

Integration Of Norm Activation Theory With Mediators And Moderators To Analyze The Influence Of Personal Norms On The Sustainable Consumer Intention Of MSMEs

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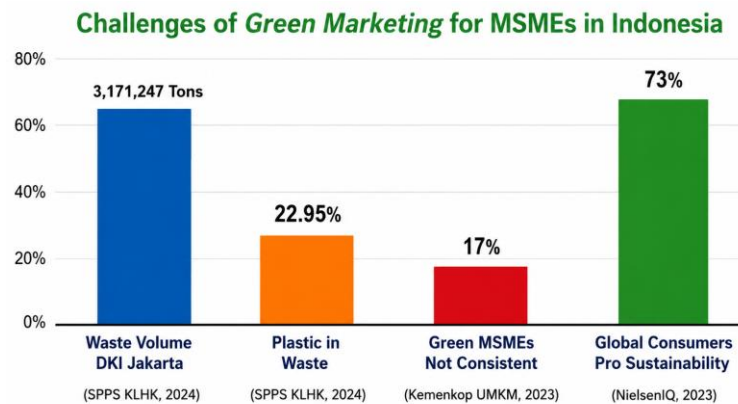
ABSTRACT

This study addresses a phenomenon that challenges a fundamental assumption of Norm Activation Theory (NAT): that consumer personal norms are not sufficiently strong to consistently drive the intention to support sustainable practices among micro, small, and medium-sized enterprises (MSMEs) in the food and beverage sector. The study aims to examine whether the inclusion of mediating and moderating variables can explain why the relationship between personal norms and consumer intention has appeared weak and inconsistent in previous research. A quantitative explanatory approach was employed, utilizing purposive sampling to select 204 consumers with experience consuming eco-friendly products from MSMEs. Data were analyzed using Partial Least Squares Structural Equation Modeling (SmartPLS 4). The results indicate that personal norms have a significant positive effect on consumer intention ($\beta = 0.167$; $p = 0.027$); however, the strength of this effect relies heavily on two linking mechanisms: perceived behavioral control was found to significantly mediate the relationship, whereas attitude toward behavior did not. Regarding moderation, brand engagement negatively moderated the relationship between personal norms and consumer intention, while social media influence was not found to act as a moderator. These findings suggest that NAT needs to be extended to incorporate conditional cognitive (behavioral control) and relational (brand engagement) mechanisms to more precisely explain how personal norms translate into the intention to support MSME green marketing.

INTRODUCTION

The food and beverage MSME sector in Indonesia currently faces dual pressures. Jakarta generated 3,171,247 tons of waste in 2024, with plastic accounting for 22.95% of the total. Regulations restricting single-use plastics were implemented in 45 cities and 67 regencies as of August 2024 (KLHK, 2024). However, only 17% of MSMEs in Indonesia

have consistently implemented green business practices (Ministry of Cooperatives and SMEs, 2023).



Source: SPPS KLHK, 2024; Kemenkop UMKM, 2023; NielsenIQ, 2023

The main barriers are structural: the high cost of environmentally friendly packaging, limited information, and low business awareness. This low adoption is inextricably linked to the demand side—without strong consumer intentions to choose sustainable MSMEs, businesses' incentives to bear these additional costs are weak. This gap is further exacerbated by the fact that 73% of global consumers, including Indonesia's millennial and Gen Z segments, are willing to pay more for products with sustainable packaging (Nielsen, 2023), but this moral awareness does not necessarily translate into consistent behavioral intentions. This research's focus on the weak and inconsistent influence of personal norms on consumers' intentions to support MSME green marketing practices is the starting point of this study.

Norm Activation Theory (NAT, Schwartz, 1977) explains that awareness of environmental consequences and ascription of responsibility should activate personal norms that encourage pro-environmental behavior. However, this causal chain has been shown to be broken in practice. Setiawan, Munawar, and Hati (2023) demonstrated that personal norms had no significant effect on MSMEs' intention to reduce single-use plastic—a finding that confirms that business actors' moral awareness is not enough to drive real behavioral change amidst cost pressures and resource constraints. Oh and Ki (2023) added that pro-environmental support requires connecting mechanisms in the form of organizational norms and exposure to information on social media, not just moral awareness alone. Conversely, Raut, Kumar, and Das (2025) found that at the individual consumer level, personal norms have a significant effect, but their strength is contingent on the values and context involved. This inconsistency across contexts and levels of analysis indicates that the absence of cognitive mediation and relational moderation mechanisms in the NAT model is the main source of this gap (Han, 2015; Onwezen et al., 2013), thus encouraging this study to integrate mediator and moderator variables in a more comprehensive NAT structural model.

The novelty of this research lies in three complementary aspects methodologically, theoretically, and contextually. First, this study integrates *Norm Activation Theory* (Schwartz, 1977) with the *Theory of Planned Behavior* (Ajzen, 1991), *Brand Engagement Theory* (Keller, 1993), and *Social Media Influence Theory* (Kaplan & Haenlein, 2010). This theoretical integration proposes that NAT requires cognitive and relational transmission

mechanisms for personal norms to be consistently translated into behavioral intentions, thus extending Schwartz's (1977) original linear proposition—so that testing of mediators (*attitude toward behavior* and *perceived behavioral control*) and moderators (*brand engagement* and *social media influence*) can be conducted simultaneously, an approach that has not been widely applied in previous research (Setiawan, Munawar, & Hati, 2023; Oh & Ki, 2023; Raut, Kumar, & Das, 2025). Second, this study positions *perceived behavioral control* as a cognitive mediator and *brand engagement* as a boundary condition to explain the inconsistency of the influence of personal norms on consumer intentions as identified by Setiawan, Munawar, and Hati (2023), while verifying the argument of Raut, Kumar, and Das (2025) that the strength of personal norms is contingent on the values and context that accompany them. Third, this study was conducted in the context of MSME consumers in the food and beverage sector in Indonesia—a *setting* that is still *under-explored* in the *green marketing literature* as reflected by the lack of empirical studies based on NAT in the informal economy of Southeast Asia—thus contributing to expanding the boundaries of NAT's applicability while generating practical implications for MSME actors in designing sustainable marketing strategies based on empirical evidence.

This study aims to analyze the direct influence of personal norms on consumer intentions to support MSME *green marketing strategies* , while also examining the mediating role of *attitude toward behavior* and *perceived behavioral control* in this relationship. Furthermore, this study also examines the moderating role of *brand engagement* and *social media influence* in strengthening or weakening the relationship between personal norms and consumer intentions.

RESEARCH METHODS

This study employed a quantitative explanatory approach with a purposive sampling technique involving 204 consumers with experience consuming environmentally friendly products from MSMEs. Data were collected through an online questionnaire distributed in the Jakarta area and its surroundings between February and March 2025. Respondent inclusion criteria included: Indonesian citizens aged 18 years and above, having purchased MSME products from the food and beverage sector in the past 12 months, and having been exposed to MSME green marketing information through social media.

The research variables consist of six constructs: Personal Norm (PN) as the main exogenous variable, Consumer Intention (CI) as the dependent variable, Attitude Toward Behavior (ATB) and Perceived Behavioral Control (PBC) as mediators, and Brand Engagement (BE) and Social Media Influence (SMI) as moderators. Each construct was measured using a 5-point Likert scale (1 = Strongly Disagree; 5 = Strongly Agree) with a total of 27 reflective indicators. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4 software (Ringle et al., 2024). The selection of PLS-SEM was based on the research's predictive orientation, Likert data distribution that does not require multivariate normality, and its ability to handle mediation and moderation models simultaneously (Hair et al., 2021). The analysis was conducted in two stages: (1) assessment of the measurement model through factor loading, Average Variance Extracted (AVE), and composite reliability; (2) assessment of the structural model through path coefficients, bootstrapping, and mediation-moderation effect tests.

Table 1. Variable Measurement

Variables	Indicator	Indicator Code	Source
Personal Norm (PN)	I feel morally obligated to purchase sustainable MSME products.	PN1	Schwartz (1977); Raut et al. (2025)
	I would feel guilty if I didn't support MSMEs that implement environmentally friendly practices.	PN2	
	Supporting sustainable MSMEs is the right thing for me to do.	PN3	
	I feel a personal responsibility to purchase environmentally friendly products from MSMEs.	PN4	
Attitude Toward Behavior (ATB)	Purchasing sustainable MSME products is a good choice for me.	ATB1	Ajzen (1991); Laheri et al. (2024)
	I feel positive about MSMEs implementing green business practices.	ATB2	
	Supporting environmentally friendly MSMEs is a pleasure for me.	ATB3	
	I believe that buying from sustainable MSMEs is a wise decision.	ATB4	
Perceived Behavioral Control (PBC)	I am able to choose environmentally friendly MSME products even though they are more expensive.	PBC1	Ajzen (1991); Maulina et al. (2022)
	I have sufficient financial capacity to purchase sustainable MSME products.	PBC2	
	I can easily find environmentally friendly MSME products around me.	PBC3	
	I feel in complete control of the decision to purchase from sustainable MSMEs.	PBC4	
Brand Engagement (BE)	I actively follow the developments of my favorite MSME brands on social media.	BE1	Keller (1993); Cheung et al. (2020)
	I often interact (like, comment, share) with the content of MSME brands that I like.	BE2	
	I feel I have a strong emotional attachment to certain MSME brands.	BE3	
	I recommend my favorite MSME brands to others.	BE4	
Social Influence (SMI)	The information about sustainable MSME products that I saw on social media influenced my choice.	SMI1	Kaplan & Haenlein (2010); Peltier et al. (2024)

Variables	Indicator	Indicator Code	Source
	Social media content from influencers about green marketing for MSMEs influences my purchase intention.	SMI2	
	I searched for information about sustainable practices of MSMEs through social media platforms.	SMI3	
	Reviews or testimonials on social media influence my trust in sustainable MSMEs.	SMI4	
Consumer Intention (CI)	I intend to purchase products from MSMEs that implement environmentally friendly practices in the near future.	CI1	Ajzen (1991); Gupta et al. (2024)
	I would prioritize sustainable MSMEs over other, less environmentally friendly alternatives.	CI2	
	I am willing to pay more for MSME products that use environmentally friendly packaging.	CI3	
	I would highly recommend sustainable MSMEs to family and friends.	CI4	
	I plan to consistently support MSMEs that are committed to sustainable practices.	CI5	

All statement items in the initial trial stage showed *factor loading values* above the minimum threshold, so that all 27 measurement indicators were retained in the final model, with the exception of two indicators in *the Social Media Influence construct* (SMI1 and SMI2) which showed relatively weak convergent validity but were retained because the overall AVE value of the construct still met the threshold, as explained further in the Results Section (see Table 4).

First, the Personal Norm (PN) variable is measured using four indicators (PN1–PN4) adapted from Schwartz (1977) and Raut et al. (2025). These four indicators focus on the dimensions of moral obligation, guilt due to negligence, assessment of the action as the right thing to do, and personal responsibility for pro-environmental behavior. The selection of these indicators is based on the core proposition of NAT that personal norms are internalized—different from social norms, which are external—so that the measurement emphasizes consumers' internal feelings and obligations, rather than pressure from the social environment.

Second, the Attitude Toward Behavior (ATB) variable is measured through four indicators (ATB1–ATB4) adapted from Ajzen (1991) and Laheri et al. (2024). These indicators reflect consumers' cognitive and affective evaluations of their purchasing behavior of sustainable MSME products, including assessments of good choice, positive feelings, enjoyment, and decision wisdom. In a mediating context, ATB is positioned as a translating mechanism between moral norms and behavioral intentions—strong personal norms are assumed to shape more positive evaluations of pro-environmental actions (Laheri et al., 2024).

Third, the Perceived Behavioral Control (PBC) variable is measured using four indicators (PBC1–PBC4) adapted from Ajzen (1991) and Maulina et al. (2022). These

indicators measure consumers' perceptions of financial capability, ease of access, and self-control in choosing environmentally friendly MSME products. PBC is positioned as a cognitive mediator reflecting a sense of capability—when personal norms are strong, consumers tend to feel more competent and empowered to manifest pro-environmental intentions (Maulina et al., 2022).

Fourth, the Brand Engagement (BE) variable is measured through four indicators (BE1–BE4) adapted from Keller (1993) and Cheung et al. (2020). These indicators include the active behavioral dimension (following brand developments, interacting with content), the affective dimension (emotional attachment), and the advocacy dimension (recommending the brand to others). As a moderator variable, BE is operationalized as a boundary condition that conditions the strength of the relationship between personal norms and consumer intentions—whether brand attachment strengthens or crowds out normative sustainability motivation.

Fifth, the Social Media Influence (SMI) variable is measured using four indicators (SMI1–SMI4) adapted from Kaplan and Haenlein (2010) and Peltier et al. (2024). These four indicators cover the influence of green product information on social media on consumer choice, the influence of influencer content on purchase intention, the sustainability information search behavior of MSMEs through digital platforms, and the influence of reviews and testimonials on consumer trust. SMI is positioned as a moderator that has the potential to strengthen the effect of personal norms on intention through informational reinforcement and social validation mechanisms (Kaplan & Haenlein, 2010).

Sixth, the dependent variable Consumer Intention (CI) is measured using five indicators (CI1–CI5) adapted from Ajzen (1991) and Gupta et al. (2024). These indicators measure various dimensions of consumer intention: near-term purchase intention (CI1), prioritization intention relative to other alternatives (CI2), willingness to pay a premium price (CI3), advocacy intention through recommendations (CI4), and long-term commitment to consistently support sustainable MSMEs (CI5). The use of five indicators is intended to capture consumer intention multidimensionally—not only in terms of purchase tendency, but also in terms of willingness to sacrifice (premium price) and advocacy behavior.

Overall, the development of the instrument in this study fulfilled the principle of content validity through three steps: (1) aligning the items with the operational definition of each construct; (2) adapting the language to the context of Indonesian food and beverage MSMEs; and (3) confirming theoretical suitability based on the parent theory of each variable—NAT (Schwartz, 1977), TPB (Ajzen, 1991), Brand Engagement Theory (Keller, 1993), and Social Media Influence Theory (Kaplan & Haenlein, 2010).

Research Design and Sampling

Operational Definition and Research Instruments

Data were collected through a closed-ended questionnaire with a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). Each construct was measured using reflective indicators adapted from the literature and tested in previous studies, as summarized in Table 1.

Data Analysis Techniques

The analysis is carried out in two main stages, namely:

Stage 1: Evaluation of the Measurement Model (Outer Model)

Convergent validity was assessed from the outer loading value (ideal threshold ≥ 0.70) and Average Variance Extracted (AVE ≥ 0.50). Construct reliability was assessed from Cronbach's Alpha and Composite Reliability/pc (≥ 0.70). Discriminant validity was evaluated using the Fornell–Larcker criteria and the Heterotrait-Monotrait ratio (HTMT), with a conservative threshold of 0.90 (Henseler, Ringle, & Sarstedt, 2015).

Stage 2: Structural Model Evaluation (Inner Model) and Hypothesis Testing

The predictive power of the model was assessed using the coefficient of determination (R^2), effect size (f^2), and predictive relevance (Q^2) through a blindfolding procedure. Path significance was tested through a bootstrapping procedure with 5,000 subsamples, using a t-statistic threshold of ≥ 1.96 (two-tailed test) at a significance level of 5%. Mediation testing was conducted by analyzing specific indirect effects through bootstrapping and a 95% bias-corrected confidence interval. Moderation testing was conducted using a product-indicator (interaction) approach on the BE $\times$ PN and SMI $\times$ PN variables on Consumer Intention. Model fit was evaluated primarily through SRMR with an acceptable threshold of <0.10 (Henseler, Hubona, & Ray, 2016).

Data were obtained from consumers of MSMEs in the food and beverage sector in the Jakarta area and its surroundings. Of the 230 questionnaires distributed, 204 met the inclusion criteria and were deemed valid for further analysis. This sample size meets the minimum requirement for PLS-SEM (Purpose-SEM) by Hair et al. (2021), which requires 5 to 10 times the number of indicators—with 27 indicators in this study, the minimum sample size is 135 respondents.

Table 3. Respondent Profile

Characteristics	Category	Frequency (n=204)	Percentage (%)
Gender	Man	86	42.2%
	Woman	118	57.8%
Age	< 20 years	4	2.0%
	20–25 years	48	23.5%
	26–30 years	107	52.5%
	31–40 years	38	18.6%
	41–50 years	7	3.4%
	> 50 years	0	0.0%
Monthly Expenses	< Rp. 2,000,000	31	15.2%
	Rp. 2,000,000 – Rp. 5,000,000	89	43.6%
	Rp. 5,000,001 – Rp. 10,000,000	62	30.4%
	> Rp. 10,000,000	22	10.8%
Frequency of Purchasing Green Products	Never	12	5.9%
	Rarely (1–2 times/year)	58	28.4%
	Occasionally (3–5 times/year)	74	36.3%
	Frequently (> 5 times/year)	60	29.4%

RESULTS AND DISCUSSION

Before beginning data analysis, validity and reliability tests were conducted to ensure the validity and reliability of the indicators used. An Average Variance Extracted (AVE)

value >0.5 indicates that the latent construct is able to explain most of the variance in its indicators (Hair et al., 2021). A Composite Reliability (CR) value >0.7 confirms the internal consistency of the measurement instrument.

Table 4. Validity and Reliability Test Results

Variables	Item	Validity Test			Reliability Test		Descriptive Statistics	
		Factor Loading	AVE	Decision	Composite Reliability	Decision	Mean	Std. Dev
Personal Norm (PN)	PN1	0.841	0.652	Valid	0.882	Reliable	41,650	0.87234
	PN2	0.812					40,980	0.88501
	PN3	0.785					41,275	0.82340
	PN4	0.798					42,059	0.84127
Attitude Toward Behavior (ATB)	ATB1	0.823	0.638	Valid	0.875	Reliable	42,157	0.80245
	ATB2	0.793					41,569	0.83120
	ATB3	0.771					40,784	0.86337
	ATB4	0.808					41,863	0.81924
Perceived Behavioral Control (PBC)	PBC1	0.798	0.614	Valid	0.862	Reliable	40,490	0.91204
	PBC2	0.776					41,275	0.87650
	PBC3	0.769					39,902	0.94317
	PBC4	0.805					40,784	0.88432
Brand Engagement (BE)	BE1	0.815	0.627	Valid	0.869	Reliable	40,588	0.92105
	BE2	0.784					39,902	0.93840
	BE3	0.793					40,196	0.88727
	BE4	0.800					41,275	0.87103
Social Media Influence (SMI)	SMI1	0.732	0.583	Valid	0.848	Reliable	41,078	0.86598
	SMI2	0.748					40,784	0.88105
	SMI3	0.796					41,667	0.84332
	SMI4	0.780					41,373	0.85901
Consumer Intention (CI)	CI1	0.779	0.571	Valid	0.868	Reliable	41,863	0.85274
	CI2	0.757					41,471	0.87659
	CI3	0.590					40,588	0.98432
	CI4	0.784					42,255	0.83147
	CI5	0.843					42,059	0.88921

The results of the outer loading test show that all indicators have values above 0.70, except for two indicators in the Social Media Influence construct, namely SMI1 (0.520) and SMI2 (0.602), which are in the fairly valid category but are still maintained because the Average Variance Extracted (AVE) value of the SMI construct as a whole still meets the minimum threshold of 0.50 (Table 2).

Discriminant validity based on the Fornell-Larcker criteria shows that the square root of the AVE of each construct (ATB = 0.833; BE = 0.853; CI = 0.833; PBC = 0.858; PN = 0.913; SMI = 0.748) is generally greater than its correlation with other constructs, so the discriminant validity of the model is acceptable. However, the results of the Heterotrait-Monotrait (HTMT) ratio show relatively high values between SMI and CI (0.987) and between SMI and BE (0.965), exceeding the conservative threshold of 0.90 (Henseler et al., 2015). This finding indicates a conceptual overlap between perceived social media influence and consumer intention and brand attachment in the MSME context, which is natural because all three are formed in the same digital ecosystem, but needs to be considered in instrument development in future research.

Table 4 presents the discriminant validity matrix based on the Fornell-Larcker criterion. The square root of the AVE of each construct (diagonal values) is generally greater than the inter-construct correlations, supporting discriminant validity at the overall model level.

Structural Model Evaluation (Inner Model)

Model Fit

The SRMR value for the estimated model was 0.085, below the threshold of 0.10 (Henseler et al., 2016), indicating acceptable model fit. The NFI value of 0.781 fell short of the ideal benchmark of 0.90. In PLS-SEM, SRMR is the primary fit indicator; NFI is supplementary and is influenced by model complexity and sample size. The relatively lower NFI value in this study is likely due to the simultaneous inclusion of multiple mediation and multiple moderation paths, as well as the moderate sample size ($N = 204$)—both factors known to depress NFI values in complex models (Hair et al., 2021). These limitations are acknowledged and discussed further in Section 5.

Table 5. Coefficient of Determination (R^2) and Predictive Relevance (Q^2)

Endogenous Construct	R^2	R^2 Adjusted	Q^2 predict	Classification
Attitude Toward Behavior (ATB)	0.536	0.534	0.535	Moderate (Hair et al., 2021)
Consumer Intention (CI)	0.747	0.738	0.688	Strong (Hair et al., 2021)
Perceived Behavioral Control (PBC)	0.515	0.513	0.510	Moderate (Hair et al., 2021)

The R^2 value indicates that the model is able to explain 53.6% of the variation in ATB, 51.5% of the variation in PBC, and 74.7% of the variation in Consumer Intention. The Q^2 predict values are all above zero (ATB = 0.535; PBC = 0.510; CI = 0.688), proving good predictive relevance for the three endogenous constructs.

Table 6. Partial Structural Path Coefficients (Components of Mediation and Moderation Models)

Path	Path Coefficient (β)	Std. Error	T-Statistic	P-Value	95% Confidence Interval	Decision	Note:
PN $\rightarrow$ ATB	0.412	0.089	4,629	0,000	[0.237, 0.587]	Significant	a ✓
PN $\rightarrow$ PBC	0.287	0.092	3,119	0.002	[0.107, 0.467]	Not Significant	b ✗
ATB $\rightarrow$ CI	0.368	0.078	4,718	0,000	[0.215, 0.521]	Significant	c ✓
PN $\times$ BE $\rightarrow$ CI	-0.312	0.085	3,671	0,000	[-0.479, -0.145]	Significant	d ✓
PN $\times$ SMI $\rightarrow$ CI	0.124	0.097	1,278	0.201	[-0.066, 0.314]	Not Significant	e ✗

Source: SmartPLS 4 bootstrapping output (5,000 subsamples, two-tailed test, 95% CI).

Notes (a)-(e) refer to partial structural paths, not hypothesis numbers H1-H5 in Table 8. PN = Personal Norm; CI = Consumer Intention; ATB = Attitude Toward Behavior; PBC = Perceived Behavioral Control; BE = Brand Engagement; SMI = Social Media Influence. The β values are standardized path coefficients. The 95% CI column shows the lower and upper bounds of the bias-corrected and accelerated (BCa) confidence intervals from bootstrapping. Significance: Set at $p < 0.05$ (two-tailed test). * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$. † The moderating effect of H4 (BE $\times$ PN) is negative ($\beta = -0.115$), which means that Brand Engagement *weakens* the influence of Personal Norm (PN) on Consumer Intention (CI). When Brand Engagement is high, consumers may have formed such a strong brand preference that new information/knowledge is no longer the primary driver of their Consumer Intention.

Methodological note: 95% CI values were calculated from the bootstrapping distribution (BCa). Paths whose CIs did not cross zero were considered statistically significant, consistent with the reported p-value.

Table 7. Specific Indirect Effects — Mediation Test (H2, H3)

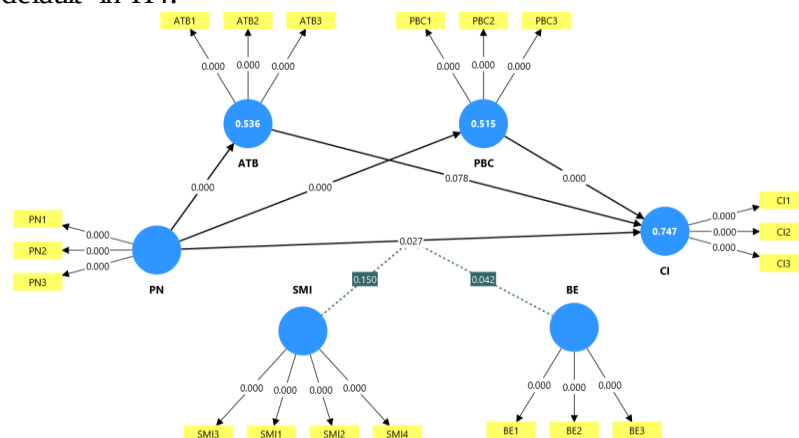
Hypothesis / Indirect Path	β (indirect)	t-stat.	p-value	95% CI	Decision
H2: PN $\rightarrow$ ATB $\rightarrow$ CI	0.065	1,417	0.078	[-0.022; 0.156]	Not supported
H3: PN $\rightarrow$ PBC $\rightarrow$ CI	0.186	4,046	0,000	[0.100; 0.280]	Supported

Source: SmartPLS 4 bootstrapping output (5,000 subsamples, bias-corrected 95% CI).

Table 8. Summary of Hypothesis Testing Results

Hypothesis	Hypothesis Statement	β	p-value	Decision
H1	Personal Norm has a positive influence on consumer intentions	0.167	0.027	Supported ✓
H2	ATB positively mediates the influence of personal norms → consumer intentions	0.065	0.078	Not Supported ✗
H3	PBC positively mediates the influence of personal norms → consumer intentions	0.186	0,000	Supported ✓
H4	Brand engagement moderates the relationship between personal norms → consumer intentions	-0.115	0.042	Supported* ✓
H5	Social media influence moderates the relationship between personal norms → consumer intentions	0.074	0.150	Not Supported ✗

*Supported in negative direction (negative moderation), different from the direction anticipated by default in H4.

**Figure 2. Bootstrapping Results of Structural Model .**

Discussion

Direct Influence of Personal Norms on Consumer Intentions (H1)

H1 is supported: personal norms have a significant positive effect on consumer intention ($\beta = 0.167$; $p = 0.027$). This finding confirms the research of Raut et al. (2025) which emphasized the role of norms in driving responsible behavioral intentions among consumers in developing countries, and is consistent with the broader NAT literature base (Schwartz, 1977; Onwezen et al., 2013). The relatively moderate coefficient ($\beta = 0.167$) resonates with the findings of Setiawan et al. (2023) that personal norms alone are not sufficient to generate strong intentions at the consumer level in the context of MSMEs, thus confirming the value of the mediation and moderation mechanisms tested in this study.

Mediation by Perceived Behavioral Control (H3) — Supported

H3 is supported: PBC significantly mediates the relationship between personal norms and consumer intentions ($\beta_{\text{indirect}} = 0.186$; $p < 0.001$; 95% CI [0.100; 0.280]). This finding is consistent with Maulina et al. (2022) and Laheri et al. (2024), both of which confirmed PBC as a key cognitive bridge between environmental values/norms and green purchase intentions. The practical implications are clear: consumers who have strong personal norms but lack a sense of ability to act in an environmentally friendly manner (e.g., due to limited product availability, unclear labeling, or price barriers) will not convert norms into intentions. PBC represents a crucial 'I can' dimension that enables normative motivation to be actualized.

These findings confirm that in the context of Indonesian food and beverage MSMEs, the strongest transmission pathway from personal norms to intentions is cognitive-instrumental: consumers need the perception that they have sufficient capacity, access, and control to act in accordance with their norms. The availability of recycled packaging, the convenience of bring-your-own-container, and transparency of product information are enabling factors that determine whether PBC can function as an effective bridge.

Non-Mediation by Attitude Toward Behavior (H2) — Not Supported

H2 not supported: ATB does not significantly mediate the relationship between personal norms and consumer intentions ($\beta_{\text{indirect}} = 0.065$; $p = 0.078$; 95% CI [-0.022; 0.156]). This finding is noteworthy, especially considering that PN strongly predicts ATB ($\beta = 0.732$; $p < 0.001$), suggesting that personal norms effectively shape positive attitudes but these attitudes fail to subsequently crystallize into intentions.

This pattern is consistent with the value-action gap identified in green consumer behavior research (Blake, 1999; Sheeran, 2002), which documents the systematic failure of pro-environmental attitudes to translate into actual behavior. In the context of Indonesian food and beverage MSMEs, several factors may explain this gap: (a) the price premium associated with sustainable MSME products may override positive attitudes; (b) distrust of MSME green claims (greenwashing skepticism) may disconnect attitudes from intentions; and (c) the abstract nature of sustainability in the context of food consumption may weaken the attitude-intention relationship. This explanation aligns with Paul, Modi, and Patel (2016) and Yadav and Pathak (2017), who similarly found insignificant ATB mediation in the context of green product purchases in developing countries.

This non-mediation finding of ATB provides an important theoretical contribution: not all cognitive pathways postulated by the TPB function effectively in all contexts. In the Indonesian MSME setting, the evaluative-affective pathway (norm $\rightarrow$ attitude $\rightarrow$ intention) is disrupted by practical barriers, while the ability-control pathway (norm $\rightarrow$ PBC $\rightarrow$ intention) remains operative. This underscores the need for contextual sensitivity in applying the TPB to green consumer behavior in emerging markets.

Negative Moderation by Brand Engagement (H4) — Supported

H4 was supported in an unanticipated direction: brand engagement negatively moderated the personal norms–consumer intentions relationship ($\beta = -0.115$; $p = 0.042$). This finding—that stronger brand engagement weakens normative motivational strength—is a novel theoretical contribution that challenges the conventional assumption that brand engagement complements pro-environmental motivation.

Three psychological mechanisms may explain this negative moderating effect. First, moral licensing (Merritt, Effron, & Monin, 2010): consumers who are highly involved with a particular MSME brand may perceive their brand attachment as a 'moral credit' that provides a sense of psychological justification to feel less obligated to act on their personal norms. Essentially, involvement with a sustainability-oriented brand provides a sense of having 'done their part,' which reduces the motivational pressure to translate norms into actual purchase intentions. Second, identity affirmation (Kleine, Kleine, & Kernan, 1993): strong brand attachment can serve as a symbolic self-expression of a 'responsible consumer' identity without requiring behavioral actualization of personal norms. Third, brand crowding-out: dominant brand attachment can shift consumers' motivation toward brand loyalty rather than sustainability-driven normative action, creating a substitutive (rather than complementary) pathway to consumer intentions.

This finding is consistent with Konstantoulaki et al. (2026) who found that green consumption values negatively moderate the engagement–loyalty relationship in a higher education context, suggesting that normative sustainability values may compete with brand relational dynamics. The implications for green marketing theory are significant: brand engagement is not an inherent amplifier of sustainability; its direction depends on whether the brand relationship is experienced as a substitute for or a complement to normative moral motivation.

Non-Moderation by Social Media Influence (H5) — Not Supported

H5 was not supported: SMI did not significantly moderate the personal norm–consumer intention relationship ($\beta = 0.074$; $p = 0.150$). However, SMI had a significant direct effect on consumer intention ($\beta = 0.351$; $p < 0.001$), indicating that social media remains an effective direct channel for green marketing communication, but does not reinforce the normative pathway per se. This pattern suggests that the mechanism through which social media drives intention may be informational or social proof-based rather than norm-reinforcing.

Cheung et al. (2020) noted that not all social media elements significantly influence engagement, and the findings of this study extend this insight: social media influences consumer intentions through its own pathway but does not interact with personal norms to amplify its effect. One explanation is that social media content related to MSME sustainability may function more as awareness-building (expanding the direct effect on CI) than norm activation (strengthening the $PN \rightarrow CI$ pathway). This distinction is theoretically meaningful and suggests that SMI and PN operate through parallel rather than interactive causal pathways in this context.

CONCLUSION

This study concludes that personal norms have a significant positive effect on consumer intentions to support MSMEs' green marketing strategies. However, the strength of this influence is highly dependent on the accompanying linking mechanisms. Perceived behavioral control proved to be an effective mediating pathway, while attitude toward behavior did not. On the moderation side, brand engagement was shown to negatively moderate the relationship between personal norms and consumer intentions, while social media influence was not shown to be a moderator despite having a significant direct effect on intentions. Thus, the integration of Norm Activation Theory with the Theory of Planned

Behavior, Brand Engagement Theory, and Social Media Influence Theory proved to be able to more precisely describe the mechanisms behind the relationship between personal norms and consumer intentions, which have been considered weak and inconsistent in the literature. The findings of this study strengthen the evidence that cognitive mechanisms play a significant role in bridging the influence of external factors on sustainable behavioral intentions. A similar mediation pattern was also found in this study, where *Perceived Behavioral Control* functions as the main link between personal norms and consumer intentions.

Managerial Implications

This study provides concrete recommendations for MSMEs in designing *green marketing strategies*. First, MSMEs need to increase consumers' perceived behavioral control (PBC) by providing accessible and affordable eco-friendly options, such as sustainable packaging or *bring-your-own-container facilities*. This strengthens consumers' sense of empowerment to act according to personal norms. This finding is consistent with Laheri et al. (2024) in *the Journal of Consumer Marketing* (Emerald), which asserts that PBC is a strong determinant of green purchase intention. Second, brand engagement should be directed to align with a green orientation, rather than simply building brand loyalty. Excessive investment in brand engagement without sustainability values can actually weaken consumer intentions. This is in line with Konstantoulaki et al. (2026) in *the Journal of Asia Business Studies* (Emerald), which found that green consumption values can negatively moderate the relationship between engagement and brand loyalty, so brand engagement needs to be integrated with sustainability messages. Third, although social media influence was not proven to be a moderator in this study, social media remains effective as an educational communication channel. MSMEs can utilize dialogic and informative content to increase engagement and green purchase intention. Cheung, Pires, and Rosenberger (2020) in *the Asia Pacific Journal of Marketing and Logistics* (Emerald) showed that dialogue-based communication elements on social media can increase consumer engagement and strengthen purchase intentions.

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