Navigating Green Identity:
How SMEs Enhance Sustainability through Social Media Strategy?

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Abstract: *This study investigates the role of social media in enhancing SMEs' green organizational identity through the mediating role of green brand awareness. Drawing on Signaling Theory, we posit that SMEs strategically use social media to communicate their sustainability efforts, thus improving stakeholders' brand awareness and reinforcing internal sustainability commitments. The novelty of this research lies in explicitly examining the combined influence of social media engagement (EG) and social media content strategy (CS) on green brand awareness (GBA) and subsequently on SMEs' green organizational identity (GOI), a relatively underexplored area within the SME sustainability literature. Data were collected from 100 SME owners in Palembang, South Sumatera, using convenience sampling. The SEM-PLS analysis reveals significant positive effects of EG and CS on GBA. Additionally, GBA significantly mediates the relationships between these social media strategies and SMEs' GOI. However, direct engagement alone was not found to influence GOI significantly. The findings emphasize the critical importance of strategic content planning and active engagement to leverage social media to effectively enhance SMEs' sustainability outcomes. Practical implications include guiding SMEs to adopt integrated social media strategies and strengthening their internal and external sustainability positioning.*

Keywords**:** *Content strategy; Green organizational identity; SME; Social media engagement*

1. Introduction

Palembang, the Capital of South Sumatera Province, Indonesia, is home to approximately 155,467 small and medium enterprises (SMEs) (Gozali et al., 2024). This substantial number underscores the significant role SMEs play in Palembang's economy. As the economic hub of South Sumatra, Palembang City significantly contributes to the province's Gross Regional Domestic Product (GRDP). In 2021, the city's GRDP amounted to IDR 107.25 trillion, growing by IDR 3.29 trillion or approximately 3.2% compared to the preceding year. Given that Palembang's economic structure closely mirrors regional economic patterns, it is reasonable to assume that SMEs in the city contribute approximately 50-60% of its GRDP, aligning with the overall provincial figure (www.palembangkota.bps.go.id).

Previous studies on SMEs' sustainability indicated that although comprehensive sustainability practices are not yet widespread, a growing awareness and initial steps are being taken towards sustainable practices among SMEs in Palembang (Setiawan et al., 2025). However, this growing trend towards adopting sustainability practices, while promising, remains unsatisfactory given the limited progress observed in contributing significantly to the broader business community. SMEs have yet to fully leverage sustainability as a strategic driver of long-term competitive advantage and meaningful contribution to societal development (Wang et al., 2025).

Due to increased environmental concerns and stringent regulatory frameworks globally, sustainability has emerged as an indispensable strategic priority for small and medium enterprises (Budiarto et al., 2025). SMEs recognize that adopting sustainable practices is not merely a compliance obligation but a critical avenue for competitive advantage, brand differentiation, and improved reputation (Leonidou et al., 2022). Recent research indicates that SMEs adopting sustainability-oriented strategies witness increased customer loyalty and enhanced market position (Nguyen et al., 2023). Social media platforms give SMEs powerful tools for communicating sustainability efforts to diverse stakeholders, including consumers, environmental advocates, and regulatory authorities (Santos et al., 2024). Social media's interactive and dynamic nature, such as engagement and content strategy, allows SMEs to engage stakeholders effectively through real-time updates, informative content, and interactive dialogues, thereby significantly enhancing their visibility and brand image in sustainability contexts (Huang et al., 2023).

Engagement is critical in social media strategy, encompassing active interactions, dialogue, and sustained communication with stakeholders, such as customers, communities, and regulators. Effective engagement goes beyond mere content broadcasting by fostering meaningful exchanges through likes, comments, shares, and real-time responses, thereby creating deeper relationships and a sense of community around organizational values and initiatives (Smith et al., 2023). In SMEs, proactive engagement enables these businesses to demonstrate transparency, authenticity, and responsiveness, significantly enhancing stakeholder trust and brand loyalty and effectively reinforcing their organizational identity in sustainability practices (Huang et al., 2023; Santos et al., 2024).

Content strategy represents a planned approach in creating, curating, and distributing valuable and relevant information tailored to the interests and needs of target audiences on social media platforms (Pulizzi & Barrett, 2023). It involves defining clear objectives and messaging themes and systematically managing the tone, format, frequency, and channels used for content dissemination. Effective content strategy allows SMEs to communicate their sustainability initiatives in compelling and credible ways, enhancing their green organizational identity by consistently aligning the conveyed messages with their environmental values and stakeholder expectations (Zhang et al., 2023). Consequently, well-structured content strategies enable SMEs to strengthen stakeholder relationships, promote deeper audience engagement, and achieve greater visibility and credibility in the sustainability discourse. Additionally, through strategic social media use, SMEs can promptly address stakeholder concerns and expectations, enhancing their responsiveness and organizational legitimacy (Santos et al., 2024).

A critical element influencing SMEs' sustainable practices is the development of a strong green organizational identity, defined as the extent to which environmental values are deeply embedded within an organization's culture, strategy, and operational processes (Chen & Huang, 2022). Green organizational identity serves not only to internalize sustainability principles but also as a signal to external stakeholders regarding a firm's genuine commitment to environmental responsibility. The strategic application of social media in portraying sustainability initiatives is hypothesized to strengthen this identity by improving brand awareness and stakeholder perceptions (Kumar & Srivastava, 2023).

Despite growing scholarly interest, empirical evidence explicitly examining how SMEs utilize social media strategies to develop their green organizational identity remains limited. Previous studies have primarily employed qualitative case studies or broad quantitative surveys, examining social media as a general branding tool or emphasizing its role in enhancing consumer relationships (Wang & Kim, 2022; Rodríguez-Gutiérrez et al., 2023). Such research typically lacked specific attention to targeted methodological approaches that analyze the explicit connection between SMEs' social media strategies and their green organizational identity. Previous studies broadly explored digital communication's relationship with sustainability efforts through general surveys, without explicitly addressing specific roles of content strategy or engagement mechanisms utilized by SMEs. Additionally, prior research often overlooked brand awareness as a pivotal mediating variable within structured quantitative models (Zhang et al., 2023).

This study addresses this critical methodological gap by utilizing a structured quantitative approach, specifically employing Structural Equation Modeling (SEM), to rigorously examine how SMEs' active social media engagement and tailored content strategies directly influence their green identity through brand awareness as a clearly defined mediating factor. By explicitly clarifying these nuanced relationships through robust statistical modeling rather than relying solely on qualitative analyses or generalized quantitative surveys, this research contributes significantly to theory and practice. It provides actionable insights and concrete strategies that SMEs can adopt to leverage social media for improved sustainability outcomes effectively.

2. Literature Review & Hypotheses Development

2.1. Signaling Theory

The theoretical perspective underpinning this research primarily draws upon Signaling Theory, which posits that organizations deliberately communicate their intrinsic qualities to external stakeholders through specific signals to bridge information asymmetry between the organization and its audience (Connelly et al., 2023). In the context of SMEs' sustainability, social media emerges as a pivotal signaling mechanism through which SMEs explicitly project their commitment to environmentally sustainable practices and green initiatives (Kim & Lee, 2024). Through consistent and strategic sustainability-related content shared via social media, SMEs can effectively signal their authentic environmental intentions and distinguish themselves from competitors engaging in greenwashing (Zhang & Luo, 2023). Consequently, these deliberate signals enhance external stakeholders' awareness and perceptions of the organization's sustainability credentials, positively influencing consumer trust, reputation, and SMEs' internalization and reinforcement of green organizational identity (Li et al., 2024). Thus, social media serves as a communication tool and a critical signaling instrument to substantiate SMEs' genuine commitment to sustainability, creating value that resonates deeply with contemporary consumers who increasingly prioritize environmental accountability (Singh et al., 2023).

2.2. The Role of Social Media

Social media engagement capability is vital in developing SMEs' green organizational identity. Engagement capability refers to the frequency, intensity, and quality of SMEs' interactions on social media platforms to foster meaningful dialogues with stakeholders. This capability

enables SMEs to cultivate ongoing relationships and trust with stakeholders, promoting openness and transparency about their sustainability practices (Kim & Lee, 2024). Consistent and genuine engagement through social media platforms helps SMEs effectively convey their commitment to environmental values, strengthening stakeholder perceptions and ultimately embedding them deeper into the organizational identity (Li et al., 2024).

Additionally, SMEs' strategic content dissemination via social media significantly influences the development of their green organizational identity. A well-designed content strategy involves systematically creating and sharing relevant, informative, and credible sustainability-related messages that resonate with stakeholder values and expectations (Singh et al., 2023). Such strategic content serves as a powerful signaling mechanism, reinforcing SMEs' legitimacy and authenticity concerning sustainability. By aligning content strategy closely with stakeholder preferences and sustainability issues, SMEs effectively enhance brand awareness and solidify their organizational identity around core environmental values, distinguishing themselves distinctly from competitors (Zhang & Luo, 2023).

2.3. Green brand awareness

Green brand awareness (GBA) is a pivotal factor mediating the relationship between SMEs' social media strategies and green organizational identity. Green brand awareness refers to the extent to which stakeholders recognize and recall SMEs' environmental initiatives and associate these initiatives positively with the brand (Jabeen et al., 2023). Effective use of social media for environmental communication enables SMEs to increase visibility of their sustainability activities, fostering stronger connections with stakeholders who increasingly prioritize environmental accountability. As stakeholders become more aware of SMEs' environmental commitments through consistent social media messaging, this awareness positively influences their attitudes and behaviors towards the brand, reinforcing the internalization of sustainability values within SMEs (Chen & Tseng, 2023).

Moreover, heightened green brand awareness catalyzes competitive differentiation in an increasingly eco-conscious marketplace. SMEs with well-developed green brand awareness leverage their distinct environmental narratives to strengthen customer loyalty and market reputation (Hossain et al., 2024). Through sustained and strategic social media communication, SMEs attract environmentally conscious consumers and strengthen stakeholder perceptions of authenticity and credibility regarding their sustainability efforts. Consequently, elevated brand awareness directly supports the enhancement of SMEs' green organizational identity by motivating the organization to continuously align and reaffirm its practices and processes with the communicated environmental commitments, ensuring long-term sustainability impacts (Thakur & Kumar, 2024).

From a theoretical perspective, signaling theory robustly supports the proposed hypotheses regarding social media engagement and content strategy as key drivers of SMEs' green brand awareness. According to this theory, organizations strategically utilize signals—in this case, active and consistent engagement through interactive dialogues, updates, and responsiveness—to communicate their genuine sustainability commitments to stakeholders, thereby reducing information asymmetry and enhancing brand credibility (Connelly et al., 2023). Empirical findings from recent studies conducted in diverse geographical contexts, such

as China (Huang et al., 2023); United States (Smith et al., 2023), validate that sustained social media engagement effectively boosts green brand awareness by creating a dynamic exchange that fosters consumer trust and elevates the perceived authenticity of environmental initiatives.

Similarly, a focused social media content strategy, characterized by well-crafted, informative, and relevant sustainability messaging, serves as an explicit signaling tool reinforcing stakeholders' perceptions and strengthening brand associations with environmental responsibility (Zhang & Luo, 2023). Prior research from Asia-Pacific markets (Zhang et al., 2023); European regions (Santos et al., 2024) underscores that consistently communicated, coherent content strategies significantly enhance green brand awareness by aligning organizational messages with stakeholder values and sustainability expectations, thus improving recall and fostering positive associations. Thus, proactive engagement and strategic content dissemination via social media will positively influence SMEs' green brand awareness, clearly reflecting their sustainability attributes to stakeholders.

H_1: Social media engagement positively influences SMEs' green brand awareness

H_2: Social media content strategy positively influences SMEs' green brand awareness

SMEs actively engage stakeholders through social media interactions and strategically align their internal practices and external sustainability narratives, thus fostering a robust green organizational identity. Empirical studies conducted in South Korea (Kim & Lee, 2024) and China (Huang et al., 2023) highlight that sustained social media engagement facilitates meaningful dialogues and consistent feedback, enabling SMEs to better align their internal sustainability values with external stakeholder expectations, thereby strengthening their organizational identity. This ongoing engagement has also been demonstrated in research from the United States to increase organizational transparency and trust, essential components for building a credible and recognized green identity (Smith et al., 2023).

Furthermore, according to Signaling Theory, SMEs deliberate and strategic content dissemination via social media acts as explicit signaling, reinforcing both internal commitment and external credibility regarding environmental initiatives. Prior research from China (Li et al., 2024); broader Asia-Pacific contexts (Zhang & Luo, 2023) underscores that strategically crafted sustainability content on social media enhances stakeholder perceptions of organizational authenticity, facilitating stronger and more consistent identification with green values across internal and external stakeholders. Consequently, this strategic alignment between communicated sustainability content and organizational practices effectively enhances SMEs' authenticity, thus positively influencing and solidifying their green organizational identity, as demonstrated by studies conducted in India (Singh et al., 2023); European markets (Santos et al., 2024).

H_3: Social media engagement positively influences SMEs' green organizational identity

H_4: Social media content strategy positively influences SMEs' green organizational identity

From the lens of Signaling Theory, heightened green brand awareness significantly reinforces SMEs' green organizational identity by providing external validation of the sustainability signals SMEs communicate through social media. When stakeholders become increasingly aware of and recognize the environmental commitments communicated by SMEs,

this external acknowledgment serves as feedback, affirming the authenticity and effectiveness of SMEs' sustainability signals, as shown by research conducted in the Asia-Pacific region (Zhang & Luo, 2023). Empirical studies from China (Huang et al., 2023); India (Singh et al., 2023) further highlight that increased green brand awareness positively influences internal organizational culture by motivating SMEs to embed sustainability practices more deeply within their strategic decision-making processes, thereby reinforcing organizational commitment to environmental goals.

Additionally, research conducted in South Korea has shown that greater brand awareness intensifies stakeholder expectations for transparency and accountability, compelling SMEs to maintain consistency between their communicated and actual sustainability practices, thus reinforcing their green identity (Kim & Lee, 2024). Consequently, SMEs perceive greater legitimacy and credibility, prompting them to internalize sustainability values more deeply and align their practices consistently with communicated environmental commitments. This iterative signaling and feedback process strengthens SMEs' intrinsic identification with green practices, solidifying their overall green organizational identity, as supported by studies from China (Li et al., 2024); Europe (Santos et al., 2024).

*H_5: Green brand awareness positively influences SMEs' green organizational identity*

Based on Signaling Theory, green brand awareness is a critical mediator between SMEs' social media engagement, content strategy, and green organizational identity. Previous studies conducted in South Korea (Kim & Lee, 2024); China (Huang et al., 2023) confirm that proactive social media engagement significantly increases stakeholder interactions, dialogues, and participation, thereby enhancing green brand awareness and subsequently reinforcing SMEs' green identity through greater stakeholder validation and legitimacy. Additionally, research from India (Singh et al., 2023); broader Asia-Pacific regions (Zhang et al., 2023) demonstrates that SMEs that strategically curate and consistently disseminate sustainability-focused content achieve clearer and stronger sustainability signaling, directly enhancing brand awareness and strengthening stakeholder recognition of their environmental efforts.

When these sustainability signals effectively heighten brand awareness, SMEs gain crucial external validation, affirming the authenticity and credibility of their communicated environmental commitments, as validated by research from China (Zhang & Luo, 2023). Consequently, this external validation reinforces internal organizational motivations, prompting SMEs to internalize sustainability practices more profoundly and embed them deeply and consistently within their organizational identity, as evidenced by recent empirical findings from China (Li et al., 2024); Europe (Santos et al., 2024).

H_6: *Green brand awareness mediates the relationship between social media engagement and SMEs' green organizational identity*

H_7: *Green brand awareness mediates the relationship between social media content strategy and SMEs' green organizational identity*

Based on the theoretical description above and the development of the research hypothesis, the research model of the influence of social media strategy on green organizational identity through the mediating role of green brand awareness can be developed as shown in the following Figure 2.1.
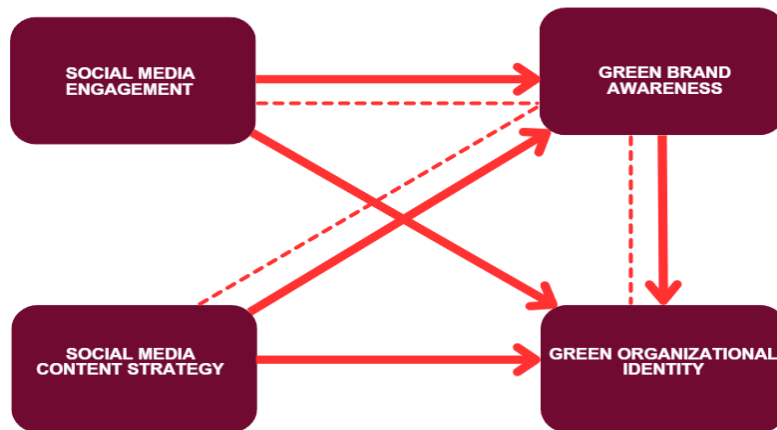
Figure 2.1. Research model

3. Method

This study employs a quantitative research design, targeting SME owners in Palembang, South Sumatera. Palembang was chosen due to its growing economic significance as one of Indonesia's prominent emerging regional hubs, particularly for SMEs. Palembang has actively fostered SME development through local governmental initiatives and supportive policies, making it an ideal context to examine how SMEs integrate sustainability and digital strategies into their operations (Central Bureau of Statistics Indonesia, 2023).

A sample size of 100 respondents was selected, following recommendations by Hair & Sarstedt (2021) and Sekaran and Bougie (2020), who suggest that 100 respondents provide sufficient statistical power for SEM analyses, especially within SME-focused studies. Convenience sampling was utilized due to its practicality, ease of respondent accessibility, and cost-effectiveness, which aligns with the common constraints of time and resources typical in SME research contexts (Etikan et al., 2016; Taherdoost, 2022). A Likert scale ranging from 1 *(=Strongly Disagree)* to 5 *(=Strongly Agree)* was employed to measure respondents' perceptions, ensuring clarity and consistency in capturing the intensity of agreement toward the survey items (Joshi et al., 2015; Hirose & Creswell, 2023). Structural Equation Modeling-Partial Least Squares (SEM-PLS) was applied using SmartPLS 4 to evaluate the simultaneous effects of social media engagement and content strategy on green organizational identity through the mediating role of green brand awareness. Measurement model validity was assessed using Composite Reliability (CR), Average Variance Extracted (AVE), and Discriminant Validity (DV). Next, the model fit assessment was performed through Root Mean Square Residual (RMSR) and Normed Fit Index (NFI). Finally, to evaluate the direct and indirect relationships and hypotheses test among variables, path coefficients and associated p-values were analyzed.

4. Results

4.1. Demographics of Respondents

The respondents' demographic profile consisted of 100 SME owners predominantly from Palembang, characterized by a relatively balanced gender distribution, with males slightly more represented (55%) than females (45%). In terms of age, the majority fell within the

economically productive age ranges, notably between 31–40 years (35%) and 41–50 years (30%), indicating respondents with substantial managerial experience and maturity. Educationally, respondents predominantly held Diploma or Bachelor's degrees (60%), suggesting a relatively well-educated sample. Business experience varied, but most notably had between 5–10 years (40%), reflecting a good operational familiarity within SMEs. Sector-wise, respondents primarily operated in retail and trade (35%) and services (30%), with smaller proportions from manufacturing (25%) and agriculture and fisheries (10%), highlighting the diversity of SME sectors within the region and enriching the insights gained on the studied phenomena. The demographics of respondents in this study are presented in Table 1.

Table 1. Respondents' Demographic Profile

Characteristic	Category	Frequency	Percentage (%)
Gender	Male	55	55%
	Female	45	45%
Age Group	18–30 years	20	20%
	31–40 years	35	35%
	41–50 years	30	30%
	Above 50 years	15	15%
Education Level	High School	25	25%
	Diploma/Bachelor's Degree	60	60%
	Master's Degree or higher	15	15%
Business Experience	Less than 5 years	30	30%
	5–10 years	40	40%
	More than 10 years	30	30%
The sector of SME	Manufacturing	25	25%
	Retail & Trade	35	35%
	Services	30	30%
	Agriculture and Fisheries	10	10%

Source: Primary Data (2025)

4.2. Construct Reliability and Validity

In this study, the measurement model is determined by conducting validity and reliability tests of the indicators of each construct (Table 2). The reliability and validity analysis indicates strong internal consistency and convergent validity for all constructs used in the study. Specifically, Cronbach's Alpha and Composite Reliability (rho_c) values for GBA (0.911; 0.911), CS (0.920; 0.920), EG (0.900; 0.900), and GOI (0.911; 0.911) exceed the generally recommended threshold of 0.70, demonstrating robust reliability. Additionally, the Average Variance Extracted (AVE) values for GBA (0.672), CS (0.699), EG (0.642), and GOI (0.672) surpass the acceptable threshold of 0.50, confirming strong convergent validity. Thus, these constructs are deemed statistically reliable and valid, providing confidence in their use for further analysis and hypothesis testing. Next, a discriminant validity test was conducted to see the consistency of the indicators in explaining each construct as presented in Table 3.

Table 2. Construct Reliability and Validity

Construct	Cronbach's Alpha	Composite Reliability (rho_c)	AVE
Green Brand Awareness (GBA)	0.911	0.911	0.672
Social Media Content Strategy (CS)	0.920	0.920	0.699
Social Media Engagement (EG)	0.900	0.900	0.642
Green Organizational Identity (GOI)	0.911	0.911	0.672

Source: Primary Data (2025)

Table 3. Discriminant Validity

Indicator	GBA	CS	EG	GOI
EG1	0.719	0.668	**0.861**	0.615
EG2	0.734	0.723	**0.785**	0.678
EG3	0.712	0.643	**0.795**	0.611
EG4	0.676	0.687	**0.775**	0.628
EG5	0.668	0.648	**0.787**	0.673
CS1	0.756	**0.862**	0.742	0.676
CS2	0.687	**0.838**	0.723	0.739
CS3	0.733	**0.785**	0.715	0.637
CS4	0.748	**0.838**	0.671	0.724
CS5	0.737	**0.853**	0.671	0.714
GOI1	0.678	0.583	0.594	**0.811**
GOI2	0.744	0.723	0.701	**0.884**
GOI3	0.707	0.749	0.682	**0.807**
GOI4	0.644	0.640	0.649	**0.782**
GOI5	0.692	0.716	0.649	**0.812**
GBA1	**0.767**	0.583	0.614	0.610
GBA2	**0.878**	0.768	0.778	0.718
GBA3	**0.810**	0.731	0.768	0.680
GBA4	**0.824**	0.772	0.705	0.722
GBA5	**0.816**	0.720	0.718	0.732

Source: Primary Data (2025)

The discriminant validity assessment using cross-loadings indicates that each indicator loads most strongly onto its respective construct, demonstrating adequate discriminant validity. Specifically, indicators for EG (EG1 to EG5) exhibit highest loadings (0.775–0.861) on the EG construct; indicators for CS (CS1 to CS5) load strongest (0.838–0.862) onto CS; indicators for GBA (GBA1 to GBA5) display highest loadings (0.767–0.878) on GBA; and indicators for GOI (GOI1 to GOI5) have most substantial loadings (0.782–0.884) on their intended construct. Since each item's loading is higher on its associated construct than on others, discriminant validity is adequately satisfied, reinforcing the distinctiveness of constructs used in this study.

4.3. Model fit and R-squared

In this research model, fit and R-squared assessment are performed to determine the alignment of the hypothesized model with the observed empirical data, as shown in Table 4. The SEM-PLS model fit assessment, as shown in Table 4, indicates mixed results. The Standardized Root Mean Square Residual (SRMR) value is 0.064, below the commonly accepted threshold of 0.08, suggesting an acceptable and good fit between the theoretical model and empirical data. The values for D_ULS (0.849) and D_G (0.757) are acceptable since smaller values indicate a better model fit; however, specific thresholds for these indices depend on data and context. Meanwhile, the Normed Fit Index (NFI) at 0.783 is slightly below the commonly recommended threshold of 0.90, suggesting a moderate but not optimal fit. While the SRMR indicates a good fit, the NFI value suggests potential areas for model improvement or refinement.

The provided R-squared (R^2) and Adjusted R-squared values indicate strong explanatory power within the SEM-PLS model. Specifically, the GBA construct has an R^2 of 0.834

(adjusted R² = 0.830), signifying that approximately 83.4% of the variance in GBA is effectively explained by EG and CS, which is considered substantial. Additionally, GOI shows an R² of 0.759 (adjusted R² = 0.750), suggesting that about 75.9% of its variance is explained by the combined influence of GBA, EG, and CS. This value also indicates substantial explanatory strength. Thus, the model demonstrates robust predictive power and effectively captures the relationships among the constructs.

Table 4. Model fit and R-square

Criteria	Saturated Model	Estimated Model
Model Fit		
SRMR	0.064	0.064
D_ULS	0.849	0.849
D_G	0.757	0.757
NFI	0.783	0.783
R-square	**R-square**	**R-square Adjusted**
GBA	0.834	0.830
GOI	0.759	0.750

Source: Primary Data (2025)

Table 5. f-square

	GBA	GOI
GBA	-	0.115
CS	0.393	0.113
EG	0.401	0.016
GOI		-

Source: Primary Data (2025)

The provided f-squared (f²) values (Table 5) indicate each predictor construct's effect size on its corresponding endogenous variables. Specifically, EG (f² = 0.401) and CS (f² = 0.393) both have large effect sizes (>0.35) on GBA, indicating that both constructs significantly contribute to explaining variance in GBA. For GOI, the effect sizes of GBA (f² = 0.115) and CS (f² = 0.113) are moderate, suggesting meaningful yet relatively minor contributions. Conversely, the effect size of EG (f² = 0.016) on GOI is small, highlighting a minimal individual impact. Overall, CS and EG strongly influence GBA, while GBA and CS moderately influence GOI, and EG has only a minimal direct impact.

4.4. Path Coefficient & Hypothesis Testing

The path coefficient is measured to know the strength and direction of the relationship between constructs within the structural model. In this research, the path coefficient and hypothesis testing can be presented as in Table 6. The hypothesis testing results reveal significant insights into the relationships among social media engagement, content strategy, brand awareness, and SMEs' green organizational identity. Specifically, social media engagement (H$_1$: β=0.478, p<0.001) and content strategy (H$_2$: β=0.473, p<0.001) significantly and positively enhance green brand awareness, while content strategy also directly and significantly strengthens green organizational identity (H$_4$: β=0.361, p=0.011). Conversely, direct engagement alone does not significantly impact green organizational identity (H$_3$: β=0.138, p=0.301). Additionally, brand awareness positively influences green organizational identity (H$_5$: β=0.409, p=0.003) and significantly mediates the relationships between engagement/content strategy and green organizational identity (H$_6$ and H$_7$).

Table 6. Path Coefficient & Hypothesis Testing

Path Description	Path Coefficient (β)	T-statistic	P-value	Result
EG => GBA	0.478	4.335	0.000**	H$_1$: Supported
CS => GBA	0.473	4.358	0.000**	H$_2$: Supported
EG => GOI	0.138	1.035	0.301	H$_3$: Rejected
CS => GOI	0.361	2.558	0.011*	H$_4$: Supported
GBA => GOI	0.409	2.980	0.003**	H$_5$: Supported
EG => GBA => GOI *(Indirect effect)*	Indirect effect significant (full mediation)		<0.05 (inferred)	H$_6$: Supported
CS => GBA => GOI *(Indirect effect)*	Indirect effect significant (partial mediation)		<0.05 (inferred)	H$_7$: Supported

** Sig< 1%; * Sig < 5%

5. Discussion

Signaling Theory robustly supports all seven hypotheses tested in this study, as SME strategically use social media engagement and content strategies as explicit signals to convey their sustainability commitments to stakeholders (Connelly et al., 2023). By proactively sharing content and engaging stakeholders through social media, SMEs effectively signal their genuine environmental commitments, reducing information asymmetry and enhancing stakeholder awareness of their sustainability initiatives (Zhang & Luo, 2023). Confirming mediation effects through brand awareness further aligns with Signaling Theory, underscoring the critical role of brand perception in translating externally communicated signals into strengthened internal organizational identity (Li et al., 2024).

The supported hypotheses (H$_1$, H$_2$, H$_4$, H$_5$, H$_6$, and H$_7$) reinforce previous findings in the literature, highlighting the importance of targeted communication strategies and stakeholder engagement in sustainability-oriented SMEs. Notably, social media content strategy and engagement significantly enhance green brand awareness and organizational identity, aligning with recent research indicating that targeted, relevant, and credible sustainability messaging effectively influences consumer perceptions and organizational behaviors (Kim & Lee, 2024; Singh et al., 2023). Additionally, the mediated pathways confirm findings by Thakur and Kumar (2024), who showed that external brand awareness significantly influences internal organizational practices and identity.

Conversely, the unsupported hypothesis (H$_3$) regarding the direct effect of social media engagement on green organizational identity suggests that mere engagement alone without strategic, sustainability-focused content may not effectively embed sustainability values internally. This outcome is consistent with prior research by Chen and Tseng (2023), which emphasized that engagement without substantive content fails to communicate clear sustainability signals, thus limiting its influence on internal organizational identity. SMEs must therefore combine active stakeholder interactions with meaningful content strategies to effectively internalize their green organizational identity.

Overall, social media emerges as a powerful mechanism for enhancing SMEs' green organizational identity, especially given SMEs' resource constraints and the necessity of differentiating themselves in competitive markets. Through strategic signaling via social media, SMEs can significantly influence external stakeholder perceptions and internal organizational

alignment towards sustainability goals. Given the agility and adaptability of SMEs, social media represents a cost-effective, influential tool enabling SMEs to quickly respond to evolving stakeholder expectations, thereby strengthening their competitive positioning and long-term sustainability commitments (Hossain et al., 2024).

5. Limitations & Suggestions for the Future

The present study acknowledges several important limitations. First, the sample size and scope were restricted to only 100 SME owners from Palembang, South Sumatera, using a convenience sampling approach, potentially affecting the generalizability of the findings. Considering the substantial diversity among SMEs in Palembang, the limited scope of this sample may not comprehensively capture the variety of sustainability initiatives or social media strategies practiced across the entire SME community in the region. Future studies should consider utilizing stratified random sampling techniques to enhance representativeness and better reflect the heterogeneity within the SME population.

Additionally, the cross-sectional nature of this research limits the ability to establish causality or to understand dynamic changes over time, which restricts the insights regarding the evolution of SMEs' sustainability practices and social media strategies. It is recommended that future research adopt a longitudinal approach to better capture changes, trends, and cause-effect relationships, providing deeper insights into how SMEs' practices and identities evolve. Lastly, the reliance on quantitative, self-reported data may have introduced response biases, as SME owners might unintentionally or deliberately exaggerate their sustainability commitments or social media activities. Future studies could integrate objective assessments, such as analyzing actual social media content or independently evaluating sustainability practices, to validate self-reported data and present a more accurate reflection of SMEs' actual behaviors and performance.

Future research would greatly benefit from adopting more rigorous sampling approaches, such as stratified or systematic random sampling, to ensure a more accurate representation of SMEs across various sectors and regions. Extending the study beyond Palembang or conducting comparative analyses across multiple Indonesian locations could provide richer, more diverse insights and enhance the generalizability of the findings. Additionally, longitudinal designs would allow researchers to capture better the progression and evolving dynamics of sustainability practices and social media strategies, providing clearer insights into causal relationships and long-term impacts (Suryaputra et al., 2024; Sari et al., 2022).

Moreover, future studies should integrate mixed-method approaches, combining quantitative data with qualitative methods such as interviews, case studies, or content analyses of social media postings. This combined approach would address biases inherent in self-reported data, offering more authentic and comprehensive insights into SMEs' actual practices and strategic decision-making processes. Adopting these methodological enhancements would significantly deepen the reliability, validity, and practical relevance of research findings in the context of SMEs' sustainability and social media strategies (Bruce et al., 2023; Huy & Phuc, 2025).

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