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Green Intention versus Green Action: The Intention–Behavior Gap in Sustainable Fashion Consumption Among Generation Z

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Abstract: Generation Z consumers express strong concern for the environment, yet their sustainable fashion purchases often lag their stated intentions. Drawing on the theory of planned behavior, this study examines whether attitudes toward sustainability shape green action through green intention and whether value–action mismatch, operationalized as the gap between the expected and perceived value of sustainable clothing, weakens the conversion of intention into action. We analyzed survey data from 155 Generation Z consumers in Bandung, Indonesia, who had purchased from mass-market brands with sustainability practices, using partial least squares structural equation modeling. Attitude toward sustainability strongly predicted green intention, and green intention predicted green action. Green intention fully mediated the effect of attitude on action. Contrary to expectations, value–action mismatch neither predicted green action nor moderated the intention–action relationship, and its confidence interval makes a substantial weakening effect unlikely. The model explained 39.7% of the variance in green action, confirming a substantial intention–behavior gap. The findings indicate that strengthening attitudes is only effective if it leads to tangible intentions. Additionally, the gap between expectation and perception in environmental values does not explain why Generation Z's intentions do not translate into action. The study also highlights the measurement limitations of difference scores and identifies directions for future research

Keywords: Green Intention, Green Action, Intention–Behavior Gap, Value–Action Mismatch, Sustainable Fashion, Generation Z.

INTRODUCTION

Sustainable consumption has become a central concern for consumers, firms and policymakers, and many consumers now report favorable attitudes toward environmentally friendly products. However, a persistent body of research shows that these favorable attitudes and intentions frequently fail to translate into corresponding purchases, a pattern known as the attitude–behavior or intention–behavior gap (Carrington et al., 2010; Haffar et al., 2020; Sheeran & Webb, 2016). (White et al., 2019) similarly note that the discrepancy between what consumers say and what they do remains a major obstacle to shifting consumption toward sustainability.

This gap is particularly relevant for Generation Z. According to the Deloitte 2025 Gen Z and Millennial Survey, reported by Katadata, 65% of Generation Z respondents across 44 countries were willing to pay more for sustainable products or services, and more than 60% of Generation Z and millennial respondents expressed environmental concern (Ridwan, 2025). Studies of Generation Z consumers in Vietnam show that green attitudes predict both green purchasing intentions and behaviours (Ngo et al., 2025) and that environmental and product attitudes drive intentions to buy sustainable clothing (Ngo et al., 2024). At the same time, Generation Z remains a major fast-fashion consumer. A FashionUnited report describes this generation as eco-conscious yet heavily engaged in fast-fashion purchasing, citing survey evidence that 72% of United States college students had bought fast fashion in the previous year (Blaazer, 2024). Academic studies point in the same direction: (Teerakapibal & Schlegelmilch, 2024) identify a gap between environmental awareness, attitudes and actions in fast-fashion consumption, and (Hosany & Serdiuk, 2025) show that Generation Z consumers use neutralization techniques to justify unsustainable purchases. Fashion is therefore an appropriate context for examining why green intentions do not translate into green actions.

Prior research has proposed several explanations for the gap. Greenwashing concerns weaken the effect of attitudes on green purchase intentions (Margariti et al., 2024), past behaviour shapes green purchase intentions (Witek & Kuźniar, 2023), environmental concern acts as a boundary condition on the translation of intentions into behaviour (Permadi et al., 2025), and price, convenience and availability remain important barriers for Generation Z (Adah et al., 2025). Less attention has been paid to the possibility that the gap arises when sustainable products fail to deliver the value consumers expect. (Biswas, 2017) showed that gaps between expected and perceived consumption values are negatively associated with sustainable consumption behaviour and market demand for green products. Expectation–disconfirmation theory likewise holds that performance falling short of expectations reduces satisfaction and subsequent behavioural intentions (Oliver, 1980). Yet such value gaps have been modelled as direct predictors of behaviour, not as conditions that may weaken the link between intention and action.

This study addresses this gap by integrating the attitude–intention–behavior sequence of the theory of planned behavior (Ajzen, 1991) with value–action mismatch (VAM), operationalized as the gap between the expected and perceived value of sustainable clothing (Biswas, 2017). Specifically, the study examines (a) the effect of attitude toward sustainability (ATS) on green intention (GI), (b) the effect of GI on green action (GA), (c) the mediating role of GI between ATS and GA, and (d) the moderating role of VAM in the GI–GA relationship among Generation Z consumers of mass-market sustainable fashion brands in Bandung, Indonesia.

The study makes three contributions. First, it tests whether the expectation–perception gap acts as a boundary condition on the intention–action relationship rather than only as a direct predictor. Second, it provides evidence from Generation Z consumers in an emerging market, where research on the green intention–behavior gap in fashion remains limited. Third, it documents the measurement challenges of using difference scores to capture value–action mismatch, which informs future research design. The remainder of the paper reviews the literature and develops the hypotheses, describes the method, presents the results, and discusses their theoretical and practical implications.

Literature Review

Theory of planned behavior and the intention–behavior gap

The TPB posits that intention, not behavior, is the most proximal determinant, and that intention is shaped by attitude toward the behavior, subjective norms, and perceived behavioral control (Ajzen, 1991). The theory has been widely applied to green consumption. Paul et al. (2016) found that attitude and perceived behavioral control significantly predicted green

product purchase intention among Indian consumers, and Ngo et al. (2025) confirmed that green attitude, subjective norms, and perceived behavioral control affect both green purchasing intentions and behaviors among Vietnamese Generation Z, with intentions acting as a mediator. Among young consumers in India, attitude toward green purchase was one of the strongest predictors of green purchase behavior (Joshi & Rahman, 2016).

The TPB also recognizes that intentions do not always lead to behavior. Reviews of the intention–behavior gap show that people often fail to act on their intentions and that the strength of the intention–behavior relationship depends on moderating conditions (Sheeran & Webb, 2016). For example, the temporal stability of intentions moderates the extent to which intentions predict behavior (Sheeran & Abraham, 2003). In green consumption, research relies heavily on self-reported intentions, while studies that observe actual purchasing show that intentions are only one of several drivers of behavior (Testa et al., 2018). Ethical consumers often do not “walk their talk” because situational and contextual factors intervene between intention and purchase (Carrington et al., 2010).

This study focuses on the attitude–intention–behavior sequence of the TPB and does not model subjective norms or perceived behavioral control. This choice keeps the model focused on the mechanism of interest, the conversion of intention into action, and its potential moderator, but it also means that the explained variance should be interpreted as a lower bound of what a full TPB model could achieve.

Value–action mismatch

The gap between what people know or value and what they do has been documented across environmental behaviors and has been attributed to cognitive, affective and cultural biases that shape motivation and the capacity to act (Colombo et al., 2023). Among Generation Z, constraints that hinder ethical consumption include intrapersonal barriers such as cognitive dissonance and consumption inertia, interpersonal barriers such as green stigma, and structural barriers such as limited accessibility and financial restrictions (Seyfi et al., 2024).

In this study, VAM is defined as the discrepancy between the value consumers expect from sustainable clothing and the value they perceive after purchasing and using it. Following (Biswas, 2017), the construct is operationalized as the difference between expectation and perception scores across three consumption-value dimensions: psychological value (the feeling of contributing to the environment and doing the morally right thing), environmental value (low environmental impact, non-polluting materials, environmentally friendly production and textile-waste reduction), and functional value (quality, comfort and value for money). A positive gap indicates that expectations exceed perceptions. This operationalization draws on the expectation–disconfirmation logic, according to which negative disconfirmation, performance below expectations, reduces satisfaction and subsequent behavioral intentions (Oliver, 1980).

Hypothesis development

Attitude toward sustainability and green intention

Attitude toward sustainability reflects an individual’s cognitive and affective evaluation of environmentally and socially responsible production and consumption. In the TPB, a more favorable attitude toward a behavior strengthens the intention to perform it (Ajzen, 1991). Empirical evidence supports this relationship in green consumption: attitude significantly predicts green product purchase intention (Paul et al., 2015) and green purchasing intentions among Generation Z (Ngo et al., 2025), and environmental and product attitudes mediate the effects of several antecedents on Generation Z’s intention to buy sustainable clothing (Ngo et al., 2024). A systematic review of Generation Z further indicates that environmental awareness and knowledge foster positive attitudes toward eco-friendly products (Adah et al., 2025).

H1: Attitude toward sustainability positively affects green intention.

Green intention and green action

Intention is the most proximal determinant of behavior in the TPB (Ajzen, 1991), and green purchasing intentions predict green purchasing behaviors among Generation Z (Ngo et al., 2025). Purchase intention is also positively associated with actual purchasing of sustainable products when behavior is observed rather than self-reported (Testa et al., 2018). Although the relationship is imperfect (Carrington et al., 2010; Haffar et al., 2020), consumers who intend to buy sustainable products are expected to act on these intentions more often than those who do not.

H2: Green intention positively affects green action.

The mediating role of green intention

The TPB proposes that attitudes influence behavior indirectly by shaping intentions (Ajzen, 1991). Consistent with this proposition, Margariti et al. (2024) found that green purchase intentions mediate the relationship between attitudes toward green products and green purchasing, and Ngo et al. (2025) reported that intentions mediate the effects of TPB antecedents on green purchasing behavior among Generation Z. Accordingly, attitude toward sustainability is expected to affect green action through green intention.

H3: Green intention mediates the relationship between attitude toward sustainability and green action.

The moderating role of value–action mismatch

When sustainable clothing delivers less value than consumers expected, negative disconfirmation can lower satisfaction and weaken subsequent behavioral intentions (Oliver, 1980). (Biswas, 2017) found that negative consumption-value gaps adversely affected sustainable consumption behavior and market demand for green products. Disappointing experiences may therefore make consumers less willing to follow through on their green intentions, even when those intentions are positive. Related evidence shows that concerns about the credibility of green claims weaken the conversion of attitudes into green purchase intentions (Margariti et al., 2024) and that perceived greenwashing is associated with less favorable environmental and product perceptions (Szabo & Webster, 2020). Because the intention–behavior relationship depends on moderating conditions (Sheeran & Abraham, 2003; Sheeran & Webb, 2016), a larger mismatch between expected and perceived value is hypothesized to weaken the effect of green intention on green action.

H4: Value–action mismatch moderates the relationship between green intention and green action, such that the relationship is weaker when the mismatch is high.

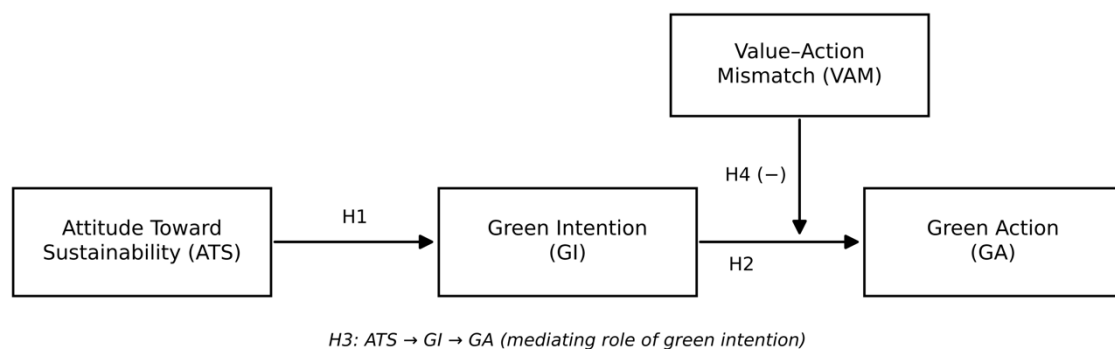


Figure 1. Conceptual framework

METHODS

Research design, context and sample

This study used a quantitative, cross-sectional survey design. The survey was conducted in Bandung, Indonesia, a city with a strong creative and fashion industry. Prior studies of fashion consumption in Indonesia have included Bandung as one of the main markets with high purchase interest in fashion brands (Ardhia & Mayangsari, 2020; Pratama et al., 2025). The target population comprised Generation Z consumers who had purchased and used clothing from mass-market brands that publicly communicate sustainability practices in their materials and production processes (UNIQLO, H&M, Levi's, Adidas, and Nike).

We recruited respondents through purposive sampling using online and offline channels. Screening questions confirmed that respondents (a) belonged to Generation Z, (b) had purchased and used clothing from at least one of the five brands, and (c) were aware that some of these brands had sustainability practices.

We assessed the minimum sample size using the inverse square root method (Kock & Hadaya, 2016). With 155 respondents, the sample is sufficient to detect path coefficients of about 0.20 at a 5% significance level with 80% power, consistent with the post-hoc power analysis reported in Section 4.7. Detecting smaller effects, such as typical interaction effects, would require a larger sample, and we consider this limitation when interpreting the moderation results.

Measures

We measured all items on five-point Likert scales and adapted them to the sustainable fashion context. We measured attitude toward sustainability with six items adapted from Biasutti and Frate (2017). We measured green intention with five items adapted from Paul et al. (2016) and Sohaib et al. (2025). We measured green action with seven items adapted from the Environmental Action Scale (Alisat & Riemer, 2015).

We measured value–action mismatch with ten pairs of items adapted from (Biswas, 2017): two psychological-value items, four environmental-value items, and four functional-value items. For each item, respondents rated their expectation of sustainable clothing before purchase (E) and their perception after purchasing or using it (P). We computed a gap score for each pair as $E - P$, so positive values indicate that expectations exceeded perceptions. Following (Biswas, 2017), we used the gap scores as reflective indicators of VAM.

Data Analysis

We estimated the model using partial least squares structural equation modelling (PLS-SEM) in SmartPLS 4 (Ringle et al., 2024). We chose PLS-SEM because the study is prediction-oriented, the model includes both mediation and moderation, and the method does not require multivariate normality (Hair et al., 2017, 2018). Following the two-step approach (Hair et al., 2018, 2022), we first evaluated the measurement model. We assessed indicator reliability using outer loadings (≥ 0.70); we removed indicators loading between 0.40 and 0.70 only when their removal increased the average variance extracted (AVE) or composite reliability above the threshold (Hair et al., 2022). Internal consistency was assessed using Cronbach's alpha, ρ_A , and composite reliability ρ_C (≥ 0.70); convergent validity using AVE (≥ 0.50); and discriminant validity using the Fornell–Larcker criterion (Fornell & Larcker, 1981) and the heterotrait–monotrait ratio (Henseler et al., 2014).

The structural model was evaluated with collinearity diagnostics (VIF), the coefficient of determination (R^2 ; 0.67 substantial, 0.33 moderate, 0.19 weak; Chin, 1998) and effect sizes (f^2 ; Cohen, 1988; for interaction terms, Kenny, 2018). Path coefficients were tested with percentile bootstrapping (5,000 subsamples, two-tailed, $\alpha = 0.05$). We classified mediation following Zhao et al. (2010). We estimated the moderating effect using a two-stage approach with standardized product-term generation (Becker et al., 2018) and probed it with simple

slopes analysis (Aiken et al., 1991). We assessed common method bias using the full collinearity approach (Kock, 2015).

RESULTS AND DISCUSSION

Respondent profile and descriptive statistics

Table 1 summarizes the profile of the 155 respondents. Women accounted for 55.5% of the sample. Most respondents held a bachelor's degree (52.9%) or a senior high school qualification (29.0%) and were private-sector employees (46.5%) or students (23.9%). The largest income group earned IDR 2.5–5 million per month (35.5%). UNIQLO was the brand most frequently purchased (76.8% of respondents), followed by Adidas (65.2%), H&M (58.1%), Nike (52.9%), and Levi's (43.9%); because respondents could select more than one brand, these percentages sum to more than 100%. Most respondents had made their last purchase within the previous six months (69.0%).

Table 1. Respondent profile ($n = 155$)

Characteristic	<i>n</i>	%	Characteristic	<i>n</i>	%
Gender			Occupation		
Female	86	55.5	Private-sector employee	72	46.5
Male	69	44.5	Student	37	23.9
Education			Self-employed	16	10.3
Senior high school or equivalent	45	29.0	Civil servant/military/police	10	6.5
Diploma	7	4.5	Homemaker	7	4.5
Bachelor's degree	82	52.9	Freelancer	5	3.2
Master's degree	20	12.9	Other	8	5.2
Doctoral degree	1	0.6	Monthly income (IDR)		
Last purchase			< 2.5 million	37	23.9
Within the last 3 months	55	35.5	2.5–5 million	55	35.5
3–6 months ago	52	33.5	5–7.5 million	33	21.3
6–12 months ago	18	11.6	7.5–10 million	18	11.6
More than 1 year ago	30	19.4	> 10 million	12	7.7
			Brands purchased ^a		
			UNIQLO	119	76.8
			Adidas	101	65.2
			H&M	90	58.1
			Nike	82	52.9
			Levi's	68	43.9

Source: authors' survey data.

Table 2 reports construct-level descriptive statistics. Mean scores declined from attitude toward sustainability ($M = 4.49$) to green intention ($M = 4.23$) and green action ($M = 3.99$). A paired-samples t -test showed that green action scores were significantly lower than green intention scores (mean difference = 0.24, $t(154) = 5.55$, $p < 0.001$, $d_z = 0.45$), and 60.0% of respondents scored lower on action than on intention. Because the two constructs are measured with different items, this comparison is descriptive only; it is nonetheless consistent with the intention–behavior gap that motivates the study.

Table 2. Descriptive statistics of the constructs ($n = 155$)

Construct	Items	<i>M</i>	<i>SD</i>
Attitude toward sustainability (ATS)	6	4.49	0.48
Green intention (GI)	5	4.23	0.57
Green action (GA)	6	3.99	0.64
VAM – expectation (VAM4E–VAM6E)	3	4.37	0.58
VAM – perception (VAM4P–VAM6P)	3	4.17	0.66
VAM gap score (E – P; VAM4G–VAM6G)	3	0.20	0.64

Note(s): Means of the retained indicators. ATS, GI, GA and the VAM expectation and perception items were rated on five-point Likert scales; the gap score ranges from -4 to $+4$, with positive values indicating that expectations exceeded perceptions.

Table 3. Expectation, perception and gap scores of the VAM items ($n = 155$)

Item	Dimension	Content (abridged)	Expect. <i>M</i> (<i>SD</i>)	Percep. <i>M</i> (<i>SD</i>)	Gap	<i>t</i>	<i>p</i>	% zero gap
VAM1	Psychological	Feeling of contributing to environmental preservation	4.51 (0.63)	4.32 (0.70)	0.19	3.68	<0.001	74.8
VAM2	Psychological	Morally right action	4.41 (0.66)	4.40 (0.64)	0.01	0.13	0.895	76.1
VAM3	Environmental	Low environmental impact	4.03 (1.06)	3.99 (1.03)	0.05	0.82	0.414	66.5
VAM4*	Environmental	Non-polluting materials	4.34 (0.71)	4.16 (0.73)	0.17	2.69	0.008	71.0
VAM5*	Environmental	Environmentally friendly production process	4.39 (0.70)	4.15 (0.77)	0.24	3.80	<0.001	67.1
VAM6*	Environmental	Reduces textile waste	4.39 (0.68)	4.20 (0.82)	0.19	2.79	0.006	64.5
VAM7	Functional	Good quality and durable	4.30 (0.76)	4.16 (0.82)	0.14	2.14	0.034	65.8
VAM8	Functional	Comfortable to wear	4.41 (0.71)	4.35 (0.67)	0.05	1.13	0.259	77.4
VAM9	Functional	Price commensurate with quality	4.29 (0.76)	4.32 (0.71)	-0.03	-0.47	0.639	68.4
VAM10	Functional	Good value for money	4.30 (0.67)	4.17 (0.74)	0.13	2.43	0.016	72.3

Note(s): Gap = expectation – perception, computed from unrounded values; t = paired-samples t -test, $df = 154$. % zero gap = percentage of respondents whose expectation and perception scores were identical. *Indicator retained in the final measurement model.

Table 3 compares expectations and perceptions for the ten VAM items. Expectations exceeded perceptions on eight of the ten items, and the difference was significant for six of them (VAM1, VAM4, VAM5, VAM6, VAM7 and VAM10). Two features of these data are important for interpreting the VAM results. First, expectations were uniformly high (item means 4.03–4.51), which leaves little room for a gap to emerge. Second, between 64.5% and 77.4% of respondents reported exactly zero gap on any given item. For the three indicators retained in the final model, the mean gap was small but significant (0.20, $t(154) = 3.88$, $p < 0.001$); 48.4% of respondents had a mean gap of zero, 36.1% a positive gap, and 15.5% a negative gap.

Measurement model

Indicator purification

In the initial estimation, seven of the ten VAM gap indicators did not meet the indicator-reliability criteria ($VAM3G = -0.109$, $VAM8G = 0.051$, $VAM2G = 0.248$, $VAM9G = 0.350$, $VAM7G = 0.423$, $VAM1G = 0.454$, $VAM10G = 0.465$), and the AVE was 0.222 for VAM and 0.492 for green action. Following Hair et al. (2022), we removed indicators with loadings below 0.40 and removed indicators loading between 0.40 and 0.70 only when doing so raised the AVE above 0.50. We deleted indicators one at a time and re-estimated the model after each deletion. Three VAM indicators were retained ($VAM4G$, $VAM5G$ and $VAM6G$; AVE = 0.616).

For green action, removing one indicator was sufficient to raise the AVE above 0.50. Removing either $GA5$ or $GA7$ produced practically identical AVE values. $GA5$ (supporting sustainable brands through recommendations or reviews) was removed rather than $GA7$, which had the lowest loading, because $GA7$ captures actual product choice and is therefore central to the behavioral domain of the construct. All other indicators were retained, including those loading between 0.59 and 0.70, because construct-level reliability and convergent validity were already satisfied (Hair et al., 2022).

An important consequence of this purification is that all three retained VAM indicators belong to the environmental value dimension: non-polluting materials, environmentally friendly production, and textile-waste reduction. The psychological and functional value gaps could not be retained. In the final model, VAM therefore captures the gap between the expected and perceived *environmental* value of sustainable clothing, and the results below should be read considering this narrower scope.

Reliability and convergent validity

Table 4 presents the final measurement model. Outer loadings ranged from 0.591 to 0.887 and were all significant ($p < 0.05$). $ATS4$ (0.591) fell below the 0.70 guideline but was retained because ATS AVE and composite reliability were adequate (Hair et al., 2022). Cronbach's alpha (0.707–0.816), ρ_A (0.800–0.828) and ρ_C (0.826–0.867) all exceeded 0.70, and every AVE exceeded 0.50 (0.517–0.616), establishing internal consistency reliability and convergent validity. Outer VIF values (1.351–1.842) were well below 3, indicating no collinearity among indicators.

The bootstrap results nevertheless call for caution regarding VAM. Although the three VAM loadings were significant ($t = 2.34$ – 4.33), the 95% percentile confidence intervals of $VAM4G$ $[-0.371, 0.931]$ and $VAM5G$ $[-0.132, 0.897]$ included zero, and the bootstrap mean AVE of VAM (0.559; 95% confidence interval $[0.250, 0.728]$) was lower than the full-sample estimate. The VAM composite is therefore not fully stable across resamples, and VAM-related estimates are interpreted cautiously.

Table 4. Measurement model: loadings, reliability and convergent validity

Construct / indicator	Loading	<i>t</i>	VIF	α	ρ_A	ρ_C	AVE
Attitude toward sustainability (ATS)				0.811	0.826	0.864	0.517
ATS1	0.807	23.07	1.842				
ATS2	0.754	13.39	1.675				
ATS3	0.657	9.95	1.371				
ATS4	0.591	5.30	1.351				
ATS5	0.759	15.19	1.684				
ATS6	0.723	11.89	1.581				
Green intention (GI)				0.795	0.800	0.860	0.551
GPI1	0.782	23.22	1.735				
GPI2	0.745	10.72	1.596				
GPI3	0.781	24.25	1.702				
GPI4	0.652	10.60	1.354				
GPI5	0.746	14.55	1.622				
Green action (GA)				0.816	0.819	0.867	0.522
GA1	0.713	12.11	1.691				
GA2	0.712	10.58	1.754				
GA3	0.774	14.19	1.843				
GA4	0.762	20.49	1.719				
GA6	0.717	11.16	1.498				
GA7	0.649	7.59	1.377				
Value–action mismatch (VAM)				0.707	0.828	0.826	0.616
VAM4G	0.746	2.34	1.363				
VAM5G	0.709	2.74	1.402				
VAM6G	0.887	4.33	1.378				

Note(s): *t*-values from bootstrapping (5,000 subsamples); all loadings significant at $p < 0.05$ (VAM4G $p = 0.019$; VAM5G $p = 0.006$; all others $p < 0.001$). α = Cronbach's alpha; ρ_A and ρ_C = composite reliability; AVE = average variance extracted; VIF = variance inflation factor. Removed indicators: VAM1G, VAM2G, VAM3G, VAM7G, VAM8G, VAM9G, VAM10G and GA5. VAM indicators are gap scores (expectation – perception).

Discriminant validity

The square root of each construct's AVE exceeded its correlations with all other constructs (Table 5), satisfying the Fornell–Larcker criterion (Fornell & Larcker, 1981). All HTMT values were below the conservative 0.85 threshold (highest: ATS–GI = 0.800), and none of the bootstrap confidence intervals included 1 (Henseler et al., 2015). The upper bound of the ATS–GI interval (0.906) slightly exceeds 0.90, which reflects the theoretical proximity of attitude and intention in the TPB. Indicator cross-loadings (Appendix Table A1) confirm that every indicator loads highest on its own construct.

Table 5. Discriminant validity: Fornell–Larcker criterion and HTMT

Construct	ATS	GI	GA	VAM
ATS	0.719	0.800 [0.684, 0.906]	0.404 [0.286, 0.575]	0.189 [0.129, 0.436]
GI	0.653	0.743	0.745 [0.612, 0.868]	0.188 [0.158, 0.397]
GA	0.334	0.609	0.722	0.263 [0.176, 0.472]
VAM	0.033	−0.060	−0.188	0.785

Note(s): Diagonal: square root of AVE. Below the diagonal: latent variable correlations (Fornell–Larcker criterion). Above the diagonal: HTMT ratios with 95% percentile bootstrap confidence intervals in brackets.

Common method bias

Because all constructs were measured with the same self-report questionnaire, we assessed common method bias using the full collinearity approach (Kock, 2015). All full collinearity VIFs (ATS = 1.773; GI = 2.490; GA = 1.664; VAM = 1.048) were below the 3.3 threshold, suggesting that common method bias is unlikely to be a serious concern.

Structural model

Inner-model VIF values ranged from 1.000 to 1.087, indicating that collinearity among predictors did not bias the path estimates (Table 6). The model explained 42.7% of the variance in green intention ($R^2 = 0.427$, 95% CI [0.314, 0.561]) and 39.7% of the variance in green action ($R^2 = 0.397$, 95% CI [0.295, 0.545]); both values are moderate according to Chin (1998). Effect sizes were large for ATS → GI ($f^2 = 0.744$) and GI → GA ($f^2 = 0.599$) (Cohen, 2013). The direct effect of VAM on GA was small and non-significant ($f^2 = 0.029$), and the interaction effect size ($f^2 = 0.004$) fell below the 0.005 threshold Kenny (2018) proposed for a small moderating effect.

The standardized root mean square residual (SRMR) was 0.096, above the 0.08 guideline (Hu & Bentler, 1999). Because model fit indices in PLS-SEM remain contested and should not be used to accept or reject a model (Hair et al., 2022), we report the SRMR for transparency rather than as a decision criterion.

Table 6. Structural model quality criteria

Path / construct	R^2	R^2 adj.	f^2	Inner VIF
Endogenous constructs				
Green intention (GI)	0.427	0.423	–	–
Green action (GA)	0.397	0.385	–	–
Paths				
ATS → GI			0.744	1.000
GI → GA			0.599	1.014
VAM → GA			0.029	1.084
VAM × GI → GA			0.004	1.087
Model fit				
SRMR (saturated / estimated model)	0.095 / 0.096			

Note: f^2 thresholds: 0.02 small, 0.15 medium, 0.35 large (Cohen, 2013); for interaction terms 0.005, 0.01 and 0.025 (Kenny, 2018).

Hypothesis testing

Table 7 summarizes the hypothesis tests. Attitude toward sustainability had a strong positive effect on green intention ($\beta = 0.653$, $t = 13.38$, $p < 0.001$, 95% CI [0.560, 0.749]), supporting H1. Green intention had a strong positive effect on green action ($\beta = 0.605$, $t = 10.29$, $p < 0.001$, 95% CI [0.482, 0.716]), supporting H2. The indirect effect of ATS on GA

through GI was positive and significant ($\beta = 0.395$, $t = 7.69$, $p < 0.001$, 95% CI [0.302, 0.503]), supporting H3.

The interaction term VAM $\times$ GI was not significant ($\beta = 0.056$, $t = 0.79$, $p = 0.430$, 95% CI [-0.073, 0.204]), and its sign was positive, opposite to the hypothesized weakening effect. H4 is therefore not supported. The main effect of VAM on GA, which is not hypothesized but must be included when estimating the interaction, was negative and not significant ($\beta = -0.138$, $t = 1.48$, $p = 0.138$, 95% CI [-0.315, 0.082]).

Table 7. Results of hypothesis testing

H	Path	β	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>	95% CI	Decision
H1	ATS $\rightarrow$ GI	0.653	0.660	0.049	13.38	<0.001	[0.560, 0.749]	Supported
H2	GI $\rightarrow$ GA	0.605	0.609	0.059	10.29	<0.001	[0.482, 0.716]	Supported
H3	ATS $\rightarrow$ GI $\rightarrow$ GA	0.395	0.402	0.051	7.69	<0.001	[0.302, 0.503]	Supported
H4	VAM $\times$ GI $\rightarrow$ GA	0.056	0.053	0.070	0.79	0.430	[-0.073, 0.204]	Not supported

Note(s): β = standardized path coefficient (original sample); *M* = bootstrap mean; *SD* = bootstrap standard deviation; CI = 95% percentile bootstrap confidence interval (5,000 subsamples, two-tailed).

Mediation analysis

The hypothesized model specifies that attitude influences action through intention and contains no direct ATS $\rightarrow$ GA path. To classify the type of mediation (Zhao et al., 2010), we estimated a robustness model that added the direct path (Table 8). The direct effect of ATS on GA was not significant ($\beta = -0.086$, $t = 0.91$, $p = 0.365$, 95% CI [-0.278, 0.094]), whereas the indirect effect remained significant ($\beta = 0.430$, 95% CI [0.303, 0.584]). This pattern indicates indirect-only (full) mediation: attitude toward sustainability is associated with green action only insofar as it is translated into green intention. Adding the direct path did not change the conclusions for any other hypothesis.

Table 8. Mediation analysis: hypothesised model and robustness model with the direct path

Effect	Hypothesised model β	95% CI	Robustness model β	95% CI
Indirect: ATS $\rightarrow$ GI $\rightarrow$ GA	0.395***	[0.302, 0.503]	0.430***	[0.303, 0.584]
Direct: ATS $\rightarrow$ GA	not estimated	–	-0.086	[-0.278, 0.094]
GI $\rightarrow$ GA	0.605***	[0.482, 0.716]	0.660***	[0.494, 0.832]
VAM $\times$ GI $\rightarrow$ GA	0.056	[-0.073, 0.204]	0.045	[-0.086, 0.166]
Mediation type	Indirect-only (full) mediation (Zhao et al., 2010)			

Note(s): *** $p < 0.001$. Percentile bootstrap confidence intervals (5,000 subsamples). Authors: robustness-model values were computed outside SmartPLS; re-run the model with the ATS $\rightarrow$ GA path in SmartPLS and replace them.

Moderation analysis

Table 9 and Figure 2 report the simple slope analysis (Aiken et al., 1991). The effect of green intention on green action was positive and significant at low (-1 SD: $\beta = 0.549$, 95% CI [0.379, 0.716]), average ($\beta = 0.605$), and high ($+1$ SD: $\beta = 0.661$, 95% CI [0.456, 0.850]) levels of VAM. The slope was slightly steeper when VAM was high, contrary to H4, but the confidence intervals overlapped substantially, and the interaction term was not significant. The conditional indirect effects of ATS on GA through GI were also significant at every level of VAM and did not differ meaningfully (0.359 to 0.431), so there is no evidence of moderated mediation.

Statistical power should be considered when interpreting this null result. The post-hoc power analysis in SmartPLS indicates that, with $n = 155$, the smallest path coefficient

detectable with 80% power at $\alpha = 0.05$ is about 0.20, and the achieved power for the observed interaction coefficient was 0.17. A small moderating effect therefore cannot be ruled out. However, the interaction confidence interval $[-0.073, 0.204]$ makes a weakening effect larger than about -0.07 implausible. In other words, the data are not consistent with VAM substantially weakening the conversion of intention into action.

Table 9. Simple slope analysis and conditional indirect effects

Level of VAM	GI → GA β	95% CI	ATS → GI → GA β	95% CI
Low (-1 SD)	0.549***	[0.379, 0.716]	0.359***	[0.234, 0.501]
Mean	0.605***	[0.482, 0.716]	0.395***	[0.302, 0.503]
High ($+1$ SD)	0.661***	[0.456, 0.850]	0.431***	[0.293, 0.574]

Note(s): *** $p < 0.001$. Percentile bootstrap confidence intervals (5,000 subsamples).

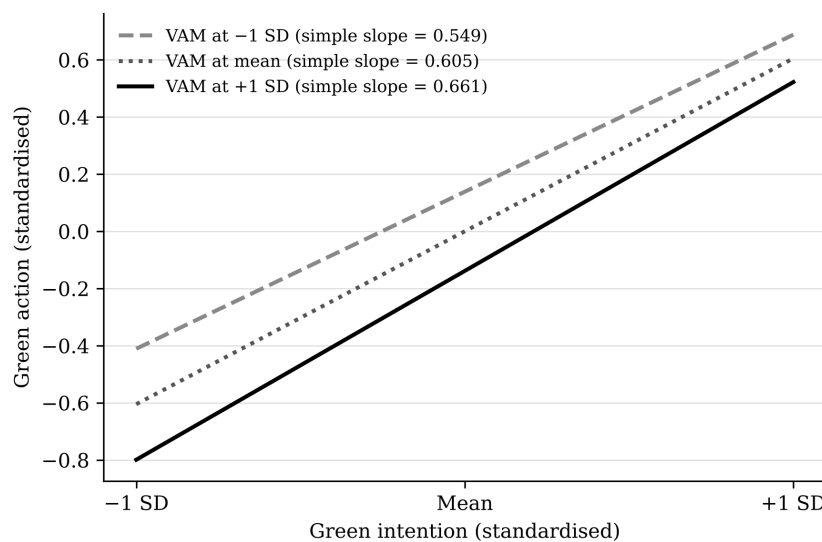


Figure 2. Simple slopes of green intention on green action at different levels of value-action mismatch (VAM). Lines are based on standardised SmartPLS estimates; the interaction is not significant ($\beta = 0.056$, $p = 0.430$).

Discussion

This study examined whether attitude toward sustainability translates into green action through green intention among Generation Z consumers of sustainable fashion, and whether value-action mismatch weakens the intention-action link. Overall, the findings tell a two-part story. The first part confirms the attitude-intention-behavior sequence of the TPB. The second part is less expected: the gap between what consumers expect from sustainable clothing and what they experience does not explain why some of their intentions are not acted upon.

Attitude readily translates into intention

Attitude toward sustainability accounted for about 43% of the variance in green intention, and its effect was large ($\beta = 0.653$; $f^2 = 0.744$). For this group of consumers, believing that environmentally and socially responsible clothing production matters is a strong starting point for wanting to buy such clothing. The finding is consistent with the TPB (Ajzen, 1991) and with prior evidence that attitude predicts green purchase intention (Paul et al., 2015), green purchasing intentions among Generation Z (Ngo et al., 2025) and Generation Z's intention to buy sustainable clothing (Ngo et al., 2024). The high mean attitude score (4.49 on a five-point scale) also echoes survey evidence of strong environmental concern among Generation Z (Ridwan, 2025).

Intention leads to action, but only part of the way

Green intention was the strongest predictor of green action ($\beta = 0.605$), so respondents who intended to buy sustainable clothing were indeed more likely to act. Nevertheless, the model explained only about 40% of the variance in green action, meaning roughly 60% depends on factors outside the model. Descriptively, action scores were lower than intention scores, and six in ten respondents scored lower on action than on intention. These results confirm that good intentions matter but are not sufficient, in line with reviews of the intention–behavior gap (Sheeran & Webb, 2016), research on ethical and green consumption (Carrington et al., 2010; Haffar et al., 2020) and evidence that intention is only one of several drivers of actual sustainable purchasing (Testa et al., 2018).

Attitude shapes action only through intention

Attitude did not influence green action directly; its effect ran entirely through intention (Section 4.6). This indirect-only mediation is consistent with the core proposition of the TPB (Ajzen, 1991) and with findings that intentions mediate the effect of green attitudes on green purchasing (Margariti et al., 2024; Ngo et al., 2025). A favorable view of sustainability therefore changes behavior only when it is first translated into a decision to buy.

Why value–action mismatch did not moderate the intention–action link

Contrary to H4, the expectation–perception gap predicted neither green action nor a weaker intention–action relationship. This result differs from (Biswas, 2017), who found that functional and environmental value gaps adversely affected sustainable consumption behavior. Several differences may explain the divergence: (Biswas, 2017) tested value gaps as direct predictors rather than moderators, studied green electronics rather than fashion, and used covariance-based structural equation modeling. The present data also suggest four explanations that are not mutually exclusive.

First, the measure left little room for a gap. Expectations were close to the top of the scale, and almost half of the respondents reported no gap for the retained indicators. When most respondents share the same score, a variable has limited capacity to explain differences between them. Difference scores are also known to be less reliable than their components and to confound the effects of the two ratings from which they are derived (Edwards, 2001; Peter et al., 1993), and the VAM composite was not fully stable across bootstrap resamples. Second, only the environmental-value items survived the measurement checks, so the results do not speak to psychological or functional value gaps. Third, in expectation–disconfirmation theory, a gap between expectation and experience shapes post-purchase satisfaction and subsequent intentions (Oliver, 1980); it may therefore matter more for repurchase than for whether an existing intention is acted upon. Notably, Margariti et al. (2024) found that greenwashing concerns weakened the attitude–intention link rather than the intention–behavior link, suggesting that credibility-related mismatches may operate earlier in the sequence. Fourth, most retained green action items capture information seeking, discussion, and recommendation rather than purchasing, and product disappointment may matter less for these behaviors than for buying.

CONCLUSIONS

This study shows that, among Generation Z consumers of sustainable fashion in Bandung, attitude toward sustainability strongly shapes green intention, and green intention in turn drives green action, with intention fully mediating the effect of attitude on action. A substantial intention–behavior gap nevertheless remains. Contrary to expectations, the gap between expected and perceived environmental value of sustainable clothing did not weaken the conversion of intention into action. Narrowing the green intention–behavior gap among Generation Z is therefore likely to require attention to factors beyond product expectations,

such as price, convenience, availability and habit, which future research should examine with behavioral data and more robust measures of value–action mismatch.

Theoretical implications

The study contributes to research on the green intention–behavior gap in three ways. First, it confirms that the attitude–intention–behavior sequence of the TPB holds for Generation Z consumers of sustainable fashion in an emerging market, with intention acting as the sole channel through which attitude affects action. Second, it shows that the expectation–perception gap in environmental value, which (Biswas, 2017) linked directly to sustainable consumption, does not function as a boundary condition on the intention–action relationship. This finding narrows plausible explanations for the gap and points researchers toward factors operating at the point of purchase, such as price, convenience, and availability (Adah et al., 2025), or toward boundary conditions such as environmental concern (Permadi et al., 2025). Third, the study illustrates the measurement limits of difference scores for capturing value–action mismatch, which future research can address with alternative designs.

Practical implications

For fashion brands and marketers, the findings imply that campaigns that merely make consumers feel more favorable toward sustainable fashion are unlikely to change what they buy unless they also help consumers turn that attitude into a concrete purchase plan, for example by making a specific product, time, or place of purchase salient. Because about 60% of the variance in green action is unexplained, brands should also address barriers at the point of purchase, such as price, convenience, and availability, which prior research identifies as important for Generation Z (Adah et al., 2025). For policymakers and educators, programs that build environmental awareness and knowledge can strengthen attitudes (Adah et al., 2025), but they should be complemented by measures that make sustainable options easier to choose.

Limitations and future research

Several limitations should be acknowledged. First, the cross-sectional, self-reported design does not allow causal inference and may inflate relationships among constructs, although the full collinearity test did not indicate a serious common method bias. Future studies should combine survey data with observed or longitudinal purchase data (Testa et al., 2018). Second, the green action measure is weighted toward advocacy and information behaviors; future research should use purchase-focused behavioral measures. Third, the sample of 155 respondents provides adequate power for medium-sized paths but limited power to detect small interaction effects, and the purposive sample from a single city limits generalizability. Fourth, VAM was measured with difference scores, and only environmental-value items were retained; future studies could model expectations and perceptions separately, for example, with polynomial regression and response surface analysis (Edwards, 2001), and develop measures with less ceiling effect. Finally, the model includes only the attitude component of the TPB; adding subjective norms, perceived behavioral control, and situational barriers would better account for the intention–behavior gap.

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APPENDIX

Table A1. Cross-loadings

Indicator	ATS	GI	GA	VAM
ATS1	0.807	0.560	0.242	-0.020
ATS2	0.754	0.516	0.343	-0.059
ATS3	0.657	0.446	0.226	0.049
ATS4	0.591	0.298	0.191	-0.041
ATS5	0.759	0.477	0.230	0.124
ATS6	0.723	0.466	0.197	0.083
GPI1	0.612	0.782	0.389	0.028
GPI2	0.542	0.745	0.398	-0.058
GPI3	0.390	0.781	0.596	-0.156
GPI4	0.501	0.652	0.323	0.012
GPI5	0.379	0.746	0.546	-0.041
GA1	0.264	0.448	0.713	-0.145
GA2	0.145	0.340	0.712	-0.187
GA3	0.143	0.386	0.774	-0.229
GA4	0.226	0.493	0.762	-0.196
GA6	0.295	0.507	0.717	0.009
GA7	0.355	0.432	0.649	-0.082
VAM4G	0.149	0.029	-0.119	0.746
VAM5G	-0.056	-0.102	-0.088	0.709
VAM6G	-0.011	-0.070	-0.200	0.887

Note(s): Loadings on the intended construct are the highest in each row.