

Sustainable Digital Marketing Drives Consumer Engagement: The Mediating Role of Customer Trust in Indonesian Local Brands

Andi Raina Ananda Herdiyana^{1*}, Baginda Hamzah¹, Audrey Michelle Wenny Yolanda²

¹Department of Management, Faculty of Economics and Business, Universitas Hasanuddin, Makassar, 90245, Indonesia

²Department of Accounting, Faculty of Economics and Business, Universitas Hasanuddin, Makassar, 90245, Indonesia

ABSTRACT

Purpose – This study aims to examine the mediating role of customer trust in the relationship between sustainable digital marketing (SDM) practices and customer brand engagement among Indonesian local brands. In particular, it investigates how key SDM dimensions, namely transparency and disclosure, social and environmental impact communication, and stakeholder engagement, influence engagement through the development of customer trust in digital contexts.

Design/methodology/approach – A quantitative cross-sectional survey design was employed. Data were collected from 150 consumers who have prior experience interacting with Indonesian local brands and have been exposed to sustainability-related digital marketing content. The proposed relationships among the constructs were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM).

Finding/Results – The findings indicate that all SDM dimensions have positive and significant effects on customer trust, with transparency and disclosure emerging as the most influential determinant. Customer trust also demonstrates a strong and significant effect on customer brand engagement. These results suggest that sustainability-oriented digital marketing practices contribute to engagement through the development of customer trust.

Originality/Value – This study advances SDM by positioning customer trust as the central mechanism linking sustainability communication to engagement and provides empirical evidence that SDM operates as a credibility-based signaling system with asymmetric effects across its dimensions in an emerging market context.

ARTICLE INFO

Keywords:

Sustainable Digital Marketing,
Transparency,
Disclosure,
Environmental impact,
Stakeholder Engagement

Article Information:

Received: 30/01/2026

Revise: 20/03/2026

Accepted: 25/03/2026

ISSN:

2985-3168 (Online)

2985-3222 (Print)

*Corresponding Author at:

Department of Management, Faculty of Economics and Business, Universitas Hasanuddin, Jalan Perintis Kemerdekaan No.10, Makassar 90245, Indonesia.

E-mail address: rainaherdiyana@unhas.ac.id (Andi Raina Ananda Herdiyana)

The work is licensed under a [Creative Commons Attribution-ShareAlike 4.0 International \(CC BY-SA 4.0\)](https://creativecommons.org/licenses/by-sa/4.0/)



1. Introduction

The growing integration of sustainability principles into digital marketing has positioned Sustainable Digital Marketing (SDM) as a strategic approach through which firms align market-facing activities with broader social and environmental responsibilities. In digital environments, platforms enable brands to scale sustainability communication by enhancing transparency, showcasing social and environmental impact, and facilitating stakeholder interaction, thereby shaping how consumers interpret and evaluate sustainability-related claims (Chaffey & Ellis-Chadwick, 2019; Nyagadza, 2022). Prior research suggests that sustainability-oriented digital practices can generate positive relational outcomes, including customer trust and consumer engagement, particularly among consumers who are increasingly attentive to ethical consumption and environmental responsibility (Kim et al., 2023; Greenland et al., 2023).

Within the marketing literature, SDM is conceptualized as a multidimensional construct reflecting how firms communicate and operationalize sustainability through digital platforms (Odoom et al., 2025). However, prior studies have predominantly examined SDM at an aggregate outcome level, focusing on variables such as brand reputation and overall engagement (Tourni et al., 2022; Greenland et al., 2023; Odoom et al., 2025). While these approaches provide valuable insights, they offer limited understanding of how sustainability signals are cognitively interpreted and translated into engagement through underlying relational mechanisms. This limitation becomes particularly salient in digital environments characterized by information overload, inconsistent sustainability claims, and varying levels of consumer digital literacy. As a result, consumers are frequently exposed to ambiguous or competing sustainability messages and may respond with heightened scepticism and concerns over greenwashing (Delmas & Burbano, 2011; Trabucchi et al., 2023).

Drawing on signalling theory, this study argues that SDM practices function as credibility signals that shape consumer evaluations through micro-level relational mechanisms rather than solely through aggregate brand-level outcomes (Spence, 1973; Connelly et al., 2011). Specifically, transparency and disclosure reduce information asymmetry, communication of social and environmental impact signals substantive responsibility, and stakeholder engagement conveys responsiveness and relational commitment in interactive digital environments. Rather than treating these practices as uniformly effective, this study conceptualizes SDM as a credibility-weighted signalling system in which different dimensions carry asymmetric signalling strength in shaping trust formation. These signals play a critical role in shaping customer trust, defined as consumers' beliefs in a brand's honesty, integrity, and reliability in digital interactions (Morgan & Hunt, 1994; Gefen et al., 2003). As a relational construct, trust reduces perceived risk and uncertainty, thereby facilitating consumers' willingness to actively engage with brands (Van Doorn et al., 2010).

Despite its central role in relationship marketing, customer trust has predominantly been treated as an outcome of sustainability communication rather than as the core relational mechanism through which sustainability signals become behaviourally consequential. Consequently, its role as a mediating process within SDM frameworks remains insufficiently theorized. Furthermore, prior SDM research has largely focused on Western or global brand contexts, providing limited insight into how these mechanisms operate in emerging markets and local brand ecosystems (Nyagadza, 2022; Wahyuningrum et al., 2023). In Indonesia, consumer responses to sustainability communication are shaped by collectivist cultural values, uneven levels of digital literacy, and heightened sensitivity to misleading sustainability

claims, rendering trust a particularly critical mechanism in determining engagement outcomes.

Therefore, this study aims to examine how sustainable digital marketing practices influence customer brand engagement through the mediating role of customer trust. In particular, it investigates the effects of transparency and disclosure, social and environmental impact communication, and stakeholder engagement on customer trust and subsequent engagement among Indonesian local brands. This study is guided by the following research questions:

RQ1: How do sustainable digital marketing practices influence customer trust?

RQ2: How does customer trust affect customer brand engagement?

RQ3: To what extent does customer trust mediate the relationship between sustainable digital marketing practices and customer brand engagement?

This study makes several theoretical contributions. First, it extends the sustainable digital marketing literature by repositioning customer trust as a central relational mechanism through which sustainability communication is translated into customer engagement. Second, it advances the conceptualization of SDM as a credibility-based signaling system, demonstrating that different sustainability dimensions exert asymmetric effects on trust formation. Third, the study shifts the focus from outcome-based perspectives to a process-based understanding of consumer engagement. Finally, it provides context-sensitive insights from an emerging market setting, highlighting how sustainability signals are interpreted under conditions of higher skepticism and information asymmetry.

2. Literature Review & Hypothesis Development

2.1. Sustainable Digital Marketing (SDM)

Sustainable Digital Marketing (SDM) refers to the integration of environmental, social, and ethical considerations into digital marketing strategies aimed at promoting responsible consumption and fostering enduring consumer–brand relationships in online environments (Chaffey & Ellis-Chadwick, 2019; Nyagadza, 2022). Within contemporary marketing scholarship, SDM is increasingly conceptualized as a strategic orientation through which firms systematically embed sustainability principles into digital communication, content development, and interactive engagement practices (Gordon et al., 2011; Sheth & Parvatiyar, 2021; Unal & Tascioglu, 2022; Prieto-Sandoval et al., 2022).

The effectiveness of SDM is largely attributed to its capacity to function as a source of credibility signals in digital environments characterized by information asymmetry, heightened consumer scepticism, and growing concerns regarding greenwashing (Li et al., 2018; Trabucchi et al., 2023). By enhancing the visibility, accessibility, and verifiability of sustainability-related information, digital platforms enable firms to communicate their ethical commitments more transparently, thereby influencing consumers' evaluative processes. Consequently, SDM extends beyond a mere communication tool and can be more appropriately understood as a strategic mechanism through which firms shape consumer perceptions of authenticity, legitimacy, and trustworthiness.

Building on prior research, SDM is conceptualized in this study as a multidimensional construct comprising three key practices: transparency and disclosure, communication of social and environmental impact, and stakeholder engagement (Odoom et al., 2025). These dimensions capture how firms articulate sustainability commitments, demonstrate tangible societal contributions, and foster interactive stakeholder relationships within digital contexts.

Drawing on signalling theory, these SDM practices can be interpreted as credibility signals that reduce uncertainty and enable consumers to evaluate the sincerity and reliability of sustainability claims (Spence, 1973; Connelly et al., 2011). However, in digital environments where consumers are frequently exposed to ambiguous or competing sustainability narratives, such signals are unlikely to translate directly into behavioral outcomes. Instead, SDM are expected to operate through relational mechanisms, most notably customer trust that mediate the relationship between sustainability communication and consumer engagement. As such, the influence of these practices is unlikely to manifest directly in behavioural outcomes, but rather to operate through relational mechanisms, with customer trust acting as a pivotal mediator in translating sustainability communication into consumer engagement.

2.1.1. Transparency and Disclosure

Transparency in sustainable digital marketing refers to the degree to which brands provide clear, accessible, and verifiable disclosures regarding their sustainability-related practices, policies, and performance through digital platforms (Parris et al., 2016; Li et al., 2018). Within branding contexts, transparency functions as a form of accountable digital communication, whereby brands make sustainability claims open to scrutiny and verification, thereby reinforcing perceptions of honesty and responsibility (Li et al., 2018). Clear and comprehensible sustainability information is particularly important in helping consumers understand and evaluate sustainability-related claims, reducing confusion and misinterpretation in the marketplace (Grunert et al., 2014).

The relevance of transparency is amplified in digital environments, where consumers are able to cross-check brand claims against external information sources, peer discussions, and stakeholder narratives. As a result, selective disclosure or ambiguous sustainability messaging may heighten consumer scepticism and trigger perceptions of greenwashing (Trabucchi et al., 2023; Zhou et al., 2023). Prior evidence indicates that transparent and consistent disclosure enhances credibility assessments and strengthens customer trust, particularly when sustainability messages are aligned with observable actions and outcomes (Boegeman et al., 2023; Wahyuningrum et al., 2023).

H1: Transparency and disclosure positively influence customer trust.

2.1.2. Social and Environmental Impact

Social and environmental impact refers to the digital communication of brands' tangible contributions to broader societal and environmental objectives, including community development initiatives, environmental conservation programs, partnerships with non-profit organizations, and efforts to reduce carbon emissions or waste (Maduku, 2024; Al-Emran, 2023). This dimension reflects how brands position themselves as socially responsible actors whose activities extend beyond profit maximization.

In digital settings, impact communication gains significance because brands can provide timely and observable evidence such as progress updates, visual documentation, or stakeholder testimonials allowing consumers to assess whether sustainability narratives are supported by concrete action (Trabucchi et al., 2023). When such impact-related communication is perceived as credible and substantive, it enhances trust by reinforcing beliefs that the brand is ethically committed and dependable in pursuing long-term societal value (Namkung & Jang, 2017; Zhou et al., 2023).

H2: Social and environmental impact communication positively influences customer trust.

2.1.3. Stakeholder Engagement

Stakeholder engagement in the context of sustainable digital marketing refers to how brands use digital platforms to actively involve customers and other stakeholders such as employees, communities, and business partners in sustainability-related initiatives through interaction, dialogue, and collaboration (Beck & Ferasso, 2023; De Luca et al., 2022). Rather than being limited to one-way communication, this approach reflects a relational orientation in which brands seek to co-create sustainability outcomes through ongoing, reciprocal digital interactions that signal responsiveness, fairness, and long-term commitment.

In digital environments, stakeholder engagement is manifested through practices such as co-creation campaigns, interactive sustainability content, online community initiatives, and transparent communication regarding sustainability priorities and trade-offs. When stakeholders perceive that their input is acknowledged and meaningfully integrated into brand actions, brands are viewed as more accountable and credible, which strengthens trust in their sustainability commitments (Helmefalk et al., 2023; Wahyuningrum et al., 2023). This aligns with digital trust and relationship marketing literature, which emphasizes that interaction quality, responsiveness, and reciprocity are key mechanisms through which trust and long-term engagement are formed in online contexts (Luo, 2002; Nadeem et al., 2020).

H3: Stakeholder engagement positively influences customer trust.

2.2. Customer Trust and Customer Brand Engagement

Customer trust refers to consumers' beliefs regarding a brand's honesty, integrity, and reliability in fulfilling its promises within ongoing digital interactions (Morgan & Hunt, 1994; Gefen et al., 2003). In digital environments characterized by uncertainty, privacy concerns, and perceived risk, trust functions as a critical mechanism that reduces uncertainty and facilitates consumers' willingness to engage in brand-related activities (Luo, 2002; Hajli, 2015). As a relational construct, trust serves not only as a cognitive evaluation but also as a psychological assurance that enables consumers to commit their time, attention, and emotional investment to brands in digital contexts (Nadeem et al., 2020).

Customer brand engagement (CBE) represents consumers' cognitive, emotional, and behavioural investment in brand interactions across digital platforms, including participation, advocacy, and sustained involvement (Van Doorn et al., 2010; Brodie et al., 2011). Prior research consistently identifies trust as a key antecedent of engagement, as consumers are more inclined to interact with brands they perceive as credible, dependable, and aligned with their expectations (Hansen et al., 2019; Ryan & Casidy, 2018). Trust facilitates engagement by strengthening emotional attachment, lowering perceived risk, and enhancing consumers' confidence in brand-related interactions (Molinillo et al., 2020; Hollebeek & Macky, 2019).

Based on these theoretical arguments, customer trust is expected to play a direct and significant role in shaping customer brand engagement in digital environments.

H4: Customer trust positively influences customer brand engagement.

2.3. Customer Trust as a Mediating Mechanism in Sustainable Digital Marketing

While prior research has acknowledged trust as an outcome of sustainability communication (Li et al., 2018; Trabucchi et al., 2023; Zhou et al., 2023), its role as a mediating mechanism linking sustainable digital marketing (SDM) practices to customer engagement remains insufficiently examined. Drawing on signalling theory, SDM practices can be understood as credibility signals that influence consumer evaluations indirectly through the development of trust (Spence, 1973; Connelly et al., 2011). In digital environments marked by information asymmetry and scepticism, consumers rely on observable signals to infer the authenticity and

reliability of sustainability claims, making trust a central conduit through which such signals become behaviourally meaningful.

Transparency and disclosure reduce information asymmetry by providing clear, accessible, and verifiable information regarding sustainability practices, thereby strengthening consumers' perceptions of honesty and accountability (Li et al., 2018; Boegeman et al., 2023). When such disclosures are perceived as consistent and credible, they enhance customer trust, which in turn encourages deeper engagement with the brand.

Similarly, social and environmental impact communication reflects the extent to which brands demonstrate tangible contributions to societal and environmental outcomes. The credibility of such communication depends on the availability of observable evidence and consistency between claims and actions (Trabucchi et al., 2023; Wahyuningrum et al., 2023). When consumers perceive impact-related messages as authentic and substantiated, they are more likely to develop trust, which subsequently translates into engagement behaviours.

Stakeholder engagement further contributes to trust formation by signalling responsiveness, inclusiveness, and relational commitment. Interactive digital practices such as co-creation initiatives and participatory communication foster perceptions of fairness and accountability, thereby strengthening trust in brand–consumer relationships (De Luca et al., 2022; Helmefalk et al., 2023). In digital contexts, where relational quality is shaped through ongoing interaction, stakeholder engagement enhances trust by reinforcing consumers' perceptions that their input is valued and meaningfully incorporated.

Taken together, these arguments suggest that SDM practices influence customer brand engagement indirectly through customer trust, which functions as a relational conduit linking sustainability signals to behavioural outcomes.

H3a: Customer trust mediates the relationship between transparency and disclosure and customer brand engagement.

H3b: Customer trust mediates the relationship between social and environmental impact communication and customer brand engagement.

H3c: Customer trust mediates the relationship between stakeholder engagement and customer brand engagement.

3. Methodology

3.1. Research Design

A cross-sectional design was selected as it allows the capture of consumer perceptions at a specific point in time, which is suitable for examining relationships among perceptions of sustainability communication, trust formation, and engagement behaviour in digital environments. This approach is widely adopted in marketing research investigating consumer attitudes and relational outcomes.

The unit of analysis in this study was individual consumers who have prior experience interacting with Indonesian local brands through digital platforms. This unit of analysis is appropriate as the study focuses on consumer-level perceptions and behavioural responses to sustainability-oriented digital marketing practices.

3.2. Research Setting and Population

The study was conducted in Indonesia, focusing on consumers who interact with local brands through digital platforms, including social media, e-commerce platforms, and brand-owned digital channels. Indonesia represents a relevant research context due to the rapid expansion of digital marketing practices and the increasing prominence of sustainability communication

among local brands. The target population comprised consumers who have prior experience with Indonesian local brands, have been exposed to sustainability-related digital marketing content, and actively engage with brands through digital platforms.

These criteria ensure that respondents possess sufficient familiarity with digital brand interactions and sustainability communication, thereby enhancing the validity of their evaluations of SDM practices and their effects on trust and engagement.

3.3. Sampling Technique and Sample Size Determination

A purposive sampling technique was employed in this study. This approach is appropriate for selecting respondents who possess relevant experience and knowledge required to evaluate sustainability-oriented digital marketing practices, particularly when the research focuses on specific behavioural and perceptual criteria (Odoom et al., 2025). Given that not all consumers are equally exposed to or aware of sustainability-related communication, purposive sampling ensures the inclusion of information-rich respondents.

The sample size was determined based on established guidelines for Partial Least Squares Structural Equation Modelling (PLS-SEM). According to Hair et al. (2022), the minimum sample size should be at least ten times the maximum number of structural paths directed at any latent construct (the “10-times rule”). In this study, the most complex endogenous construct, customer trust receives three incoming paths, resulting in a minimum required sample size of 30 respondents.

However, the 10-times rule is considered a conservative estimate. To ensure adequate statistical power and robustness, a larger sample size was adopted. Following Cohen (1988) and Hair et al. (2022), a minimum sample size of approximately 150 respondents is recommended to detect medium effect sizes ($f^2 = 0.15$) with a statistical power of 0.80 in structural equation modelling.

Accordingly, the final sample of 150 respondents exceeds both the minimum and recommended thresholds, thereby ensuring sufficient statistical power and reliability for PLS-SEM analysis.

3.4. Data Collection

Data were collected through an online survey distributed via social media platforms and digital communication channels. Online data collection was considered appropriate due to the study’s focus on digital consumer behaviour and the widespread use of digital platforms among Indonesian consumers.

Prior to the main data collection, a pilot study involving 30 respondents was conducted to evaluate the clarity, reliability, and contextual appropriateness of the measurement instrument. The pilot results indicated satisfactory internal consistency, with Cronbach’s alpha values exceeding the recommended threshold of 0.70 (Hair et al., 2022). Minor revisions were made to improve item wording and ensure alignment with the Indonesian local brand context. The final survey was administered over a defined period, and only complete and valid responses were included in the analysis. This procedure helps ensure data quality and reduces potential measurement error.

3.5. Measurement of Variables

All constructs were measured using previously validated scales adapted from the literature. Responses were assessed using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), which is widely used in behavioural and marketing research to capture attitudinal responses.

Sustainable Digital Marketing (SDM) was operationalized through three distinct dimensions; transparency and disclosure, social and environmental impact communication, and stakeholder engagement, each treated as an independent construct in the structural model. This approach is consistent with prior research that conceptualizes SDM as a multidimensional phenomenon while allowing for the examination of the differential effects of each dimension (Odoom et al., 2025).

Customer trust was measured using items adapted from Gefen et al. (2003), capturing consumers' perceptions of brand honesty, integrity, and reliability in digital interactions. Customer brand engagement (CBE) was measured using items adapted from Odoom et al. (2025), reflecting consumers' cognitive, emotional, and behavioural engagement with brands across digital platforms.

All measurement items were adapted to the context of Indonesian local brands while preserving their original conceptual meaning. This adaptation ensures contextual relevance without compromising construct validity.

3.6. Data Analysis Technique

The data were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM) with SmartPLS 4. PLS-SEM is particularly suitable for this study as it allows the analysis of complex relationships among latent constructs, accommodates relatively small to medium sample sizes, and is appropriate for prediction-oriented and exploratory research (Hair et al., 2019).

The analysis followed a two-stage approach. First, the measurement model was assessed to evaluate the reliability and validity of the constructs. This included the assessment of indicator reliability, internal consistency reliability (Cronbach's alpha and composite reliability), convergent validity (average variance extracted), and discriminant validity using the heterotrait–monotrait (HTMT) ratio.

Second, the structural model was evaluated by examining path coefficients, coefficients of determination (R^2), and the statistical significance of relationships using bootstrapping with 5,000 resamples. The mediating role of customer trust was assessed through indirect effect analysis, following established procedures in PLS-SEM mediation testing.

3.7. Ethical Considerations

This study adhered to general ethical standards for social science research. Participation was voluntary, and informed consent was obtained from all respondents prior to data collection. Respondents were assured of the confidentiality and anonymity of their responses, and all data were used solely for academic purposes

4. Result and Discussion

4.1. Result

Respondent Profile

A total of 150 valid responses were included in the analysis. The demographic profile of respondents is presented in Table 1.

The sample consisted of 54.7% female and 45.3% male respondents. In terms of age, the majority were aged 18–25 years (62.7%), followed by 26–35 years (25.3%) and above 35 years (12.0%). Regarding education, most respondents held a bachelor's degree (57.3%), while 34.7% had completed high school and 8.0% held postgraduate qualifications.

Most respondents reported frequent interaction with local brands through social media (78.7%), followed by e-commerce platforms (64.0%) and brand-owned digital channels

(41.3%). Overall, the sample reflects digitally active consumers with relevant exposure to sustainability-related marketing content.

Table 1. Respondent Profile (n=150)

Characteristics	Category	Frequency	Percentage
Gender	Male	68	45.3%
	Female	82	54.7%
Age	18–25 years	94	62.7%
	26–35 years	38	25.3%
	>35 years	18	12.0%
Education Level	High School	52	34.7%
	Bachelor’s Degree	86	57.3%
	Postgraduate	12	8.0%
Platform Usage	Social Media	118	78.7%
	E-commerce	96	64.0%
	Brand Website/App	62	41.3%

(Source: Primary data, 2026)

Measurement and Model Assessment

This study employed Partial Least Squares Structural Equation Modelling (PLS-SEM) via SmartPLS 4.0, a variance-based approach well suited to research designs involving complex mediation structures and constructs grounded in behavioural and relational marketing theory (Hair et al., 2019). Following the two-stage analytical procedure recommended by Hair et al. (2019), the measurement model was evaluated prior to testing the structural paths to ensure the reliability and validity of all latent constructs.

Indicator reliability was assessed through outer loading values, all of which exceeded the established threshold of 0.70 (Hair et al., 2019). As presented in Table 2, outer loadings ranged from 0.822 (CT3) to 0.915 (SE3), confirming that each indicator explained a sufficient proportion of variance in its respective construct. Internal consistency was evaluated via Cronbach's alpha and composite reliability (CR). Cronbach's alpha values ranged from 0.872 (Social and Environmental Impact) to 0.925 (Customer Trust), and CR values ranged from 0.876 to 0.928, both consistently surpassing the minimum threshold of 0.70. Convergent validity, assessed through Average Variance Extracted (AVE), was confirmed for all constructs, with AVE values ranging from 0.725 (Stakeholder Engagement) to 0.796 (Social and Environmental Impact), all exceeding the 0.50 threshold established by Fornell and Larcker (1981).

Table 2. Reliability and Validity Assessment

Constructs	Items	Outer loading	Cronbach’s Alpha	CR	AVE	R ²	VIF
Transparency & Disclosure (TD)	TD1	0.897	0.911	0.913	0.789	-	3.033
	TD2	0.891					2.698
	TD3	0.875					2.533
	TD4	0.891					2.84
Social & Environmental Impact (SE)	SE1	0.864	0.872	0.876	0.796	-	2.004
	SE2	0.897					2.565
	SE3	0.915					2.705

Stakeholder Engagement & Collaboration (STK)	STK1	0.83					2.237
	STK2	0.872					2.784
	STK3	0.846	0.905	0.912	0.725	-	2.372
	STK4	0.862					2.434
	STK5	0.845					2.517
Customer Trust (CT)	CT1	0.889					3.197
	CT2	0.894					3.285
	CT3	0.822	0.925	0.928	0.769	0.565	2.248
	CT4	0.883					3.064
	CT5	0.894					3.147
Customer Brand Engagement (CBE)	CBE1	0.858					2.529
	CBE2	0.822					2.071
	CBE3	0.864	0.910	0.910	0.735	0.272	2.596
	CBE4	0.881					2.906
	CBE5	0.86					2.591

(Source: Primary data, 2026)

Discriminant validity was assessed using the Heterotrait-Monotrait (HTMT) ratio criterion, as Henseler et al. (2015) demonstrated that HTMT offers superior diagnostic performance over conventional approaches such as cross-loading matrices or the Fornell–Larcker criterion in PLS-SEM contexts. All HTMT values remained below the conservative threshold of 0.85, as reported in Table 3. The highest value observed was 0.746 between Transparency and Disclosure and Customer Trust, which, while theoretically consistent given the conceptual proximity of these constructs, does not compromise their empirical distinctiveness. Additionally, all Variance Inflation Factor (VIF) values fell below 5.0, ranging from 2.004 to 3.285, thereby ruling out multicollinearity concerns at the structural level.

Table 3. Heterotrait-monotrait factors

	CBE	CT	SE	STK	TD
CBE	-	-	-	-	-
CT	0.567	-	-	-	-
SE	0.529	0.644	-	-	-
STK	0.332	0.471	0.436	-	-
TD	0.657	0.746	0.57	0.389	-

Structural Model Assessment

The structural model was evaluated in terms of explanatory power (R^2) and path significance. An R^2 of 0.565 was obtained for Customer Trust, indicating that the three SDM dimensions collectively explain a moderate proportion of variance in trust, a result that aligns with Hair et al. (2019) benchmark of 0.50 as moderate explanatory power in behavioural marketing applications. The R^2 for Customer Brand Engagement was 0.272, approaching the moderate threshold and reflecting the fact that, while trust is a meaningful predictor of engagement, other unmeasured antecedents, including platform-specific variables, brand heritage, and hedonic involvement are likely to contribute additional variance beyond the current model's scope. The structural path results and their associated significance levels, derived from 5,000-resample bootstrapping, are displayed in Table 4 and illustrated in Figure 1.

Figure 1. Research results using SmartPLS

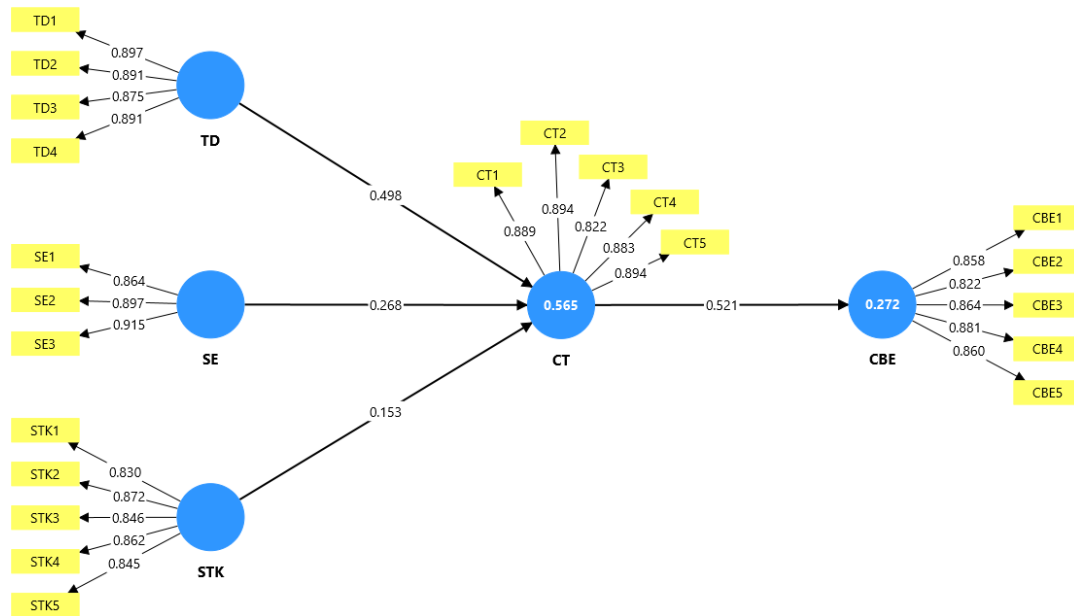


Table 4. Hypothesis testing results

Hypothesis	Relationship	Path coefficients	T-values	P values	Result
H1a	TD → CT	0.498	7.356	0.000	Accepted
H1b	SE → CT	0.269	3.655	0.000	Accepted
H1c	STK → CT	0.154	2.534	0.011	Accepted
H2	CT → CBE	0.524	7.590	0.000	Accepted
H3a	TD → CT → CBE	0.262	5.050	0.000	Accepted
H3b	SE → CT → CBE	0.141	3.147	0.002	Accepted
H3c	STK → CT → CBE	0.081	2.419	0.016	Accepted

(Source: Primary data, 2026)

4.2. Discussions

Transparency and Disclosure

Among the three SDM dimensions, transparency and disclosure emerged as the strongest predictor of customer trust ($\beta = 0.498$, $p < 0.001$), indicating that openness in sustainability communication constitutes the most influential credibility signal in digital contexts. This finding aligns with the view that transparency enhances trust by reducing information asymmetry and signalling consistency between stated intentions and actual practices (Schnackenberg & Tomlinson, 2016). More importantly, transparency functions as a clear and easily interpretable signal, enabling consumers to assess the credibility of sustainability claims with greater confidence.

In Indonesian local brands, consumers place strong importance on the clarity, accessibility, and verifiability of sustainability information. In emerging digital markets where misleading or exaggerated claims are common, consumers tend to be more cautious in evaluating brand messages. When brands communicate both achievements and challenges transparently, consumers perceive such communication as more honest and credible, thereby strengthening trust. This highlights the role of transparency as a key mechanism for reducing uncertainty

and signalling organisational sincerity in contexts with relatively high scepticism toward sustainability claims.

The mediating effect further supports this interpretation. The indirect effect of transparency on customer brand engagement via trust ($\beta = 0.262$, $p < 0.001$) was the strongest among all mediation paths, indicating that transparency drives engagement primarily through trust formation. This is consistent with prior research suggesting that authenticity-based communication influences engagement through relational mechanisms rather than direct persuasive effects (Hollebeek & Macky, 2019). In line with Trabucchi et al. (2023), the findings suggest that credibility is shaped more by perceived honesty and consistency than by message sophistication. Therefore, transparency represents a functionally dominant driver of relational engagement in digital sustainability communication.

Social and Environmental Impact

Social and environmental impact communication also showed a positive and significant effect on customer trust ($\beta = 0.269$, $p < 0.001$), although weaker than transparency. This suggests that impact-related messages carry lower immediate credibility, as they are more complex and less directly observable by consumers.

This weaker effect can be explained by the outcome-based nature of impact communication. Unlike transparency, which provides clear and accessible information, impact claims require consumers to evaluate whether stated outcomes are supported by credible evidence. As noted by Gong et al. (2023), the effectiveness of sustainability communication depends on the consistency between claims and actual practices, making such messages more demanding to process and more likely to be questioned.

In the context of Indonesian local brands, this challenge becomes more evident, as sustainability initiatives are often communicated through general claims such as “environmentally friendly” or “socially responsible,” without measurable or verifiable evidence. This aligns with increasing awareness of greenwashing and scepticism toward sustainability narratives (Delmas & Burbano, 2011; Zhou et al., 2023), leading consumers to adopt a more cautious evaluation and form trust only when claims are perceived as credible. The indirect effect through trust ($\beta = 0.141$, $p = 0.002$) confirms that impact communication contributes to engagement only when it successfully builds trust, reinforcing the role of trust as a key relational mechanism.

Stakeholder Engagement

Stakeholder engagement exhibited the weakest, yet still significant, effect on customer trust ($\beta = 0.154$, $p = 0.011$), indicating that participatory digital practices contribute to trust formation, but with more limited influence compared to transparency and impact communication.

This weaker effect can be explained by the conditional nature of engagement as a signal. Unlike transparency or impact communication, stakeholder engagement is interaction-based and requires consumers to perceive the interaction as genuine, responsive, and meaningfully integrated into organisational actions. As noted by Brodie et al. (2013) and De Luca et al. (2022), engagement enhances trust only when it is perceived as authentic rather than symbolic or performative.

In the context of Indonesian local brands, where participatory digital practices are still evolving, consumers may not consistently perceive engagement initiatives as credible or impactful. As a result, engagement signals are more ambiguous and less reliable in shaping trust, leading to a weaker effect. The indirect effect through trust ($\beta = 0.081$, $p = 0.016$) further confirms that stakeholder engagement contributes to engagement outcomes only when it

successfully builds trust. Overall, these findings suggest that stakeholder engagement is a context-dependent signal whose effectiveness relies on perceived authenticity and responsiveness, rather than mere interaction.

Customer Trust

Customer trust was found to have a strong positive effect on customer brand engagement ($\beta = 0.524$, $p < 0.001$), confirming its role as the most influential driver in the model. This finding aligns with the commitment-trust theory of relationship marketing, which posits that trust is a key determinant of relational outcomes (Morgan & Hunt, 1994).

In digital contexts, where consumers cannot directly verify product quality or organizational intentions, trust functions as a critical mechanism for reducing perceived risk and facilitating engagement behaviours. The results indicate that trust enables consumers to invest cognitively, emotionally, and behaviourally in brand interactions, thereby strengthening engagement.

This finding is consistent with prior studies demonstrating that perceived credibility and trust significantly enhance consumer engagement in digital environments (Hansen et al., 2019; Molinillo et al., 2020). It also reinforces the argument that engagement should be understood as a relational outcome that depends on prior trust formation rather than as a direct response to marketing stimuli.

Indirect Effects and Theoretical Implications

The findings indicate that all dimensions of sustainable digital marketing exert significant indirect effects on customer brand engagement through customer trust. This pattern suggests that sustainability-oriented digital practices operate primarily through relational mechanisms rather than direct behavioural pathways.

From a theoretical perspective, these results support a relational view of consumer engagement, in which behavioural outcomes emerge from prior evaluative processes. Specifically, customer trust functions as an enabling condition that translates sustainability communication into engagement (Van Doorn et al., 2010). This reinforces the argument that engagement is contingent upon trust formation rather than direct exposure to sustainability messaging.

Moreover, the findings advance the conceptualization of sustainable digital marketing as a credibility-based signalling system. In line with signalling theory, sustainability communication serves to reduce uncertainty and shape perceptions of trustworthiness (Spence, 1973; Connelly et al., 2011). The results further suggest that the effectiveness of these signals depends on their ability to activate trust as a mediating mechanism.

Finally, the variation in indirect effect strength across SDM dimensions highlights that not all sustainability signals carry equal weight. Transparency and disclosure exhibit the strongest influence, followed by impact communication and stakeholder engagement, indicating that consumers prioritize clarity and verifiability in evaluating sustainability claims.

5. Conclusion and Suggestion

Conclusions

This study investigated the role of customer trust in linking sustainable digital marketing (SDM) practices and customer brand engagement within the context of Indonesian local brands. The findings demonstrate that all SDM dimensions, namely transparency and disclosure, social and environmental impact communication, and stakeholder engagement, significantly influence customer trust, with transparency emerging as the most

influential predictor.

Customer trust was found to exert a strong positive effect on customer brand engagement, confirming its role as a central relational mechanism in digital marketing contexts (Morgan & Hunt, 1994; Hansen et al., 2019). Furthermore, the results indicate that the influence of SDM practices on engagement is transmitted through trust, suggesting that sustainability communication does not directly stimulate engagement but instead operates through the formation of consumer trust.

These findings contribute to the literature by advancing the understanding of sustainable digital marketing as a credibility-based signalling system (Spence, 1973; Connelly et al., 2011). In this perspective, sustainability communication functions as a set of signals that reduce uncertainty and shape perceptions of trustworthiness, which subsequently facilitate engagement. In addition, the study highlights that SDM is not a homogeneous construct, as its dimensions exhibit varying levels of influence, with transparency playing a dominant role in shaping relational outcomes.

Recommendations

The findings of this study provide several practical implications specifically for Indonesian local brands seeking to strengthen customer engagement through sustainable digital marketing.

First, local brands should prioritize transparency and disclosure as a core trust-building strategy. Given that many local brands operate with limited brand recognition, clearly communicating sustainability practices such as sourcing, production processes, and operational challenges can reduce consumer uncertainty. Providing simple, accessible, and honest information (e.g., through social media updates or product descriptions) can significantly enhance perceived credibility.

Second, social and environmental impact communication should be supported by concrete and observable evidence. Local brands are encouraged to move beyond general claims such as “eco-friendly” or “socially responsible” by providing specific examples, such as the use of recycled materials, local community involvement, or measurable environmental efforts. Where possible, even simple forms of validation (e.g., photos, process documentation, or partnerships with local communities) can strengthen consumer trust.

Third, stakeholder engagement should be implemented in a meaningful and visible way. For local brands, this can involve engaging customers directly through social media interactions, feedback loops, or small-scale co-creation initiatives. However, the key is not the presence of engagement activities, but whether consumers perceive their input as valued and reflected in actual brand decisions.

Fourth, local brands should recognize that customer engagement is not driven by frequent posting or interaction alone, but by the credibility of the message. Therefore, digital strategies should focus on building trust first, before expecting higher levels of engagement.

Finally, considering the Indonesian market, where consumers are increasingly aware of misleading sustainability claims, local brands should emphasize authenticity, simplicity, and transparency in their communication. Clear and evidence-based messaging is more effective than overly sophisticated or promotional sustainability narratives.

Limitations and Future Research

Despite its contributions, this study is subject to several limitations. First, the use of a cross-sectional research design limits the ability to capture the dynamic and evolving nature of trust

over time. Future research is encouraged to adopt longitudinal approaches to examine how repeated exposure to sustainability communication influences trust development and engagement trajectories (Van Doorn et al., 2010).

Second, the study focuses exclusively on Indonesian local brands, which may limit the generalizability of the findings. Future studies could conduct cross-country or cross-industry comparisons to assess the applicability of the results in different cultural and market contexts. Third, the model explains a moderate proportion of variance in customer brand engagement, suggesting that additional factors may contribute to engagement behaviour. Future research could incorporate constructs such as perceived authenticity, consumer scepticism, or brand identification to provide a more comprehensive understanding of engagement formation.

Finally, this study does not examine direct effects between SDM dimensions and engagement. Future research is encouraged to incorporate direct effect testing to further explore the structural relationships and to validate the presence of potential mediation patterns more rigorously

Acknowledgement

The authors would like to express their sincere gratitude to Lembaga Penelitian dan Pengabdian Kepada Masyarakat (LPPM), Universitas Hasanuddin, for providing financial support for this research through the Penelitian Dasar Dosen Pemula (PDPU) funding scheme. This support has been instrumental in facilitating the completion of this study. The authors also extend their appreciation to all respondents who participated in this research and contributed valuable insights.

Declaration of AI and AI-assisted technologies in the writing process

During the preparation of this work, the author(s) used ChatGPT (OpenAI) to assist in improving the clarity of language, refining academic writing, and organizing the structure of the manuscript. After using this tool, the author(s) reviewed and edited the content as necessary and take full responsibility for the content of the publication.

Reference

- Beck, D., & Ferasso, M. (2023). Bridging stakeholder value creation and urban sustainability. *Sustainable Cities and Society*, 89, 104316. <https://doi.org/10.1016/j.scs.2022.104316>
- Boegeman, S. J., Cardonuto, S., Rebitzer, S., Grant, H., & Cisneros, B. (2023). Seeing through transparency in the craft chocolate industry. *Journal of Agriculture and Food Research*, 14. <https://doi.org/10.1016/j.jafr.2023.100739>
- Brodie, R. J., Hollebeek, L. D., Juric, B., & Ilic, A. (2011). Customer engagement. *Journal of Service Research*, 14(3), 252–271. <https://doi.org/10.1177/1094670511411703>
- Brodie, R. J., Ilic, A., Juric, B., & Hollebeek, L. (2013). Consumer engagement in a virtual brand community: An exploratory analysis. *Journal of Business Research*, 66(1), 105–114. <https://doi.org/10.1016/j.jbusres.2011.07.029>
- Chaffey, D., & Ellis-Chadwick, F. (2019). *Digital marketing*. Pearson UK.
- Connelly, B. L., Certo, S. T., Ireland, R. D., & Reutzel, C. R. (2011). Signaling theory: A review and assessment. *Journal of Management*, 37(1), 39–67. <https://doi.org/10.1177/0149206310388419>

- Delmas, M. A., & Burbano, V. C. (2011). The drivers of greenwashing. *California Management Review*, 54(1), 64–87. <https://doi.org/10.1525/cmr.2011.54.1.64>
- De Luca, L., Lai, L., Mahmood, A., & Vrontis, D. (2022). Can social media improve stakeholder engagement and communication of sustainable development goals? *Technological Forecasting and Social Change*, 177, 121525. <https://doi.org/10.1016/j.techfore.2022.121525>
- Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in online shopping. *MIS Quarterly*, 27(1), 51–90. <https://doi.org/10.2307/30036519>
- Gordon, R., Carrigan, M., & Hastings, G. (2011). A framework for sustainable marketing. *Marketing Theory*, 11(2), 143–163. <https://doi.org/10.1177/1470593111403218>
- Greenland, S. J., Nguyen, N., & Strong, C. (2023). Irresponsible marketing and the need to support pro-sustainable production and consumption. *Journal of Strategic Marketing*. <https://doi.org/10.1080/0965254X.2023.2230487>
- Grunert, K. G., Hieke, S., & Wills, J. (2014). Sustainability labels on food products: Consumer motivation, understanding and use. *Food Policy*, 44, 177–189. <https://doi.org/10.1016/j.foodpol.2013.12.001>
- Hajli, N. (2015). Social commerce constructs and consumer trust. *International Journal of Information Management*, 35(2), 183–191. <https://doi.org/10.1016/j.ijinfomgt.2014.12.005>
- Hansen, S., Jiang, L., & Dahl, D. (2019). Enhancing consumer engagement in an online brand community via user reputation signals. *Journal of the Academy of Marketing Science*, 47(2), 349–367. <https://doi.org/10.1007/s11747-018-0617-2>
- Helmeffalk, M., Palmquist, A., & Rosenlund, J. (2023). Understanding stakeholder engagement in a recycling ecosystem. *Waste Management*, 160, 1–11. <https://doi.org/10.1016/j.wasman.2023.01.030>
- Kim, J., Rundle-Thiele, S., Knox, K., & Dietrich, T. (2023). Laying the foundations for success: Co-creating sustainable marketing solutions. *Journal of Strategic Marketing*, 31(1), 267–295. <https://doi.org/10.1080/0965254X.2021.1900341>
- Li, D., Huang, M., Ren, S., Chen, X., & Ning, L. (2018). Environmental legitimacy, green innovation, and corporate carbon disclosure. *Journal of Business Ethics*, 150(4), 1089–1104. <https://doi.org/10.1007/s10551-016-3187-6>
- Luo, X. (2002). Trust production and privacy concerns on the Internet. *Journal of Marketing Management*, 18(1–2), 111–134. [https://doi.org/10.1016/S0019-8501\(01\)00182-1](https://doi.org/10.1016/S0019-8501(01)00182-1)
- Maduku, D. K. (2024). How environmental concerns influence sustainable consumption. *Journal of Retailing and Consumer Services*, 76, 103593. <https://doi.org/10.1016/j.jretconser.2023.103593>
- Molinillo, S., Anaya-Sánchez, R., Liébana-Cabanillas, F., & Ruiz-Montañez, M. (2020). Analyzing the effect of social support factors on customer engagement and its impact on loyalty behaviors. *Computers in Human Behavior*, 108, 105980. <https://doi.org/10.1016/j.chb.2019.04.004>
- Morgan, R. M., & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58(3), 20–38. <https://doi.org/10.1177/002224299405800302>
- Nyagadza, B. (2022). Sustainable digital transformation for ambidextrous digital firms. *Sustainable Technology and Entrepreneurship*, 1(3), 100020. <https://doi.org/10.1016/j.stae.2022.100020>

- Odoom, R., Yamo, P., & Adams, M. (2025). Sustainable digital marketing practices and consumer brand engagement: A brand reputation mediation investigation. *Journal of Strategic Marketing*. <https://doi.org/10.1080/0965254X.2025.2453690>
- Parris, D. L., Dapko, J. L., Arnold, R. W., & Arnold, D. (2016). Exploring transparency. *Management Decision*, 54(1), 222–247. <https://doi.org/10.1108/MD-07-2015-0279>
- Prieto-Sandoval, V., Torres-Guevara, L., & García-Díaz, C. (2022). Green marketing innovation. *Journal of Cleaner Production*, 363, 132509. <https://doi.org/10.1016/j.jclepro.2022.132509>
- Ryan, J., & Casidy, R. (2018). The role of brand reputation in organic food consumption. *Journal of Retailing and Consumer Services*, 41, 239–247. <https://doi.org/10.1016/j.jretconser.2018.01.002>
- Sheth, J. N., & Parvatiyar, A. (2021). Sustainable marketing: Market-driving, not market-driven. *Journal of Macromarketing*, 41(1), 150–165. <https://doi.org/10.1177/0276146720961836>
- Spence, M. (1973). Job market signaling. *Quarterly Journal of Economics*, 87(3), 355–374. <https://doi.org/10.2307/1882010>
- Touni, R., Kim, W. G., Halawani, K., & Rady, A. (2022). Customer engagement and hotel booking intention. *International Journal of Hospitality Management*, 104, 103246. <https://doi.org/10.1016/j.ijhm.2022.103246>
- Trabucchi, D., Patrucco, A. S., Buganza, T., & Marzi, G. (2023). Is transparency the new green? *Technovation*, 126. <https://doi.org/10.1016/j.technovation.2023.102803>
- Unal, U., & Tascioglu, M. (2022). Sustainable, therefore reputable. *Marketing Intelligence & Planning*, 40(4), 497–512. <https://doi.org/10.1108/MIP-03-2022-0102>
- Van Doorn, J., Lemon, K. N., Mittal, V., Nass, S., Pick, D., Pirner, P., & Verhoef, P. C. (2010). Customer engagement behavior. *Journal of Service Research*, 13(3), 253–266. <https://doi.org/10.1177/1094670510375599>
- Wahyuningrum, I. F. S., Humaira, N. G., Budiharjo, M. A., et al. (2023). Environmental sustainability disclosure in Asia. *Journal of Cleaner Production*, 371, 137195. <https://doi.org/10.1016/j.jclepro.2023.137195>
- Zhou, Y., Yan, S., Li, G., Xiong, Y., & Lin, Z. (2023). The impact of consumer skepticism on blockchain-enabled sustainability disclosure. *Transportation Research Part E*, 179, 103323. <https://doi.org/10.1016/j.tre.2023.103323>
- Schnackenberg, A. K., & Tomlinson, E. C. (2016). Organizational transparency. *Journal of Management*, 42(7), 1784–1810. <https://doi.org/10.1177/0149206314525202>