

The role of social media influencers in promoting sustainable consumption: An analysis of credibility and engagement factors

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Abstract. This study aims to analyze the influence of influencer credibility on social media engagement, intention to adopt sustainable behavior, and sustainable consumption. Using a quantitative approach, data were collected through an online survey targeting Indonesian social media users aged 17 and above who follow at least one influencer. A voluntary sampling method yielded 1,228 responses, which were analyzed using Structural Equation Modeling (SEM) to examine relationships among the key variables. The findings indicate that influencer credibility significantly impacts social media engagement, which, in turn, enhances users' intention to adopt sustainable behaviors and engage in sustainable consumption. However, this study is limited by its non-probability sampling method and cross-sectional design, which may affect the generalizability of the results. Future research should investigate various types of influencers and conduct longitudinal studies to evaluate long-term behavioral changes. This research contributes to the fields of influencer marketing and sustainability by integrating influencer credibility with sustainable consumer behavior. The findings offer valuable insights for marketers, policymakers, and content creators in promoting sustainability through digital platforms.

1 Introduction

Environmental degradation caused by climate change is closely linked to unsustainable consumption patterns, underscoring the importance of sustainable consumption as a key

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strategy for achieving sustainability. Among young consumers, environmental knowledge and concern play an important role in shaping pro-environmental attitudes that encourage more responsible consumption behavior [1]. Evidence from Indonesian consumers shows that individuals with higher levels of environmental knowledge tend to develop more positive environmental attitudes and a stronger intention to choose environmentally friendly products as part of sustainable consumption practices [1, 2]. In addition, green marketing strengthens consumers' intention to adopt more sustainable product choices [2].

The growing urgency of climate change and increasing pressure on natural resources have heightened awareness of the importance of sustainable consumption. A fundamental approach to addressing environmental problems related to resource use lies in the adoption of sustainable consumption and production patterns [3]. Sustainable consumption involves using goods and services that not only meet basic human needs but also minimize resource use, waste, and pollution to maintain environmental balance and ensure the well-being of present and future generations [4]. Consequently, the active involvement of consumers, businesses, and governments is crucial in supporting the transition toward more sustainable consumption patterns.

Currently, social media influencers have become key players in shaping public perceptions and behaviors [5]. They influence followers' purchasing intentions, attitudes, and sustainable behaviors through a combination of personal attributes, such as credibility and expertise, and content elements, including focus on environmental issues and the type of messages conveyed [6]. Furthermore, active engagement with audiences on digital platforms enables influencers to effectively encourage sustainable consumption and environmentally friendly lifestyle choices. This highlights the critical role of social media influencers in promoting more responsible consumer behavior.

The presence of social media influencers has significantly impacted consumption patterns, particularly in sustainability. Their credibility and content play a pivotal role in their success in educating and promoting more environmentally friendly products and habits [7, 8]. This study examines the role of social media influencers, specifically focusing on influencer credibility and social media engagement, in shaping individuals' intentions to adopt sustainable behavior and engage in sustainable consumption.

This research contributes to a deeper understanding of how social media influencers shape sustainable consumption habits, particularly in terms of credibility and audience engagement. From an industry and business perspective, the findings of this study can serve as a guideline for companies in the sustainable products and services sector to design more targeted marketing strategies through collaborations with influencers. Moreover, these insights can help businesses select the most effective influencers to enhance awareness and education about sustainable consumption.

2 Research method

2.1 Research design and timeline

This study employs a quantitative research approach, focusing on the measurement of specific variables to examine their relationships. An online survey was used to explore relationships among influencer credibility, social media engagement, intention to adopt sustainable behavior, and sustainable consumption. The research location was determined by the respondents' respective domiciles, as reported in the online questionnaire. The study was conducted in 2025.

2.2 Data collection

This study adopts a non-probability sampling method using a voluntary sampling approach, in which sample selection is based on respondents' willingness to participate and their fulfillment of predefined survey criteria. The criteria for respondents include Indonesian citizens aged 17 years and older who actively use social media and follow at least one social media influencer.

Indonesia has a large population of active social media users with substantial engagement across various digital platforms, particularly among younger demographics such as Generation Z, who frequently follow influencers for product recommendations and lifestyle inspiration.

The survey link was disseminated across multiple social media platforms, including Instagram, WhatsApp, Facebook, Twitter (X), and Telegram, to facilitate broad outreach. A total of 1,228 respondents participated in the study. This sample size exceeds the minimum recommended threshold for statistical analysis in survey-based research, thereby enhancing the stability and robustness of the findings. Given the large number of participants, the study achieved adequate statistical power to support reliable data analysis.

Prior to the main data collection, the instrument underwent validity and reliability assessment. Construct validity was examined using item–total correlation analysis to ensure that each item appropriately measured the intended construct. Reliability was evaluated using Cronbach's alpha, with values ≥ 0.70 considered acceptable. Only items that satisfied these criteria were retained in the final instrument.

While the online distribution strategy enabled efficient and extensive data collection, it relied on voluntary participation and non-probability sampling. Consequently, this approach may limit the representativeness of the sample and the generalizability of the findings to the broader population.

2.3 Research variables

This study analyzes several key variables, namely influencer credibility, social media engagement, intention to adopt sustainable behavior, and sustainable consumption. The influencer credibility variable is measured based on the instrument developed by Wiedmann and von Mettenheim [9], which identifies three indicators: trust in the influencer, the influencer's expertise in sustainable practices, and the influencer's attractiveness.

Next, social media engagement is assessed across three main aspects: frequency of interaction with influencer content, type of engagement (likes, comments, or content sharing), and depth of engagement with the influencer's content. This variable is measured using the model developed by Tafesse and Wood [10].

To measure individuals' intention to adopt sustainable behavior, two indicators are used: the plan to purchase sustainable products promoted by influencers and the willingness to adopt sustainable practices as recommended by influencers. Finally, the sustainable consumption variable is evaluated by examining whether individuals have purchased sustainable products recommended by influencers and have implemented the sustainable practices they have suggested. The authors developed these last two variables.

2.4 Research hypotheses

Based on the identified research variables, a conceptual framework was developed to illustrate the proposed relationships among influencer credibility, social media engagement, intention to adopt sustainable behavior, and sustainable consumption (see Figure 1). The framework assumes that influencer credibility directly influences social media engagement,

behavioral intention, and sustainable consumption, while social media engagement also affects behavioral intention and sustainable consumption. In addition, intention to adopt sustainable behavior is expected to directly influence sustainable consumption.

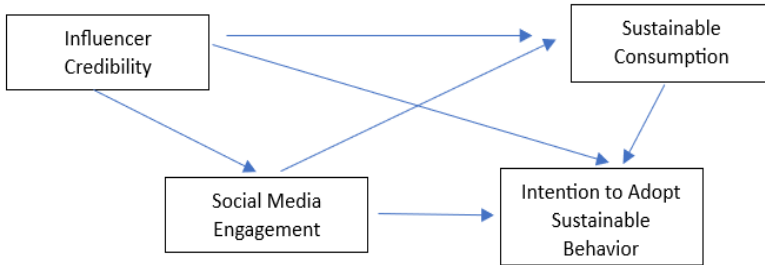


Fig. 1. Research framework

Accordingly, the following hypotheses are proposed:

- H1:** Influencer credibility has a positive effect on social media engagement.
- H2:** Influencer credibility has a positive effect on intention to adopt sustainable behavior.
- H3:** Influencer credibility has a positive effect on sustainable consumption.
- H4:** Social media engagement positively affects the intention to adopt sustainable behavior.
- H5:** Social media engagement has a positive effect on sustainable consumption.
- H6:** Intention to adopt sustainable behavior has a positive effect on sustainable consumption.

2.5 Research ethics

In this study, ethical considerations were upheld by ensuring informed consent before data collection and protecting the information provided by participants. Before data collection, each participant was given a clear and comprehensive explanation of the research objectives, the types of data collected, and how the data would be analyzed. Participants were also free to decide whether to participate and could withdraw at any time without consequences.

Regarding data security, all information obtained was securely stored to prevent misuse or unauthorized access. Only the researchers had access to the data, and security measures were in place to protect participants' confidentiality.

2.6 Data analysis

This study employs descriptive analysis and Structural Equation Modeling (SEM) to analyze the collected data. Descriptive analysis examines respondent characteristics. The primary goal of this research is to investigate the influence of influencer credibility, social media engagement, and intention to adopt sustainable behavior on sustainable consumption. The analysis is conducted using Structural Equation Modeling with Smart PLS.

Structural Equation Modeling was employed in this study because it enables the simultaneous examination of complex relationships among multiple latent variables while accounting for measurement error. Unlike traditional regression analysis, SEM allows the integration of measurement and structural models within a single analytical framework. This approach is particularly appropriate when the constructs under investigation are abstract and measured indirectly through multiple observed indicators.

3 Results and discussion

3.1 Respondent characteristics

The majority of respondents in this study were female (61.9%) and aged 17-20 years (74.7%). Regarding education, most respondents had completed high school (59%), while only a small percentage had earned a master's or doctoral degree (Table 1). The majority of respondents were students (75.6%), whereas other occupations, such as employees of private or state-owned companies (6.4%) and entrepreneurs (2.2%), were underrepresented. Regarding income levels, most respondents earned less than IDR 5,000,000 per month (86.2%), with only a small fraction earning more than IDR 10,000,000 (4.6%).

Table 1. Respondent demographic characteristics

Variables	Options	Frequency	Percent
Sex	Male	468	38.1
	Female	760	61.9
Age	17-20	917	74.7
	21-30 years old	191	15.6
	31-40 years old	36	2.9
	41-50 years old	43	3.5
	51-63 years old	41	3.3
Education	Completed Diploma	41	3.3
	Completed Bachelor's Degree	429	34.9
	Completed Master's Degree	26	2.1
	Completed Doctorate	2	0.2
	Completed Elementary School	2	0.2
	Completed High School	725	59.0
	Completed Junior High School	3	0.2
Job	Freelancer	21	1.7
	Part-time Teacher/Lecturer	32	2.6
	Student	928	75.6
	Private Sector/State-Owned Enterprise Employee	78	6.4
	Healthcare Worker	14	1.1
	Unemployed	43	3.5
	Military/Police	2	0.2
	Entrepreneur/Trader	27	2.2
	Others	83	6.8
Average Monthly Income/Pocket Money	< IDR 5,000,000	1059	86.2
	IDR 5,000,000 - IDR 10,000,000	112	9.1
	IDR 10,000,000 - IDR 15,000,000	26	2.1
	IDR 15,000,000 - IDR 20,000,000	10	0.8
	> IDR 20,000,000	21	1.7

3.2 Structural Equation Modeling (SEM) analysis

To assess the model's consistency in measuring its variables, reliability testing was conducted using Cronbach's Alpha and Composite Reliability (CR). The recommended minimum threshold for Composite Reliability (CR) and Cronbach's Alpha (CA) in quantitative research is 0.70. The results of the analysis in Table 2 indicate that each variable has a reliability score above 0.70, signifying that the data used in this study is sufficiently reliable and stable.

Meanwhile, convergent validity was assessed using two methods: Standardized Factor Loadings (FLs) and Average Variance Extracted (AVEs). An AVE value of 0.50 or higher is considered acceptable, while an FL score above 0.70 is regarded as satisfactory. The results in Table 2 show that FL scores for all indicators exceed 0.70, ranging from 0.848 to 0.931. Additionally, AVE values for all variables exceed the minimum threshold of 0.50, ranging from 0.769 to 0.862. This indicates that the model effectively measures the intended research concepts.

Table 2. Measurement model

Construct	Items	Loadings	CA	CR	AVE
Influencer credibility	IC1	0.911	0.840	0.926	0.862
	IC2	0.895			
	IC3	0.863			
Social media engagement	SME1	0.848	0.868	0.870	0.792
	SME2	0.876			
	SME3	0.906			
Intention to adopt sustainable behavior	ISB 1	0.930	0.849	0.890	0.769
	ISB2	0.927			
Sustainable consumption	SC1	0.919	0.832	0.922	0.856
	SC2	0.931			

Discriminant validity was evaluated using a criterion in which the square root of the Average Variance Extracted (AVE), shown as bold diagonal values, must be greater than the correlations between constructs represented by the off-diagonal values. The results in Table 3 demonstrate that all constructs exhibit strong discriminant validity, indicating that each construct better explains its indicators than the other variables in the model.

Table 3. Discriminant validity

Construct	Influencer credibility	Intention to adopt sustainable behavior	Social media engagement	Sustainable consumption
Influencer credibility	0.890			
Intention to adopt sustainable behavior	0.668	0.928		
Social media engagement	0.614	0.673	0.877	
Sustainable consumption	0.649	0.768	0.632	0.925

Furthermore, the R^2 values indicate that the independent variables explain the extent to which changes in the dependent variables. A higher R^2 value signifies a better model fit, while Adjusted R^2 corrects for the number of predictor variables in the model. The study results show that Intention to adopt sustainable behavior has an $R^2 = 0.557$, meaning that more than 55.7% of the variation in individuals' intention to engage in sustainable behavior is explained by the model variables. Social media engagement has an R^2 of 0.377, indicating that the model explains 37.7% of the variation, while sustainable consumption has an R^2 of 0.634, accounting for 63.4% of the variation (see Table 4).

Table 4. R Square and Adjusted R Square values

Construct	R Square	R Square Adjusted
Intention to Adopt Sustainable Behavior	0.557	0.557
Social Media Engagement	0.377	0.377
Sustainable Consumption	0.634	0.633

3.3 Hypothesis test

Hypothesis testing was conducted using PLS bootstrap path analysis; t-values of 1.96 or higher indicate statistical significance. The results, presented in Table 5, confirm that all model relationships are significant. Influencer credibility has a positive effect on social media engagement ($\beta=0.614$; $t=32.491$), intention to adopt sustainable behavior ($\beta=0.409$; $t=14.931$), and sustainable consumption ($\beta=0.201$; $t=6.952$), though its impact on sustainable consumption is less pronounced. Similarly, social media engagement significantly influences intentions to adopt sustainable behavior (0.422; $t=15.919$) and to engage in sustainable consumption ($\beta=0.150$; $t=5.272$), albeit with lower effects than other factors. The most dominant factor in the model is intention to adopt sustainable behavior, which exerts the most decisive influence on sustainable consumption ($\beta=0.533$; $t=17.305$). These findings highlight that influencer credibility and social media engagement play crucial roles in shaping individuals' intentions to adopt sustainable behavior, ultimately driving sustainable consumption.

Table 5. Hypothesis testing

Path	Original Sample (O)	T Statistics (O/STDEV)	Conclusion
Influencer credibility → social media engagement	0.614	32.491	H1 accepted
Influencer credibility → intention to adopt sustainable behavior	0.409	14.931	H2 accepted
Influencer credibility → sustainable consumption	0.201	6.952	H3 accepted
Social media engagement → Intention to adopt sustainable behavior	0.422	15.919	H4 accepted
Social media engagement → sustainable consumption	0.150	5.272	H5 accepted
Intention to adopt sustainable behavior → sustainable consumption	0.533	17.305	H6 accepted

3.4 Discussion

The path analysis results indicate that influencer credibility significantly affects social media engagement, intention to adopt sustainable behavior, and sustainable consumption. This suggests that the more credible an influencer is perceived to be, the greater their influence in increasing user interactions on social media, shaping awareness, and encouraging individuals to adopt sustainable behaviors.

Research shows that when an influencer is perceived as highly credible, followers tend to engage more actively with the content shared on social media platforms. A study demonstrates that influencer credibility on platforms such as TikTok and Instagram significantly enhances follower engagement, as audiences are more likely to trust, interact with, and respond positively to content delivered by credible influencers [11]. This finding indicates that credibility is associated with higher levels of engagement, as it may enhance trust and support message acceptance. Accordingly, influencers perceived as knowledgeable and trustworthy appear more likely to encourage audience interaction.

Additionally, consumers' assessments of an influencer's credibility significantly influence their willingness to engage in sustainable consumption behaviors. When influencers are perceived as trustworthy, authentic, and genuinely concerned about environmental issues, they are more effective in encouraging followers to adopt environmentally friendly lifestyles [12]. This perceived credibility appears to support trust and message acceptance, which may contribute to gradual shifts in consumers' consumption preferences toward more sustainable choices.

Social media engagement plays an essential role in shaping individuals' intentions to adopt sustainable behavior and encouraging more environmentally friendly consumption patterns. Through interactive content and persuasive communication, social media can influence consumer preferences and purchasing decisions, particularly by increasing awareness of eco-friendly products [13]. Influencers, in particular, can creatively promote sustainable products and highlight their benefits, making environmentally responsible choices more appealing to a broader audience.

One of the main focuses of this research is the relationship between the intention to adopt a sustainable lifestyle and actual sustainable consumption behavior. A positive attitude toward sustainability is widely recognized as crucial in shaping individuals' intentions to engage in environmentally friendly practices, which, in turn, affects their consumption decisions across sectors. When individuals are more aware of the environmental impacts of their choices, they are more likely to develop stronger intentions to live sustainably [14]. This increased awareness can encourage changes in daily behavior, such as choosing eco-friendly products and reducing environmentally harmful consumption, ultimately leading to more consistent, responsible, sustainable consumption patterns.

However, a clear gap often exists between intention and actual behavior, with individuals expressing a strong desire to live sustainably yet struggling to consistently put those intentions into practice in daily life. Various internal and external factors, such as lack of motivation, habitual behavior, convenience, and situational constraints, can prevent individuals from translating good intentions into long-term sustainable practices. Understanding the social and psychological mechanisms behind this intention-behavior gap is therefore essential. Strengthening alignment among personal values, trust, and positive attitudes toward sustainability can play a key role in encouraging individuals to move beyond intention and adopt more consistent, meaningful sustainable behaviors [15].

3.5 Implications

This study extends source credibility theory to the context of sustainable consumption on social media by demonstrating that influencer credibility enhances social media engagement and strengthens individuals' intentions to adopt sustainable behavior, thereby supporting sustainable consumption. These findings highlight the indirect role of influencer credibility in shaping environmentally responsible behavior through engagement and behavioral intention.

Given that intention to adopt sustainable behavior is the primary driver of sustainable consumption, practical implications should focus on strategies that strengthen consumers' commitment to sustainable lifestyles. Furthermore, because influencer credibility significantly influences both engagement and behavioral intention, brands may benefit from collaborating with credible, authentic influencers to communicate sustainability values. Maintaining transparency and consistency in sustainability messaging is essential to preserving audience trust.

In addition, since social media engagement contributes to the development of sustainable behavioral intentions, interactive and educational content may be effective in supporting pro-environmental behaviors. From a policy perspective, considering the importance of credibility, regulations promoting transparency in influencer-based sustainability campaigns may help reduce misleading claims and strengthen public trust in environmental communication.

4 Conclusion

In conclusion, this study demonstrates that influencer credibility plays an important role in shaping sustainable consumption by enhancing social media engagement and strengthening individuals' intentions to adopt sustainable behavior. The findings indicate that behavioral intention serves as a central mechanism through which influencer credibility and engagement influence sustainable consumption practices. By empirically integrating influencer credibility with engagement, behavioral intention, and sustainable consumption, this research extends existing literature on influencer marketing and sustainability. Overall, the study highlights the significance of credible digital influencers in supporting environmentally responsible consumer behavior through engagement-driven psychological processes.

5 Limitations and recommendations

This study has several limitations that can be addressed in future research. First, the study used an online survey, which, although effective at reaching a large number of respondents, has limitations in ensuring the validity of responses. Respondents may not fully understand the questions or may provide answers that do not accurately reflect their actual behavior. Future research could use experimental methods or in-depth interviews to gain a more comprehensive understanding of the relationships among influencer credibility, social media engagement, and sustainable consumption behavior.

Second, this study focuses on influencers in general, without distinguishing among categories or industries. However, the effectiveness of influencers in shaping their followers' behavior may vary by field of expertise. Future research could compare the influence of influencer credibility across different industry categories to determine whether there are significant differences in its impact on sustainable consumption behavior.

Finally, this study was conducted within a specific time period (a cross-sectional study), meaning it does not measure long-term changes in respondents' attitudes and behaviors.

Future research could employ longitudinal studies to examine how influencer credibility influences changes in consumption behavior over time, providing a deeper understanding of influencers' roles in shaping long-term, sustainable consumption habits.

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