Skin Game on TikTok helps me understand the product's performance	IQN2
	The large volume of information about Skin Game on TikTok proves that the product is safe to use	IQN3
Information Credibility	I find the information about Skin Game on TikTok convincing	IC1
	I think the information about Skin Game on TikTok is credible	IC2
	I believe the information about Skin Game on TikTok is trustworthy	IC3
	I think the information about Skin Game on TikTok is accurate	IC4
	I think the information about Skin Game on TikTok is reliable	IC5
Information Usefulness	I find the information about Skin Game on TikTok is useful	IU1
	I think the information about Skin Game on TikTok is informative	IU2
	The information about Skin Game on TikTok helps me evaluate the product	IU3
	The information about Skin Game on TikTok helps me become familiar with the product	IU4
Information Adoption	I learned something new about Skin Game through TikTok	IA1
	I accept the information about Skin Game presented on TikTok	IA2
	I accept brand recommendations for Skin Game found on TikTok	IA3
Social Media Marketing	TikTok content from Skin Game provides the information I need	SM1
	I like the advertisements posted by Skin Game on their TikTok account	SM2
	The content on Skin Game's TikTok is always relevant to current trends	SM3
Purchase Intention	I consider purchasing Skin Game in the future	PI1
	If I need skincare, I am likely to purchase Skin Game	PI2
	I will try Skin Game products	PI3

#### 4. Result

A pilot test was conducted with 30 respondents through an online questionnaire distributed via Google Forms. All participants were TikTok users based in Indonesia and were familiar with the Skin Game brand. The data collected were then analyzed using SPSS software. In this study, the researcher assessed validity using Pearson's correlation coefficient ( $r$ ). With a sample size of 30 and a significance level of 5% ( $\alpha = 0.05$ ), the critical value of  $r$  table is 0.36. In reliability testing, Cronbach's Alpha is used as the measurement indicator. If the alpha value is greater than 0.60, the instrument can be considered reliable (Sekaran & Bougie, 2016; Indrawati et al., 2022). The results of the pilot test present in the following Table 2.

**Table 2** Pilot Test Result

Item Code	CITC	CronchBach Alpha
IQ.1	0.724	0,736
IQ.2	0.715	
IQ.3	0.600	
IQ.4	0.720	
IQ.5	0.731	
IQU.1	0.786	0,648
IQU.2	0.873	
IQU.3	0.682	
IC.1	0.813	0,833
IC.2	0.744	
IC.3	0.795	
IC.4	0.868	
IC.5	0.691	
IU.1	0.779	0,862
IU.2	0.844	
IU.3	0.951	
IU.4	0.834	
IA.1	0.716	0,774
IA.2	0.943	
IA.3	0.843	
SMM.1	0.798	0,687
SMM.2	0.832	
SMM.3	0.723	
PI.1	0.909	0,922
PI.2	0.938	
PI.3	0.948	

The pilot test results indicate that all items in the questionnaire met the required standards for both validity and reliability. Using a CITC threshold of 0.36, all items across the seven measured constructs were found to be valid. In terms of reliability, all Cronbach's Alpha values exceeded 0.60, ranging from 0.648 to 0.922, which demonstrates acceptable to excellent internal consistency. These results confirm that the measurement instrument is both valid and reliable, and thus appropriate for use in the main study.

## 5. Conclusion

This study extends the Information Adoption Model (IAM) by incorporating Social Media Marketing (SMM) and Electronic Word of Mouth (eWOM) to explore their influence on consumers' purchase intention via TikTok, using the Skin Game brand as a case context. The findings from the pilot test confirm that the measurement instrument demonstrates both strong validity and reliability, making it suitable for further empirical investigation. By integrating constructs relevant to social commerce and digital branding, this research contributes to the theoretical development

of IAM and offers practical insights for marketers seeking to enhance brand engagement and conversion through short-form video platforms.

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## Compliance with ethical standards

### *Disclosure of conflict of interest*

No conflict of interest to be disclosed.

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