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Green-Claim Skepticism as a Boundary Condition of Received Green Word-of-Mouth among Generation Z Consumers

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Abstract: Green peer communication is frequently treated as a persuasive route to sustainable consumption, yet its association with purchase intention may depend on consumers' internal evaluations and confidence in environmental claims. This study examines how received green word-of-mouth is associated with green purchase intention among Generation Z consumers in Bandung, Indonesia. Using the stimulus-organism-response framework and self-efficacy reasoning, environmental concern and perceived consumer effectiveness are modelled as parallel mediators, while green-claim skepticism is specified as a direct inhibitor and a first-stage moderator. A cross-sectional purposive survey produced 278 valid responses, which were analysed using partial least squares structural equation modelling. Received green word-of-mouth was positively associated with both mediators, and both were positively associated with purchase intention, whereas its direct path to intention was non-significant. Green-claim skepticism was negatively associated with purchase intention and weakened the first-stage relationships. The conditional indirect effects remained positive but declined as skepticism increased. The findings indicate that peer communication is most relevant when it corresponds with concern and personal efficacy and when environmental claims remain credible and verifiable.

Keyword: Received Green Word-of-Mouth, Green-Claim Skepticism, Environmental Concern, Perceived Consumer Effectiveness, Green Purchase Intention, Generation Z

INTRODUCTION

Sustainable consumption has moved from a niche concern to a central issue in consumer research and corporate strategy. Nevertheless, favourable environmental attitudes do not automatically become marketplace intentions or purchasing behaviour. This persistent gap is especially important in green markets because consumers must evaluate not only product utility and price but also whether environmental attributes are credible, personally relevant, and

consequential. Research on young consumers has repeatedly shown that ecological knowledge, affect, concern, and social influence contribute to green purchasing, but their effects vary across settings and product categories (Kanchanapibul et al., 2014; Pagiaslis & Krontalis, 2014; Yadav & Pathak, 2016).

Generation Z is a particularly relevant segment because peer networks and social media are embedded in its information environment. Digital platforms increase access to user experiences, recommendations, and environmental narratives, but they also expose consumers to inconsistent claims and accusations of greenwashing. General electronic word-of-mouth research shows that interpersonal and peer-mediated information can shape purchase decisions by influencing message usefulness, credibility, adoption, and attitudes (Cheung & Thadani, 2012; Ismagilova et al., 2020). In green markets, however, the same communication can be filtered through doubts about whether products and firms genuinely deliver the environmental benefits they claim.

The present study focuses on received green word-of-mouth (RGWOM), defined as consumers' perceived exposure to positive recommendations, experiences, and information about environmentally friendly products from interpersonal or peer-mediated networks. This definition distinguishes received communication from a consumer's own intention to generate or disseminate word-of-mouth. Recent evidence indicates that green word-of-mouth can be positively associated with purchase intention, but its influence may operate through intervening evaluations rather than as a uniform direct effect (Parveen & Chaudhary, 2025; Rosyihuddin & Krisnawati, 2025). This motivates a shift from asking whether green word-of-mouth works to examining the psychological routes and credibility conditions under which it matters.

The stimulus-organism-response framework provides a coherent structure for that question. The framework proposes that an external stimulus is associated with internal cognitive or affective states, which are subsequently related to behavioural responses (Jacoby, 2002; Vieira, 2013). It has been applied to communication sources, online reviews, and sustainable or organic consumption because it separates information exposure from the internal evaluations that make the information behaviourally relevant (Bigne et al., 2020; Sultan et al., 2021). In the present model, RGWOM is the social-information stimulus, environmental concern and perceived consumer effectiveness are parallel organismic states, and green purchase intention is the response.

Environmental concern (EC) captures the extent to which consumers recognise environmental problems, care about their consequences, and evaluate their mitigation positively. It is not identical to product attitude; rather, it is a broad environmental evaluative orientation. Prior research consistently identifies concern as an important antecedent of green intention and behaviour because it increases the salience of environmental consequences in consumption decisions (Albayrak et al., 2013; Pagiaslis & Krontalis, 2014; Yadav & Pathak, 2016). Peer discussions about reusable products, low-waste practices, responsible sourcing, or environmentally preferable alternatives may make those consequences more accessible and personally relevant. Therefore, RGWOM is expected to be positively associated with EC.

Perceived consumer effectiveness (PCE) is conceptually distinct from concern. It refers to the belief that an individual's consumption choices can contribute meaningfully to environmental improvement. Ellen et al. (1991) demonstrated that PCE contributes uniquely to environmentally conscious behaviour rather than merely reflecting concern. Self-efficacy reasoning similarly suggests that people are more likely to form behavioural intentions when they believe that their actions can produce valued outcomes (Bandura, 1997). Peer recommendations can provide examples of feasible action and social proof that individual choices matter. RGWOM is therefore expected to be positively associated with PCE, and PCE is expected to be positively associated with green purchase intention.

Credibility creates an important boundary condition. Green-claim skepticism (GCS) refers specifically to doubt regarding the truthfulness, accuracy, or substantiation of environmental claims made in marketing communications (Mohr et al., 1998). Skepticism can be a reasoned response to vague or exaggerated claims rather than a general cynical disposition. Research shows that skepticism may prompt information seeking and negative word-of-mouth and can inhibit purchase intention, although the direct path is not always significant once internal psychological mechanisms are considered (Fabiola & Mayangsari, 2020; Goh & Balaji, 2016; Leonidou & Skarmeas, 2017; Nguyen et al., 2019). The mixed evidence implies that skepticism may operate both as an independent inhibitor and as a condition that alters how green information is processed.

A domain distinction is necessary. RGWOM refers to peer communication, whereas the GCS scale concerns marketer-originated environmental claims. The model does not assume that skeptical consumers necessarily distrust friends. Instead, peer recommendations frequently repeat, interpret, or rely upon claims initially made by brands, labels, or sellers. Consumers who doubt those underlying claims may be less willing to internalise the environmental information embedded in peer communication. Accordingly, GCS is proposed to weaken the association of RGWOM with EC and PCE. It is also proposed to have a direct negative association with green purchase intention because uncertainty about claimed benefits can reduce willingness to select green products (Leonidou & Skarmeas, 2017; Riva et al., 2024).

The study is conducted among Gen Z consumers in Bandung, Indonesia. Bandung is suitable because it contains a large young and school-age population and functions as an education-intensive urban setting; official statistics report a substantial population in the 18-22 school-age band and a high human development profile (BPS-Statistics Indonesia Bandung Municipality, 2025). The setting concentrates peer interaction, digital consumption, and exposure to green narratives, while evidence from Indonesian Gen Z consumers remains comparatively limited (Fabiola & Mayangsari, 2020; Rosyihuddin & Krisnawati, 2025).

This study contributes by integrating a positive social-information pathway with a credibility-based boundary condition in one first-stage moderated parallel mediation model. It examines whether RGWOM is associated with green purchase intention through EC and PCE, whether GCS is independently associated with intention, and whether GCS weakens the first-stage associations and resulting conditional indirect effects. Because the study uses a cross-sectional survey, all hypotheses are formulated in associational rather than causal terms.

H1: Received green word-of-mouth is positively associated with environmental concern.

H2: Received green word-of-mouth is positively associated with perceived consumer effectiveness.

H3: Environmental concern is positively associated with green purchase intention.

H4: Perceived consumer effectiveness is positively associated with green purchase intention.

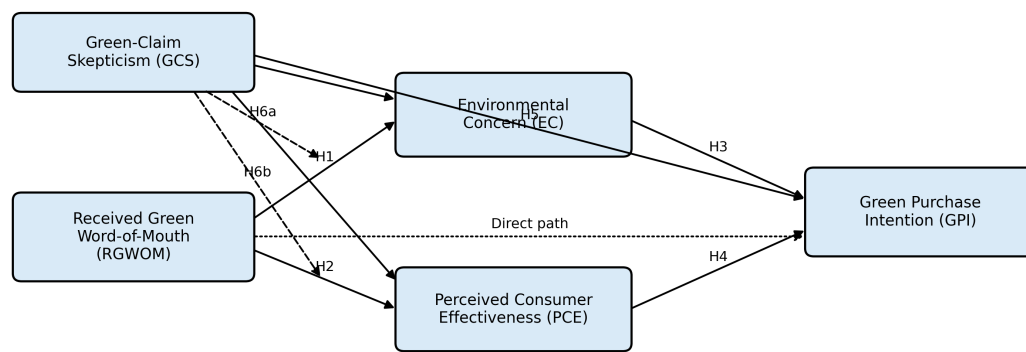
H5: Green-claim skepticism is negatively associated with green purchase intention.

H6a: Green-claim skepticism negatively moderates the association between received green word-of-mouth and environmental concern, such that the association is weaker at higher skepticism.

H6b: Green-claim skepticism negatively moderates the association between received green word-of-mouth and perceived consumer effectiveness, such that the association is weaker at higher skepticism.

H7a: Green-claim skepticism weakens the indirect association between received green word-of-mouth and green purchase intention through environmental concern.

H7b: Green-claim skepticism weakens the indirect association between received green word-of-mouth and green purchase intention through perceived consumer effectiveness.



H7a-H7b: first-stage moderated indirect effects through EC and PCE

Source: Research Framework
Figure 1. Conceptual Framework

METHOD

This study used a quantitative cross-sectional survey design to examine associations among latent constructs at one point in time. The design is appropriate for evaluating the proposed structural relationships and conditional process pattern but does not establish temporal or causal ordering. The target population was green-product-aware Generation Z consumers residing in Bandung. Eligibility required respondents to be 17-27 years old, currently reside in Bandung, have encountered peer or social-media discussion about environmentally friendly products during the previous six months, and have at least limited familiarity with reusable lifestyle goods, personal-care products, clothing, or low-waste household products.

Purposive non-probability sampling was combined with soft recruitment balancing across students and early-career employees. The sampling strategy was intended to obtain theoretically relevant respondents rather than estimate population prevalence. Minimum sample size planning used the inverse square root method rather than the ten-times rule. Assuming a minimum meaningful path coefficient of 0.20 and a two-tailed significance level of 0.05 produces a minimum requirement of approximately 155 cases (Kock & Hadaya, 2018). The target was raised to at least 250 valid cases to improve parameter stability and accommodate latent interaction estimation.

Data were collected through online dissemination and controlled campus and community outreach. A total of 312 questionnaires were returned. Incomplete cases and responses meeting predefined quality criteria for excessive speed, invariant patterns, or failed attention checks were removed, yielding 278 valid cases. Participation was voluntary and anonymous. The introductory page described the academic purpose, the right to discontinue before submission, and aggregate use of responses. No directly identifying information was included in the analytical file.

All constructs were specified as reflective and measured with four items on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). RGWOM measured perceived receipt of positive peer recommendations and green-product information. EC measured awareness of and concern about environmental degradation associated with consumption. PCE measured belief in the environmental consequence of individual purchase decisions. GCS measured skepticism toward environmental claims in marketers' communications rather than general interpersonal distrust. GPI measured willingness and plans to choose environmentally friendly products.

The English items were translated into Bahasa Indonesia by a bilingual academic with marketing expertise and back-translated independently by a second bilingual academic. Differences were reviewed collaboratively to preserve conceptual rather than merely literal equivalence. Two academics reviewed the content and wording, and a pilot test with 30 respondents assessed clarity, completion time, and internal consistency. Minor wording changes were made for GCS and PCE, and pilot reliability exceeded 0.70 for every construct. The complete bilingual questionnaire should be retained as an online supplementary file.

Table 1. Measurement Instrument and Sources

Construct	Operational definition	Items	Sample item	Source base
RGWOM	Perceived receipt of positive green-product recommendations from peer networks	4	People around me often recommend environmentally friendly products.	Cheung & Thadani (2012); Parveen & Chaudhary (2025)
EC	Awareness of and concern about environmental problems associated with consumption	4	I am very concerned about environmental degradation caused by consumption.	Pagiaslis & Krontalis (2014); Yadav & Pathak (2016)
PCE	Belief that individual consumption choices can contribute to environmental improvement	4	My personal purchase choices can contribute to environmental improvement.	Ellen et al. (1991); Roberts (1996)
GCS	Doubt regarding the truthfulness or substantiation of environmental marketing claims	4	I am skeptical of brands' claims that their products are environmentally friendly.	Mohr et al. (1998); Leonidou & Skarmas (2017)
GPI	Willingness and plan to select environmentally friendly products	4	I intend to choose environmentally friendly products when possible.	Chen & Chang (2012); Yadav & Pathak (2016)

Source: Adapted from the cited sources

Partial least squares structural equation modelling was used because the study emphasised explanation and prediction, included simultaneous parallel mediation and two latent interaction terms, and examined a model whose conditional-process specification remains developing. PLS-SEM should not be treated as universally superior to covariance-based SEM; its use here follows the prediction-oriented objective and interaction structure (Hair et al., 2019; Sarstedt et al., 2022). The analysis was specified as a two-stage procedure for moderation, with the lower-order effects retained alongside each interaction term (Becker et al., 2018).

The reflective measurement model was assessed using indicator loadings, outer variance inflation factors, Cronbach's alpha, rho_A, composite reliability, average variance extracted, and the heterotrait-monotrait ratio. Loadings and reliability values above 0.70, average variance extracted above 0.50, and HTMT below 0.85 were used as reference values (Fornell & Larcker, 1981; Henseler et al., 2015). The structural model was assessed using inner VIF, standardised path coefficients, 5,000-resample bootstrapped standard errors, t-values, two-tailed p-values, 95% percentile confidence intervals, f², R², adjusted R², and blindfolding-based Q².

Mediation was evaluated through specific indirect effects. Moderated mediation was assessed using the index of moderated mediation and conditional indirect effects at one standard deviation below the mean, the mean, and one standard deviation above the mean of GCS (Preacher et al., 2007). A conditional effect was interpreted as statistically distinguishable from zero only when its bootstrapped interval excluded zero. Potential common method variance was addressed procedurally through anonymity, concise wording, item randomisation where feasible, and psychological separation of predictor and criterion sections. Harman's first-

factor test and full-collinearity VIF were treated as diagnostics rather than proof that common method variance was absent (Kock, 2015; Podsakoff et al., 2003).

RESULT AND DISCUSSION

Respondent Profile

The final sample comprised 278 valid respondents. Female respondents accounted for 59.7% and male respondents for 40.3%. The largest age group was 21-23 years (46.0%), followed by 24-27 years (29.1%) and 17-20 years (24.8%). Students represented 65.1% of the sample and early-career employees 34.9%. The most frequently considered green-product categories were beauty and personal care (31.3%) and reusable lifestyle or food-and-beverage products (28.1%). The sample therefore reflects a predominantly young and education-oriented urban consumer group, but the purposive design does not support prevalence estimates for the entire Gen Z population of Bandung.

Table 2. Respondent Characteristics (n = 278)

Characteristic	Category	n	%
Gender	Female	166	59.7
	Male	112	40.3
Age	17-20 years	69	24.8
	21-23 years	128	46.0
	24-27 years	81	29.1
Primary status	Student	181	65.1
	Early-career employee	97	34.9
Monthly personal income	Below IDR 1.5 million	95	34.2
	IDR 1.5-3 million	109	39.2
	Above IDR 3 million	74	26.6
Main green-product category	Beauty/personal care	87	31.3
	Reusable lifestyle/F&B	78	28.1
	Fashion	60	21.6
	Household	53	19.1

Source: Research data

Measurement Model Assessment

All indicator loadings exceeded 0.70 and ranged from 0.741 to 0.904, so no item was removed. Cronbach's alpha ranged from 0.824 to 0.901, rho_A ranged from 0.832 to 0.904, and composite reliability ranged from 0.883 to 0.931. Average variance extracted ranged from 0.653 to 0.773, supporting convergent validity. Outer VIF values ranged from 1.427 to 2.744 and remained below the conventional collinearity threshold.

Table 3. Measurement Model Assessment

Construct	Item	Loading	Outer VIF	Cronbach's α	Rho_A	CR	AVE
RGWOM	RGWOM1	0.791	1.642	0.861	0.866	0.905	0.705
	RGWOM2	0.827	1.847				
	RGWOM3	0.856	2.013				
	RGWOM4	0.866	2.076				
EC	EC1	0.752	1.515	0.835	0.842	0.890	0.669
	EC2	0.803	1.694				
	EC3	0.844	1.891				

Construct	Item	Loading	Outer VIF	Cronbach's α	Rho_A	CR	AVE
PCE	EC4	0.860	1.962	0.884	0.889	0.920	0.743
	PCE1	0.806	1.823				
	PCE2	0.845	2.104				
	PCE3	0.888	2.432				
GCS	PCE4	0.902	2.578	0.824	0.832	0.883	0.653
	GCS1	0.741	1.427				
	GCS2	0.788	1.579				
	GCS3	0.835	1.802				
GPI	GCS4	0.860	1.917	0.901	0.904	0.931	0.773
	GPI1	0.844	2.111				
	GPI2	0.871	2.336				
	GPI3	0.889	2.519				
	GPI4	0.904	2.744				

Source: Research data (PLS-SEM output)

The HTMT values ranged from 0.410 to 0.820, with the largest value between EC and GPI. All values remained below 0.85, indicating that the constructs were empirically distinguishable under the conservative criterion. Common-method diagnostics did not indicate severe single-factor dominance or full-collinearity: Harman's first factor accounted for 33.8% of the variance and full-collinearity VIF ranged from 1.26 to 2.41. These diagnostics reduce concern about severe method-related collinearity but do not demonstrate that common method variance was absent.

Table 4. Discriminant Validity and Common-Method Diagnostics

Diagnostic/pair	Statistic	Reference Value	Interpretation
RGWOM-EC	0.620	< 0.85	Supported
RGWOM-PCE	0.580	< 0.85	Supported
RGWOM-GCS	0.410	< 0.85	Supported
RGWOM-GPI	0.640	< 0.85	Supported
EC-PCE	0.730	< 0.85	Supported
EC-GCS	0.460	< 0.85	Supported
EC-GPI	0.820	< 0.85	Supported
PCE-GCS	0.490	< 0.85	Supported
PCE-GPI	0.790	< 0.85	Supported
GCS-GPI	0.550	< 0.85	Supported
Full-collinearity VIF	1.26-2.41	< 3.30	No severe collinearity indicated
Harman first factor	33.8%	< 50%	No severe single-factor dominance

Source: Research data (PLS-SEM output). HTMT = heterotrait–monotrait ratio; VIF = variance inflation factor.

Structural Model Assessment

The structural estimates supported the four positive direct hypotheses. RGWOM was positively associated with EC (beta = 0.431, $p < 0.001$) and PCE (beta = 0.377, $p < 0.001$). EC and PCE were positively associated with GPI, with coefficients of 0.287 and 0.414, respectively. PCE displayed the numerically larger coefficient, but a formal bootstrap contrast is required before describing the difference as statistically significant.

GCS was negatively and significantly associated with GPI (beta = -0.145, SE = 0.060, t = 2.417, p = 0.016, 95% CI [-0.263, -0.027], f² = 0.030), supporting H5. GCS also showed small negative associations with EC and PCE. The interaction terms were negative and significant for EC and PCE, supporting H6a and H6b. The direct RGWOM to GPI path remained non-significant, which is compatible with a predominantly indirect relationship through the two organismic states.

Table 5. Structural Model Results

Path	β	SE	t	p	95% CI	f ²	Decision
RGWOM → EC (H1)	0.431	0.056	7.684	< 0.001	[0.321, 0.541]	0.229	Supported
RGWOM → PCE (H2)	0.377	0.058	6.512	< 0.001	[0.264, 0.490]	0.175	Supported
EC → GPI (H3)	0.287	0.062	4.611	< 0.001	[0.165, 0.409]	0.107	Supported
PCE → GPI (H4)	0.414	0.066	6.235	< 0.001	[0.284, 0.544]	0.212	Supported
GCS → GPI (H5)	-0.145	0.060	2.417	0.016	[-0.263, -0.027]	0.030	Supported
GCS → EC	-0.104	0.051	2.041	0.041	[-0.204, -0.004]	0.025	Significant
GCS → PCE	-0.126	0.051	2.463	0.014	[-0.226, -0.026]	0.033	Significant
RGWOM x GCS → EC (H6a)	-0.146	0.052	2.781	0.006	[-0.249, -0.043]	0.041	Supported
RGWOM x GCS → PCE (H6b)	-0.181	0.055	3.291	0.001	[-0.289, -0.073]	0.058	Supported
RGWOM → GPI (direct)	0.051	0.063	0.812	0.417	[-0.072, 0.173]	0.004	Not significant

Source: Research data (PLS-SEM output; 5,000 bootstrap resamples, two-tailed).

The model accounted for 29.7% of the variance in EC and 28.6% in PCE. The final structural specification accounted for 62.5% of the variance in GPI. The corresponding adjusted values reflect three predictors for each first-stage equation and four predictors for GPI. All Q² values were above zero, indicating in-sample predictive relevance. Blindfolding-based Q² should not be interpreted as out-of-sample predictive superiority; PLSpredict or CVPAT remains necessary for that claim.

Table 6. Explanatory and Predictive Power

Endogenous construct	Predictors (k)	R ²	Adjusted R ²	Q ²
Environmental concern	3	0.297	0.289	0.186
Perceived consumer effectiveness	3	0.286	0.278	0.201
Green purchase intention	4	0.625	0.620	0.423

Source: Research data (PLS-SEM output).

Mediation and Moderated Mediation

The two specific indirect effects of RGWOM were positive and significant. The indirect effect through EC was 0.124 and the indirect effect through PCE was 0.156. Their sum produced a total indirect effect of 0.280. Because the direct path was non-significant while both indirect paths were significant, the pattern is consistent with indirect-only mediation. The total effect of RGWOM on GPI was 0.331. For GCS, the direct and indirect effects had the same negative direction, indicating complementary negative mediation. The specific indirect effect through EC was -0.030 and the specific indirect effect through PCE was -0.052, producing a total indirect effect of -0.082 and a total effect of -0.227.

Table 7. Direct and Indirect Effects

Predictor	Effect / path	β	SE	t	p	95% CI
RGWOM	Direct: RGWOM → GPI	0.051	0.063	0.812	0.417	[-0.072, 0.173]
RGWOM	Indirect: RGWOM → EC → GPI	0.124	0.030	4.106	< 0.001	[0.071, 0.186]

Predictor	Effect / path	β	SE	t	p	95% CI
RGWOM	Indirect: RGWOM -> PCE -> GPI	0.156	0.031	4.958	< 0.001	[0.097, 0.226]
RGWOM	Total indirect	0.280	0.045	6.287	< 0.001	[0.192, 0.367]
RGWOM	Total effect	0.331	0.052	6.365	< 0.001	[0.230, 0.433]
GCS	Direct: GCS -> GPI	-0.145	0.060	2.417	0.016	[-0.263, -0.027]
GCS	Indirect: GCS -> EC -> GPI	-0.030	0.014	2.143	0.032	[-0.059, -0.006]
GCS	Indirect: GCS -> PCE -> GPI	-0.052	0.020	2.600	0.009	[-0.094, -0.017]
GCS	Total indirect	-0.082	0.025	3.280	0.001	[-0.133, -0.038]
GCS	Total effect	-0.227	0.055	4.127	< 0.001	[-0.335, -0.119]

Source: Research data (PLS-SEM output; 5,000 bootstrap resamples, two-tailed).

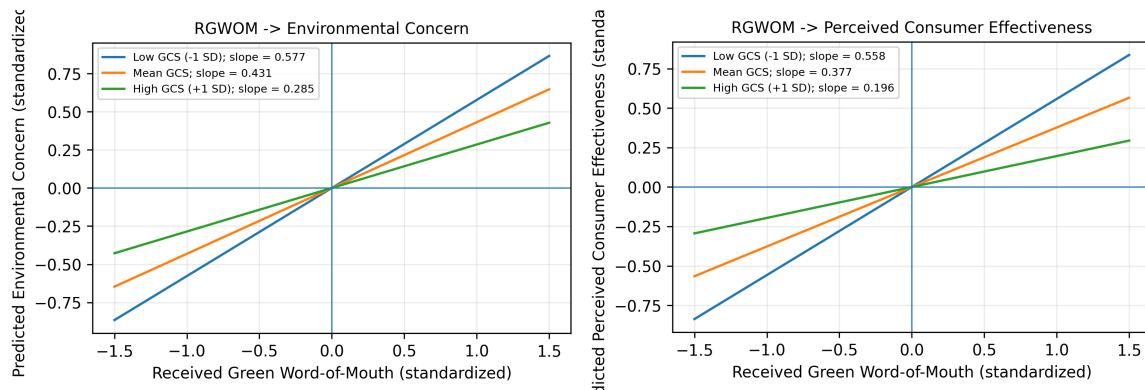
The conditional analysis supported first-stage moderated mediation. The RGWOM to EC simple slope declined from 0.577 at low skepticism to 0.431 at the mean and 0.285 at high skepticism. The RGWOM to PCE slope declined from 0.558 to 0.377 and 0.196. The specific conditional indirect effects remained positive at all three levels, but their magnitudes declined as skepticism increased. The indexes of moderated mediation were -0.042 through EC and -0.075 through PCE, with confidence intervals excluding zero. The appropriate interpretation is attenuation rather than complete elimination within the observed range.

Table 8. Conditional Indirect Effects by Level of Green Skepticism

Indirect path	GCS level	Effect	SE	t	p	95% CI	Index MM	95% CI index
RGWOM -> EC -> GPI	Low (-1 SD)	0.166	0.039	4.256	< 0.001	[0.093, 0.246]	-0.042	[-0.076, -0.016]
	Mean	0.124	0.030	4.106	< 0.001	[0.071, 0.186]		
	High (+1 SD)	0.082	0.034	2.412	0.016	[0.018, 0.151]		
RGWOM -> PCE -> GPI	Low (-1 SD)	0.231	0.045	5.133	< 0.001	[0.147, 0.322]	-0.075	[-0.120, -0.030]
	Mean	0.156	0.031	4.958	< 0.001	[0.097, 0.226]		
	High (+1 SD)	0.081	0.033	2.455	0.014	[0.020, 0.149]		
Total conditional indirect	Low (-1 SD)	0.397	0.057	6.965	< 0.001	[0.290, 0.513]	-0.117	[-0.179, -0.056]
	Mean	0.280	0.045	6.287	< 0.001	[0.192, 0.367]		
	High (+1 SD)	0.163	0.049	3.327	0.001	[0.071, 0.263]		

Source: Research data (PLS-SEM output). MM = moderated mediation.

The simple-slope analysis in Figure 2 shows that green-claim skepticism weakens the positive association of received green word-of-mouth with both environmental concern and perceived consumer effectiveness. For environmental concern, the slope decreased from 0.577 at low skepticism to 0.431 at the mean level and 0.285 at high skepticism. Similarly, the slope for perceived consumer effectiveness declined from 0.558 to 0.377 and 0.196, respectively. Although all slopes remained positive, the progressively flatter lines indicate that received green word-of-mouth is less strongly associated with environmental concern and consumers' belief in the effectiveness of their individual actions when skepticism toward environmental claims is higher. Thus, green-claim skepticism attenuates rather than completely eliminates the influence of received green word-of-mouth.



Source: Simple slopes calculated from the reported main and interaction coefficients.

Figure 2. Simple Slopes of RGWOM on EC and PCE at Different Levels of GCS

Discussion

The results answer the research questions by showing that RGWOM was associated with GPI mainly through EC and PCE, while GCS was associated with lower intention and weakened the first-stage pathways. The non-significant direct RGWOM path is theoretically important. Peer communication did not correspond with intention merely because recommendations were present; the relationship became meaningful when it was accompanied by greater environmental concern and stronger beliefs that individual choices matter. This pattern is consistent with communication research in which eWOM operates through information adoption, attitudes, and social evaluations rather than exerting an invariant direct influence (Cheung & Thadani, 2012; Parveen & Chaudhary, 2025).

The findings reinforce the conceptual separation between EC and PCE. Both mediators carried distinct portions of the RGWOM relationship. EC reflects the environmental relevance and evaluative importance of consumption, whereas PCE reflects personal agency. The numerically larger PCE coefficient suggests that Gen Z respondents may require more than concern; they may also need to believe that their own purchase can contribute to a meaningful outcome. This interpretation is compatible with the original PCE argument and self-efficacy reasoning (Bandura, 1997; Ellen et al., 1991). Nevertheless, the difference between the two coefficients should remain a descriptive comparison until a direct bootstrap contrast is performed.

GCS played a broader role than a simple moderator. It had a small negative direct association with GPI, negative indirect associations through EC and PCE, and negative interactions with RGWOM. This multi-stage pattern is consistent with literature showing that skepticism can forestall intention, lower concern or knowledge, and redirect consumers toward verification and information search (Goh & Balaji, 2016; Leonidou & Skarmas, 2017; Nguyen et al., 2019). The small direct effect is also plausible given the mixed literature: Fabiola and Mayangsari (2020) found a negative but non-significant direct path among Indonesian Gen Z, while other product-specific studies have reported significant inhibition. The present model therefore treats significance as an empirical result rather than an assumed property of skepticism.

The moderation results position GCS as a credibility filter operating early in the process. At higher skepticism, RGWOM was less strongly associated with both internal states, and the reduction was more pronounced for PCE. Consumers may still hear positive peer narratives, but doubts about the marketer-originated claims underlying those narratives can make them less willing to infer that a product is environmentally consequential or that individual purchase action will matter. The construct should not be interpreted as direct distrust of peers because the measure concerns marketer claims. Future research should distinguish claim skepticism, peer-message skepticism, and perceived source credibility.

The conditional indirect effects remained positive at high skepticism, so the evidence supports attenuation rather than nullification. This matters practically because skeptical consumers are not necessarily unreachable. Specific, traceable, and verifiable evidence may preserve the relevance of peer communication even when general green rhetoric is viewed critically. Vague claims such as environmentally friendly should be replaced with measurable information about material content, durability, emissions, recyclability, waste reduction, or independently verified certification.

The study contributes to the stimulus-organism-response literature by showing how a social-information stimulus can be linked to intention through two parallel internal states and by adding a credibility-based boundary condition. It also contributes to green skepticism research by examining direct, indirect, and moderating roles within the same model. The contribution remains associational because cross-sectional data cannot establish that RGWOM precedes EC or PCE. Reverse selection is possible: consumers with stronger concern or efficacy beliefs may pay greater attention to green conversations or recall them more readily.

For managers, increasing the volume of peer advocacy is unlikely to be sufficient. Communication should connect environmental relevance with personal efficacy and provide evidence that supports the claims repeated by consumers. Authentic user experience, transparent sourcing, credible third-party labels, and concrete impact metrics are more consistent with the observed pattern than broad sustainability rhetoric. Universities, government agencies, and non-governmental organisations can complement firm communication by building claim-verification literacy so that young consumers can distinguish credible environmental information from symbolic or misleading claims.

Several limitations qualify the conclusions. The purposive single-city sample limits generalisability, and the eligibility screen restricted the sample to consumers already familiar with green products and recent peer discussion. All measures were self-reported in one survey, leaving possible social-desirability and common-method influences. The broad product-category frame may conceal differences between personal care, reusable lifestyle products, fashion, and household goods. The GCS scale targets marketer claims while RGWOM targets peer communication, and actual peer-message credibility was not measured. Future research should use longitudinal or experimental designs, behavioural outcomes, product-specific samples, multi-city comparisons, MICOM and multi-group analysis, and out-of-sample prediction through PLSpredict or CVPAT.

CONCLUSION

This study examined when received green word-of-mouth is associated with green purchase intention among Generation Z consumers in Bandung. The findings indicate that received peer communication is not uniformly associated with purchase intention. Its relationship with intention is primarily indirect through environmental concern and perceived consumer effectiveness. These parallel mechanisms distinguish caring about environmental consequences from believing that an individual purchase can contribute to improvement. Green-claim skepticism operates as a credibility-related inhibitor: it is negatively associated with intention, is associated with lower concern and perceived effectiveness, and weakens the first-stage relationships through which received green word-of-mouth is linked to intention. The conditional indirect effects remain positive at high skepticism but are substantially smaller, supporting attenuation rather than complete elimination. The theoretical implication is that social green communication should be modelled as a conditional stimulus whose relevance depends on internal evaluation, personal efficacy, and the credibility of underlying environmental claims. The practical implication is that peer advocacy must be paired with specific, verifiable evidence and communication that demonstrates the tangible consequence of individual action. Because the design is cross-sectional and uses a purposive single-city

sample, the conclusions concern associations within the study sample rather than causal effects or population prevalence.

REFERENCES

- Albayrak, T., Aksoy, S., & Caber, M. (2013). The effect of environmental concern and scepticism on green purchase behaviour. *Marketing Intelligence & Planning*, 31(1), 27-39. <https://doi.org/10.1108/02634501311292902>
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. W. H. Freeman.
- Becker, J.-M., Ringle, C. M., & Sarstedt, M. (2018). Estimating moderating effects in PLS-SEM and PLSc-SEM: Interaction term generation and data treatment. *Journal of Applied Structural Equation Modeling*, 2(2), 1-21. [https://doi.org/10.47263/JASEM.2\(2\)01](https://doi.org/10.47263/JASEM.2(2)01)
- Bigne, E., Chatzipanagiotou, K., & Ruiz, C. (2020). Pictorial content, sequence of conflicting online reviews and consumer decision-making: The stimulus-organism-response model revisited. *Journal of Business Research*, 115, 403-416. <https://doi.org/10.1016/j.jbusres.2019.11.031>
- BPS-Statistics Indonesia Bandung Municipality. (2025). Population by school age in Bandung City, 2024. <https://bandungkota.bps.go.id/en/statistics-table/2/MjI1MSMy/population-by-school-age-in-bandung-city.html>
- Chen, Y.-S., & Chang, C.-H. (2012). Enhance green purchase intentions: The roles of green perceived value, green perceived risk, and green trust. *Management Decision*, 50(3), 502-520. <https://doi.org/10.1108/00251741211216250>
- Cheung, C. M. K., & Thadani, D. R. (2012). The impact of electronic word-of-mouth communication: A literature analysis and integrative model. *Decision Support Systems*, 54(1), 461-470. <https://doi.org/10.1016/j.dss.2012.06.008>
- Do Paco, A. M. F., & Reis, R. (2012). Factors affecting skepticism toward green advertising. *Journal of Advertising*, 41(4), 147-155. <https://doi.org/10.1080/00913367.2012.10672463>
- Ellen, P. S., Wiener, J. L., & Cobb-Walgren, C. (1991). The role of perceived consumer effectiveness in motivating environmentally conscious behaviors. *Journal of Public Policy & Marketing*, 10(2), 102-117. <https://doi.org/10.1177/074391569101000206>
- Fabiola, K., & Mayangsari, L. (2020). The influence of green skepticism, environmental knowledge and environmental concern on Generation Z's green purchase intentions in Indonesia. *Malaysian Journal of Social Sciences and Humanities*, 5(8), 96-105. <https://doi.org/10.47405/mjssh.v5i8.470>
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50. <https://doi.org/10.2307/3151312>
- Goh, S. K., & Balaji, M. S. (2016). Linking green skepticism to green purchase behavior. *Journal of Cleaner Production*, 131, 629-638. <https://doi.org/10.1016/j.jclepro.2016.04.122>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2-24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115-135. <https://doi.org/10.1007/s11747-014-0403-8>
- Ismagilova, E., Slade, E. L., Rana, N. P., & Dwivedi, Y. K. (2020). The effect of electronic word of mouth communications on intention to buy: A meta-analysis. *Information Systems Frontiers*, 22(5), 1203-1226. <https://doi.org/10.1007/s10796-019-09924-y>

- Jacoby, J. (2002). Stimulus-organism-response reconsidered: An evolutionary step in modeling consumer behavior. *Journal of Consumer Psychology*, 12(1), 51-57. https://doi.org/10.1207/S15327663JCP1201_05
- Kanchanapibul, M., Lacka, E., Wang, X., & Chan, H. K. (2014). An empirical investigation of green purchase behaviour among the young generation. *Journal of Cleaner Production*, 66, 528-536. <https://doi.org/10.1016/j.jclepro.2013.10.062>
- Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of e-Collaboration*, 11(4), 1-10. <https://doi.org/10.4018/ijec.2015100101>
- Kock, N., & Hadaya, P. (2018). Minimum sample size estimation in PLS-SEM: The inverse square root and gamma-exponential methods. *Information Systems Journal*, 28(1), 227-261. <https://doi.org/10.1111/isj.12131>
- Leonidou, C. N., & Skarmeas, D. (2017). Gray shades of green: Causes and consequences of green skepticism. *Journal of Business Ethics*, 144(2), 401-415. <https://doi.org/10.1007/s10551-015-2829-4>
- Matthes, J., & Wonneberger, A. (2014). The skeptical green consumer revisited: Testing the relationship between green consumerism and skepticism toward advertising. *Journal of Advertising*, 43(2), 115-127. <https://doi.org/10.1080/00913367.2013.834804>
- Mohr, L. A., Eroglu, D., & Ellen, P. S. (1998). The development and testing of a measure of skepticism toward environmental claims in marketers' communications. *Journal of Consumer Affairs*, 32(1), 30-55. <https://doi.org/10.1111/j.1745-6606.1998.tb00399.x>
- Nguyen, T. T. H., Yang, Z., Nguyen, N., Johnson, L. W., & Cao, T. K. (2019). Greenwash and green purchase intention: The mediating role of green skepticism. *Sustainability*, 11(9), 2653. <https://doi.org/10.3390/su11092653>
- Pagiaslis, A., & Krontalis, A. K. (2014). Green consumption behavior antecedents: Environmental concern, knowledge, and beliefs. *Psychology & Marketing*, 31(5), 335-348. <https://doi.org/10.1002/mar.20698>
- Parveen, A., & Chaudhary, R. (2025). Do attitude and subjective norm mediate the relationship between social media e-WOM and green purchase intention? An empirical investigation using PLS-SEM. *Vikalpa: The Journal for Decision Makers*, 50(1), 37-50. <https://doi.org/10.1177/02560909241297015>
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879-903. <https://doi.org/10.1037/0021-9010.88.5.879>
- Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate Behavioral Research*, 42(1), 185-227. <https://doi.org/10.1080/00273170701341316>
- Riva, F., Magrizos, S., Rizomyliotis, I., & Uddin, M. R. (2024). Beyond the hype: Deciphering brand trust amid sustainability skepticism. *Business Strategy and the Environment*, 33(7), 6491-6506. <https://doi.org/10.1002/bse.3829>
- Roberts, J. A. (1996). Green consumers in the 1990s: Profile and implications for advertising. *Journal of Business Research*, 36(3), 217-231. [https://doi.org/10.1016/0148-2963\(95\)00150-6](https://doi.org/10.1016/0148-2963(95)00150-6)
- Rosyihuddin, M., & Krisnawati, W. (2025). Green word of mouth, green knowledge, green value, dan purchase intention produk tumbler pada Generasi Z. *Jurnal Riset Entrepreneurship*, 8(1), 35-48. <https://doi.org/10.30587/jre.v8i1.10400>
- Sarstedt, M., Ringle, C. M., & Hair, J. F. (2022). Partial least squares structural equation modeling. In C. Homburg, M. Klarmann, & A. Vomberg (Eds.), *Handbook of market research* (pp. 587-632). Springer. https://doi.org/10.1007/978-3-319-57413-4_15

- Skarmeas, D., & Leonidou, C. N. (2013). When consumers doubt, watch out! The role of CSR skepticism. *Journal of Business Research*, 66(10), 1831-1838. <https://doi.org/10.1016/j.jbusres.2013.02.004>
- Sultan, P., Wong, H. Y., & Azam, M. S. (2021). How perceived communication source and food value stimulate purchase intention of organic food: An examination of the stimulus-organism-response model. *Journal of Cleaner Production*, 312, 127807. <https://doi.org/10.1016/j.jclepro.2021.127807>
- Vieira, V. A. (2013). Stimuli-organism-response framework: A meta-analytic review in the store environment. *Journal of Business Research*, 66(9), 1420-1426. <https://doi.org/10.1016/j.jbusres.2012.05.009>
- Yadav, R., & Pathak, G. S. (2016). Young consumers' intention towards buying green products in a developing nation: Extending the theory of planned behavior. *Journal of Cleaner Production*, 135, 732-739. <https://doi.org/10.1016/j.jclepro.2016.06.120>