CONSUMERS' SUSTAINABLE PRODUCT RECOMMENDATION INTENTION: DO UTILITARIAN, EMOTIONAL, AND SOCIAL VALUES MATTER?

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Abstract

This study examines how utilitarian, emotional, and social value influence consumers' intention to recommend sustainable products. Building on consumer value theory and a systematic literature review of empirical studies published between 2010 and 2025, the study develops and tests a parsimonious value-based model of sustainable product recommendation intention. Data were collected through a cross-sectional online survey of 172 consumers in Germany who had purchased or used sustainable products within the previous six months. Established multi-item Likert scales were adapted to measure utilitarian value, emotional value, social value, and recommendation intention. The data were analysed using exploratory factor analysis, reliability assessment, correlation analysis, and multiple linear regression. The findings show that emotional value and social value have significant positive effects on sustainable product recommendation intention, while utilitarian value does not have a significant unique effect when the three value dimensions are considered simultaneously. Social value emerged as the strongest predictor. The study contributes to sustainable consumption research by treating recommendation intention as a distinct behavioural outcome rather than as an extension of purchase intention. Managerially, the findings suggest that firms should encourage sustainable product advocacy through social identity, emotional engagement, and credible value communication. The study is limited by its cross-sectional design, convenience sample, and self-reported data.

Keywords: Sustainable Product Recommendation Intention, Consumer Values, Utilitarian Value, Emotional Value, Social Value
JEL Classification: M31, Q56, D12

1. INTRODUCTION

Heightened environmental concerns, evolving regulatory expectations, and increasing stakeholder demands have positioned sustainable consumption at the centre of consumer behaviour research (Chen and Chang, 2013). Purchase intention, repurchase behaviour, loyalty, and overall green behaviour are the main outcomes of a large body of research that examines how sustainability-related beliefs affect customer behaviours (Hartmann and Apaolaza-Ibáñez, 2012; Zhang et al., 2024). However, focusing exclusively on individual purchasing decisions overlooks an important diffusion mechanism: consumers' recommendation behaviour, through which sustainable consumption spreads socially.

Within social networks, WOM and eWOM function as key channels for information diffusion, trust formation, and behavioural influence (Molinari et al., 2008). Recommendation behaviour is particularly important in sustainability contexts because sustainable products frequently require consumers to justify trade-offs like higher prices, unclear claims, or perceived performance differences compared to conventional items. Therefore, endorsing sustainable products is a socially visible act that entails reputational risk and necessitates trust in the product as well as the consumer's own moral and social stance (Ribeiro et al., 2023).

Recommendation behaviour is still underrepresented as a primary result in studies on sustainable consumption, despite its importance. Many studies treat word-of-mouth (WOM) as a secondary outcome or as a mediator between attitudes and purchase-related outcomes, which restricts understanding of the motivating factors that encourage consumers to actively promote sustainable products (Hameed et al., 2022; Román-Augusto et al., 2023). By examining the value-based factors that influence recommendations for sustainable products, our study overcomes this constraint.

The paper, which is based on a thorough review of the literature, suggests a parsimonious model in which three aspects of consumer value—utilitarian value (rational/functional justification), emotional value (moral and affective reward), and social value (social approval and identity signalling)—explain the intention to recommend sustainable products. Multiple linear regression analysis is used to analyse the data from a quantitative survey of German consumers of sustainable products.

This paper has a dual structure. First, it conducts a systematic literature review to identify dominant value constructs and research gaps in sustainable product recommendation research. Second, it empirically tests a quantitative model explaining recommendation intention through utilitarian, emotional, and social value among German consumers. This structure allows the study to connect evidence from prior literature with direct empirical testing.

The following questions serve as the foundation for this investigation:

1. How are consumers' intentions to recommend sustainable products influenced by utilitarian, emotional, and social values?
2. How strongly is sustainable product recommendation intention explained by utilitarian, emotional, and social values?

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. Recommendation Behaviour in Sustainable Consumption

According to Chen and Chang (2013), sustainable consumption refers to consumer practices that encourage long-term societal well-being while minimizing adverse environmental and social effects. Purchase intention, repurchase behavior, loyalty, and environmentally conscious behaviour have all been frequently studied in this field (Hartmann and Apaolaza-Ibáñez, 2012; Zhang et al., 2024). These results are significant, but they fall short of capturing the social diffusion mechanisms that allow sustainable consumption to proliferate throughout consumer communities.

Because recommendation behaviour involves interpersonal influence rather than private decision-making, it is a unique type of sustainable consumer behaviour. Behaviours including promoting a product, urging others to use it, and sharing experiences via WOM or eWOM channels are examples of recommendations (Molinari et al., 2008). Recommending is more socially visible, exposes one's reputation, and necessitates a deeper belief that the product will benefit others than buying (Ribeiro et al., 2023).

Recommendation behaviour is frequently understudied as a key dependent variable, despite the fact that it can influence sustainable adoption in larger populations. Recommendations are either incorporated as an indirect mechanism supporting purchase behaviour or considered as a secondary construct in various empirical models (Hameed et al., 2022; Román-Augusto et al., 2023). To determine the precise factors that encourage consumers to recommend sustainable products, more research is therefore required.

2.2. Theoretical underpinning

Consumer value theory conceptualises perceived value as a consumer's overall assessment of a product based on a comparison between perceived benefits and perceived sacrifices (Sweeney and Soutar, 2001). This perspective is particularly relevant in the present study because recommending a product requires not only personal evaluation but also public justification to others.

Value perceptions in sustainability contexts frequently go beyond price and product performance to encompass moral satisfaction, emotional fulfilment, and symbolic benefits related to identity expression and environmental care (Hartmann and Apaolaza-Ibáñez, 2012; Chen and Chang, 2013). Understanding recommendation behaviour, which is by its very nature public, socially rooted, and linked to reputational concerns, is a particularly good fit for these value-based explanations. Prior sustainability research employs diverse value classifications—such as functional, emotional, social, ethical, and epistemic—which has contributed to conceptual fragmentation across studies (Sweeney and Soutar, 2001; Nekmahmud et al., 2022).

The creation of integrated and economical models that take sustainable product recommendation intention as a focal outcome is hampered by this fragmentation, which also restricts comparability between researches. Consumers' logical assessments of functional performance, dependability, and value for money are reflected in utilitarian value. These factors are especially important in sustainable consumption because of perceived trade-offs like greater costs or quality uncertainty. Consumers may refrain from suggesting goods that could damage their reputation or put financial strain on others, therefore recommendation behaviour necessitates assurance that a product offers useful advantages and is deserving of support.

In sustainability situations, where making ecologically conscious decisions can have positive psychological effects and encourage experience sharing, emotional value refers to affective rewards including satisfaction, trust, pride, warm-glow sentiments, and moral fulfilment. Recommendation intention, which is influenced by social norms, subjective expectations, and identity signalling, is closely related to social value, which encompasses the interpersonal and identity-related benefits of consumption, such as social approval, reputational enhancement, and self-identity expression. Theoretical research generally indicates that three fundamental value mechanisms—utilitarian, emotional, and social value—are responsible for sustainable product recommendation intention. However, empirical data is still inconsistent, and recommendation intention is often viewed as a secondary outcome rather than a primary behavioural consequence.

Importantly, recommending a product differs conceptually from purchasing it. Whereas purchase decisions primarily involve private evaluations of costs and benefits within a perceived value framework (Sweeney and Soutar, 2001), recommendation behaviour represents a publicly observable endorsement that may influence one's social credibility and reputation (Molinari, Abratt and Dion, 2008). In sustainability contexts, such public endorsement is further shaped by subjective norms and identity considerations, as individuals often seek consistency with their environmental self-identity and perceived social expectations (Ajzen, 1991; van der Werff, Steg and Keizer, 2013). Consequently, value mechanisms related to identity expression and emotional gratification may exert stronger influence in recommendation contexts than purely functional evaluations. This conceptual distinction provides the theoretical foundation for examining utilitarian, emotional and social value as

competing explanatory mechanisms of sustainable product recommendation intention.

2.3. Insight from a systematic literature review

Irfan and Bryła's recent systematic literature evaluation revealed a research gap, which serves as the foundation for this study's goal (2025). The authors of the review also point out that the consumer values that drive people to recommend sustainable products to others have not been studied in previous studies. In particular, they assert that:

> "…no study investigated values that encourage consumers to recommend sustainable products, so it would be valuable to understand what types of consumer values (functional, emotional, social, economic, ethical, psychological, lifetime value, etc.) encourage Generations X, Y, and Z to recommend sustainable products to their friends, family, and colleagues" (Irfan and Bryła, 2025, p. 10).

A lack of empirical study on recommendation behaviour as a value-driven consequence of sustainable consumption is shown by this gap. Although purchase intention and associated behavioural outcomes have been well studied in previous research, little is known about the value-based factors that underlie consumers' propensity to actively promote sustainable items. The main driving force for the current systematic literature analysis and the subsequent creation of the conceptual framework under investigation in this study is to close this gap. The current study focuses on discovering basic value mechanisms that predict sustainable product referral behaviour among consumers in general, without segmenting by generation, despite the fact that Irfan and Bryła (2025) emphasize generational disparities as a future research path. In the context of this study, this helps the creation of a parsimonious model appropriate for quantitative testing.

To find empirical research looking at consumer values in relation to sustainable product recommendation, a thorough literature analysis was carried out. Relevant empirical studies were identified through structured searches in major scholarly databases, including EBSCO, ScienceDirect, Emerald, SpringerLink, Wiley Online Library, Web of Science, and Scopus. The review was restricted to original empirical research published in English and included studies published between 2010 and 2025. Boolean operators and truncations were used in a structured keyword approach that combined phrases associated with green or sustainable products, consumer values, and outcomes connected to recommendations (e.g., advocacy, word-of-mouth, and recommendation intention).

Studies were excluded if they were conceptual in nature, published before 2010, written in languages other than English, or did not jointly address sustainable products, consumer value constructs, and recommendation-related outcomes. All included studies were assessed using a three-point quality assessment scale that included validity, reliability, credibility, and integrity in order to guarantee methodological rigor. Studies were rated as low, medium, or high quality based on the clarity of construct operationalization, reporting of reliability and validity evidence, transparency of sampling and data collection, and appropriateness of the analytical method. Only studies classified as high quality were retained for synthesis. 16 excellent empirical studies were kept for synthesis after screening and quality assessment. These studies look at consumer value dimensions in connection to outcomes connected to recommendations, including advocacy, loyalty, word-of-mouth, and referral intention.

Table 1 provides an overview of the selected studies, including research setting, value constructions, outcome variables, and analytical techniques. This serves as the empirical foundation for the synthesis that follows. Figure 1 summarizes the systematic literature review process.

2.4. Synthesis of the Literature

According to the comprehensive literature assessment, consumer reactions to sustainable value propositions are interrelated and shape the multifaceted phenomena of sustainable product recommendation. Recommendation-related effects stem from broader behavioural, attitudinal, psychological, and social causes rather than being considered as discrete behaviours in the examined studies. As a result, four interconnected viewpoints are synthesized to offer sustainable products.

Word-of-mouth (WOM), electronic word-of-mouth (eWOM), advocacy, and recommendation intention are examples of observable outcomes that are captured by the behavioural approach and are often used indicators of sustainable consumption outcomes. The relationship between consumer values and recommended outcomes is often mediated by internal assessments like trust, satisfaction, loyalty, and positive attitudes, which are reflected in the attitudinal perspective. The psychological approach emphasizes the significance of internal alignment with sustainable principles by incorporating affective and cognitive factors as warm-glow, self-consistency, self-efficacy, belief, and perceived credibility. Lastly, the social-influence perspective highlights the intrinsically social character of recommendation behaviour by focusing on social norms, identity signalling, peer influence, and advocacy.

Expanding upon these viewpoints, the research also finds a number of consumer value drivers that account for the recommendation of sustainable products. Functional-economic, emotional, psychological, social, ethical-moral, and knowledge-epistemic values are the six broad categories into which these drivers can be divided. Emotional and psychological values are repeatedly found to be powerful advocates, while functional-economic value provide the pragmatic underpinnings that validate recommendations. Although emotional and social values frequently emerge as significant predictors of

recommendation-related outcomes, their relative strength varies across contexts, product categories, and sample characteristics. Some studies report functional or economic value as central drivers, whereas others emphasize identity-related or affective mechanisms. This variation suggests that contextual moderators—such as cultural norms, product involvement, or perceived credibility—may condition the influence of value perceptions. However, prior research rarely compares these value dimensions within a unified framework, limiting conclusions about their relative explanatory power. Knowledge-epistemic values promote recommendations through perceived expertise and information sharing, while social and ethical-moral values support moral responsibility and identity expression. Table A1 in Appendix A offers a detailed classification of these value categories.

Three significant research gaps still exist in spite of these revelations. First, most research focus on purchase intention, loyalty, or general green behaviour, rarely positioning recommendation-related outcomes like advocacy, eWOM, WOM, and recommendation intention as major dependent variables. Second, although recommendation intention is the major outcome, consumer value constructs are still conceptually disjointed, which restricts comparability and makes it difficult to identify which processes are most important. Third, while research tends to focus on a small number of recurrent mechanisms, these are rarely incorporated into a concise, empirically verifiable framework that directly influences recommendation intention.

Overall, the systematic literature review shows that recommendation-related outcomes in sustainable consumption research are often studied indirectly through purchase intention, loyalty, WOM, eWOM, or general green behaviour rather than as primary dependent variables. It also reveals fragmentation in the use of consumer value constructs, as prior studies employ functional, emotional, social, ethical, epistemic, psychological, and economic value dimensions in different combinations. To address this fragmentation, the present study focuses on three recurrent and theoretically central dimensions: utilitarian value, emotional value, and social value. These dimensions provide a parsimonious basis for examining sustainable product recommendation intention as a distinct behavioural outcome.

Figure 1. | Systematic Literature Process

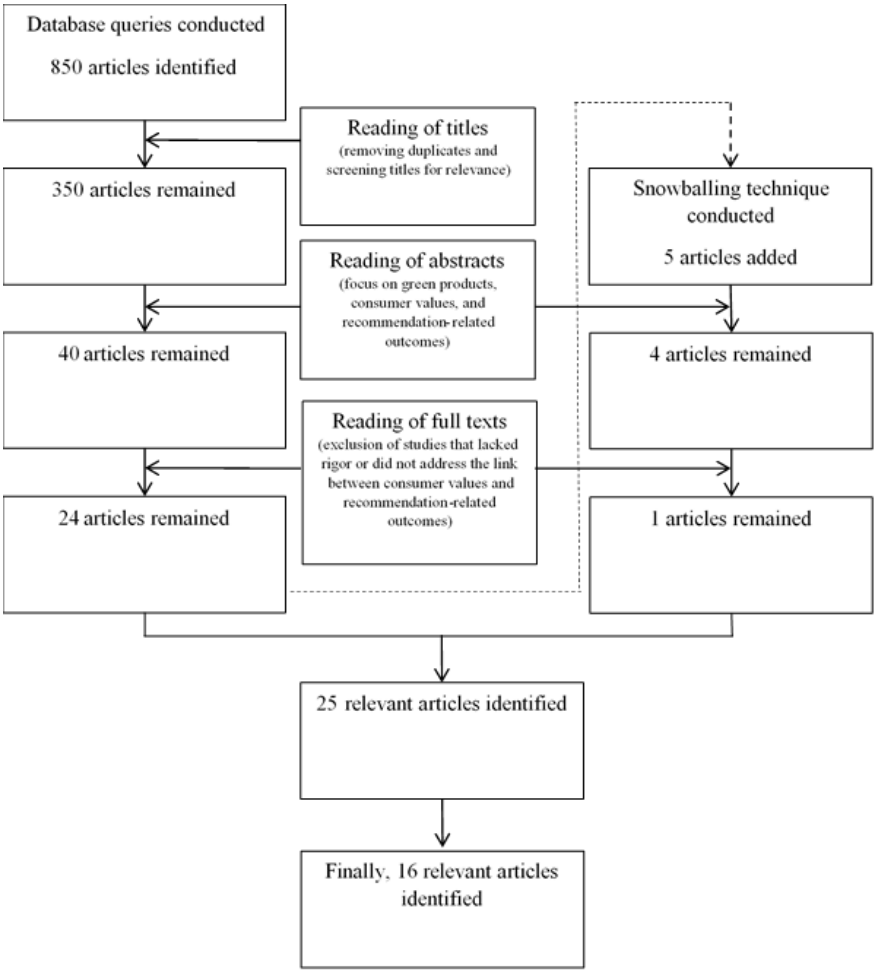


Table 1 | Data Extraction Form for the Literature Review

Author(s)	Year	Sample/Context	Value Constructs	Outcome Variable	Generation	Data Analysis Method	Main Findings
Chang & Yoo	2025	Eco-marketing consumers	Green trust, eco-value, emotions	Green WOM, purchase intention	None	PLS-SEM	Eco-value & trust increase WOM + intention.
Chen et al.	2026	Green product buyers	Warm-glow, self-verification	WOM intention	None	SEM	Psychological consistency increases WOM.
Neiba & Singh	2024	Organic consumers	Green values, env. responsibility	WOM, purchase intention	None	PLS-SEM	Emotional + social values increase WOM & intention.
Boccia & Tohidi	2024	Organic food consumers	Involvement, perceived value	WOM advertising	None	SEM / Regression	Value perception predicts WOM.
Román-Augusto et al.	2023	Peru green consumers	Perceived value, trust, satisfaction	Green WOM	None	PLS-SEM	Value → trust → satisfaction → WOM.
Wu	2023	General consumers	Awareness, advocacy, self-efficacy	Green WOM intention	None	PLS-SEM	Advocacy & self-efficacy ↑ WOM.
Hameed et al.	2022	Green hotel guests	Satisfaction, trust, image	Green WOM	None	SEM (mediation)	Trust + satisfaction mediate WOM.
Aly	2025	Egyptian consumers	Functional, emotional, social values	Purchase intention	None	PLS-SEM	Social + emotional values strongest predictors.
Amin et al.	2021	Retail consumers	Functional, social, epistemic values	Green behaviour	None	SEM	Values influence behaviour; trust mediates.
Zhang et al.	2024	General consumers	Perceived green value	Loyalty, intention	None	SEM	Green value ↑ loyalty & intention.
Borah et al.	2024	Gen Z	Knowledge, responsibility, trust	Green behaviour	Gen Z	PLS-SEM	Trust drives Gen Z behaviour.
Ribeiro et al.	2023	Gen Z travelers	Biospheric & altruistic values	Recommending green travel	Gen Z	SEM / Hierarchical regression	Values ↑ recommendation behaviour.
Nguyen et al.	2025	Tourists	Knowledge sharing, consciousness	Green eWOM	None	Time-lagged SEM	Knowledge sharing ↑ eWOM.
Gattupalli et al.	2025	Online shoppers	eWOM credibility, usefulness	Green behaviour	None	Regression / SEM	Credibility strongest predictor.
Van Phuong	2025	Green food buyers	Belief in benefits, attitude	eWOM → purchase	None	SEM	Belief + eWOM predict actual purchases.
Nekmahmud et al.	2022	Social media users	Green messaging, social influence	eWOM, purchase intention	None	SEM	Green SMM boosts eWOM + intention.

2.5. Hypothesis Development

Utilitarian Value and Sustainable Product Recommendation Intention

Utilitarian value represents consumers' practical evaluation of a product's functionality, reliability, and economic efficiency. From the perspective of consumer value theory, individuals are more likely to support products they perceive as delivering tangible benefits relative to their costs (Sweeney and Soutar, 2001). Within sustainable consumption contexts, functional performance and price justification are particularly important due to concerns about higher costs, uncertainty regarding quality, or scepticism toward environmental claims (Hartmann and Apaolaza-Ibáñez, 2012). Recommending a product publicly involves implicit endorsement, which may affect one's credibility if the product fails to meet expectations (Molinari et al., 2008). When sustainable products are viewed as dependable and economically reasonable, consumers are more confident that recommending them will not create dissatisfaction. Prior empirical findings indicate that

perceived functional quality positively relates to advocacy and word-of-mouth behaviours in green markets (Boccia and Tohidi, 2024; Gattupalli et al., 2025). Accordingly, higher levels of utilitarian value are expected to strengthen consumers' intention to recommend sustainable products:

> H1: Utilitarian value positively influences sustainable product recommendation intention.

Emotional Value and Sustainable Product Recommendation Intention

Emotional value refers to the affective and moral rewards consumers derive from engaging in sustainable consumption, including feelings of pride, satisfaction, trust, and personal contribution (Hartmann and Apaolaza-Ibáñez, 2012; Chen and Chang, 2013). Consumer value theory suggests that such affective benefits enhance intrinsic motivation and reinforce behaviour aligned with personal values. Positive emotional experiences increase the likelihood that consumers will communicate favourable product experiences to others (Molinari et al., 2008). Evidence from sustainability research consistently demonstrates that emotional mechanisms such as trust and satisfaction contribute to recommendation-related outcomes (Hameed et al., 2022; Román-Augusto et al., 2023). When sustainable purchasing generates moral fulfilment and positive emotions, individuals may feel encouraged to share these experiences as an expression of their values. Therefore, stronger emotional value perceptions are expected to increase consumers' intention to recommend sustainable products:

> H2: Emotional value positively influences sustainable product recommendation intention.

Social Value and Sustainable Product Recommendation Intention

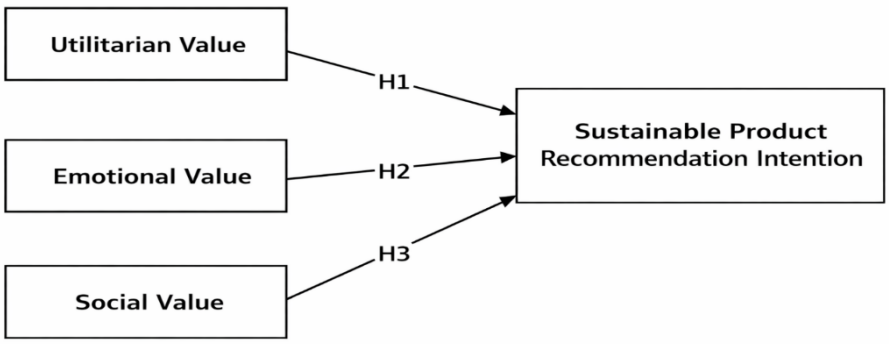
Social value captures the interpersonal and identity-based benefits associated with recommending sustainable products, such as social recognition, approval, and alignment with perceived norms (Sweeney and Soutar, 2001). According to the Theory of Planned Behaviour, behavioural intentions are shaped in part by subjective norms and perceived expectations of others (Ajzen, 1991), particularly when behaviours are visible within social environments. Recommending sustainable products can function as a signal of responsibility and environmental commitment. Research on environmental self-identity indicates that individuals engage in pro-environmental behaviours to maintain consistency with their self-concept and communicate desirable social attributes (van der Werff et al., 2013). Empirical studies further show that social influence and identity-related motivations contribute to advocacy behaviours in sustainability contexts (Ribeiro et al., 2023). Consequently, higher perceived social value is expected to enhance consumers' intention to recommend sustainable products:

> H3: Social value positively influences sustainable product recommendation intention.

2.6. Proposed Research Model

Based on the systematic literature review and hypothesis development, the proposed model examines utilitarian value, emotional value, and social value as direct predictors of sustainable product recommendation intention. The model is intentionally parsimonious because the purpose of the study is to compare the relative explanatory power of the three most recurrent value dimensions identified in prior research. Figure 2 presents the proposed conceptual model and the hypothesised relationships.

Figure 2. | Proposed Conceptual Model



3. METHODOLOGY

The impact of utilitarian, emotional, and social values on consumers' intention to recommend sustainable products is investigated in this study using a quantitative, cross-sectional research approach. Since the study uses numerical data and statistical analysis to investigate hypothesized correlations between established constructs, a quantitative method is acceptable. Assuming that consumer value judgments and behavioural intents can be objectively evaluated and scientifically examined, the research adopts a positivist epistemological position.

A structured online questionnaire was used to gather data in Germany between January and February of 2026. Convenience sampling was considered appropriate for this study because online recruitment through Facebook and Instagram provided access to consumers with recent experience of sustainable products, as required by the

screening question. This approach is also consistent with prior survey-based studies in sustainable consumption and green word-of-mouth research, which have used consumer samples to examine value-based behavioural intentions and recommendation-related outcomes (Hameed et al., 2022; Román-Augusto et al., 2023; Nekmahmud et al., 2022). Nevertheless, the use of convenience sampling limits the generalizability of the findings. Therefore, the results should be interpreted with caution, particularly when extending them to broader consumer populations. Respondents were asked to affirm through a screening question that they have used or bought sustainable items in the preceding six months in order to guarantee relevant experience. In order to characterize the sample characteristics, the questionnaire also asked demographic questions about age, gender, and educational attainment. The final analysis contained 172 valid replies, which is deemed sufficient for multiple linear regression analysis and in line with comparable consumer behaviour research studies.

Established multi-item measures adapted from previous studies were used to measure each construct. Utilitarian value was measured using three items adapted from Nosrati et al. (2025). Emotional value and social value were measured using items adapted from Mohd Suki et al. (2022). Sustainable product recommendation intention was measured using three items adapted from Chang and Yoo (2025). All items were evaluated on a five-point Likert scale, ranging from 1 = strongly disagree to 5 = strongly agree. Composite scores were calculated by averaging the individual items for each construct. The items were adapted with minor wording changes to fit the context of sustainable products and recommendation intention. The questionnaire was administered in German, and the wording was reviewed to ensure clarity and consistency with the original constructs. The data were processed using SPSS software. Descriptive analyses were performed to summarize demographic characteristics and key variables. Reliability was evaluated through Cronbach's alpha coefficients, and construct validity was assessed via exploratory factor analysis. Pearson correlation coefficients were calculated to examine relationships among the variables. To test the proposed hypotheses, multiple linear regression analysis was employed. Multiple linear regression was selected because the empirical model examines the direct effects of three independent variables on a single dependent variable. The purpose of the analysis was not to test a complex latent-variable model with mediation, moderation, or indirect effects, but to compare the relative explanatory power of utilitarian, emotional, and social value in predicting recommendation intention. Before conducting regression analysis, exploratory factor analysis and reliability assessment were used to evaluate the dimensionality and internal consistency of the constructs. Composite scores were then calculated for each construct and used in the regression model. Given the parsimonious model structure and the sample size of 172 respondents, multiple linear regression was considered an appropriate and transparent analytical technique. SEM or PLS-SEM could be useful in future studies with larger samples, more complex models, or full latent-variable measurement objectives.

Table 2 | Measurement Items and Sources

Construct	Measurement items	Answer type	Source
Utilitarian value	1. Sustainable products provide good value for the price paid. 2. Compared to conventional products, sustainable products offer a better overall deal. 3. Sustainable products provide the practical benefits that I need.	5-point Likert scale	Nosrati et al. (2025)
Emotional value	1. Recommending sustainable products makes me feel that I am making a positive personal contribution to something better. 2. Recommending sustainable products feels like the morally right thing to do. 3. Recommending sustainable products makes me feel like a better person.	5-point Likert scale	Mohd Suki et al. (2022)
Social value	1. Recommending sustainable products would help me feel socially acceptable. 2. Recommending sustainable products would improve the way others perceive me. 3. Recommending sustainable products would create a good impression on other people. 4. Recommending sustainable products would give me social approval from others.	5-point Likert scale	Mohd Suki et al. (2022)
Sustainable product recommendation intention	1. I think it is worth recommending sustainable products to people around me. 2. I am willing to recommend sustainable products if people around me are willing to purchase them. 3. After using a sustainable product, I am willing to recommend it to others.	5-point Likert scale	Chang and Yoo (2025)

Note: All items were measured using a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree.

4. RESEARCH FINDINGS

4.1. Sample Characteristics

The final sample comprised 172 respondents. Regarding age distribution, the largest group was between 45–54 years (23.3%), followed by 35–44 years (21.5%). Participants aged 25–34 and 55–64 each represented 16.3% of the sample, while 18–24-year-olds accounted for 13.4%. Respondents aged 65 and above comprised 9.3%. The age structure therefore reflects a relatively balanced distribution across adult age groups, with a moderate concentration in middle adulthood.

In terms of gender, 54.7% of respondents identified as female, 44.2% as male, and 1.2% preferred not to disclose their gender. The sample thus shows a slight predominance of female participants.

Regarding educational attainment, most respondents held a Bachelor's degree (37.2%), followed by a Master's degree (28.5%). Vocational training accounted for 22.7% of the sample, while 8.7% reported holding a PhD and 2.9% indicated secondary school as their highest qualification. Overall, the sample can be characterized as relatively well educated.

Table 3 | Sample Characteristics

Variable	Category	Frequency	Percent
Age	18–24	23	13.4
	25–34	28	16.3
	35–44	37	21.5
	45–54	40	23.3
	55–64	28	16.3
	65+	16	9.3
Gender	Female	94	54.7
	Male	76	44.2
	Preferred not to say	2	1.2
Education	Secondary school	5	2.9
	Vocational training	39	22.7
	Bachelor	64	37.2
	Master	49	28.5
	PhD	15	8.7

4.2. Descriptive Statistics and Measurement Validation

Descriptive statistics indicate that respondents reported a high intention to recommend sustainable products (M = 4.08, SD = 0.70). Utilitarian value showed a comparatively lower mean (M = 3.47, SD = 0.91), though it remained above the midpoint of the five-point Likert scale. Emotional value (M = 3.92, SD = 0.79) and social value (M = 3.89, SD = 0.82) likewise demonstrated relatively high average levels. The observed standard deviations suggest adequate variability across responses.

To assess construct validity, an exploratory factor analysis (principal axis factoring with varimax rotation) was conducted. The Kaiser–Meyer–Olkin measure of sampling adequacy was .872, and Bartlett's test of sphericity was significant ($p < .001$), indicating that the data were suitable for factor analysis. Four factors emerged consistent with the theoretical structure, jointly explaining 61.5% of the total variance. All measurement items loaded predominantly on their intended constructs, supporting the distinctiveness of utilitarian value, emotional value, social value, and recommendation intention.

Reliability analysis further confirmed satisfactory internal consistency, with Cronbach's alpha coefficients ranging from .757 to .867 across constructs. All retained items showed factor loadings ≥ .40 on their intended factor.

Table 4 | Descriptive Statistics and Reliability

Construct	No. of Items	Mean	SD	Cronbach's α
Utilitarian Value	3	3.47	0.91	.867
Emotional Value	3	3.92	0.79	.780
Social Value	4	3.89	0.82	.858
Recommendation Intention	3	4.08	0.70	.757

Table 5 | Rotated Factor Loadings from Exploratory Factor Analysis

Item	Utilitarian	Emotional	Social	Recommendation
Q1	.869			
Q2	.798			
Q3	.763			
Q4		.757		
Q5		.573		
Q6		.468		
Q7			.820	
Q8			.724	
Q9			.635	
Q10			.555	
Q11				.733
Q12				.710
Q13				.514

KMO = .872; Bartlett's Test p < .001; Total Variance Explained = 61.5%

4.3. Correlation and Regression Analysis

Pearson correlation analysis revealed significant positive relationships among all study variables. Recommendation intention was positively correlated with utilitarian value (r = .279, p < .001), emotional value (r = .499, p < .001), and social value (r = .557, p < .001). The strongest association was observed between social value and recommendation intention. Intercorrelations among the independent variables ranged from .270 to .627, remaining below critical multicollinearity thresholds.

To test the proposed hypotheses, multiple linear regression analysis was conducted. The regression model was statistically significant ($F(3,168) = 30.486$, $p < .001$) and explained 35.2% of the variance in sustainable product recommendation intention ($R^2 = .352$; adjusted $R^2 = .341$). Social value emerged as the strongest predictor ($\beta = .402$, $p < .001$), followed by emotional value ($\beta = .213$, $p = .013$), both exerting significant positive effects. In contrast, utilitarian value did not demonstrate a significant unique influence ($\beta = .081$, $p = .238$). Collinearity diagnostics indicated no multicollinearity concerns (VIF values between 1.214 and 1.855), and the Durbin–Watson statistic of 1.849 suggested no serious autocorrelation issues. Overall, the results support H2 and H3, whereas H1 is not supported.

Table 6 | Correlation Matrix

Variable	1	2	3	4
1. Utilitarian Value	1			
2. Emotional Value	.420**	1		
3. Social Value	.270**	.627**	1	
4. Recommendation Intention	.279**	.499**	.557**	1

Note: N = 172. p < .01 (two-tailed).

Table 7 | Linear Regression Results (Dependent Variable: Recommendation Intention)

Predictor	B	SE	β	t	p	VIF
Utilitarian Value	.063	.053	.081	1.185	.238	1.214
Emotional Value	.191	.076	.213	2.515	.013	1.855
Social Value	.347	.069	.402	5.040	< .001	1.649

Model Summary: $R^2 = .352$; Adjusted $R^2 = .341$; $F(3,168) = 30.486$, $p < .001$; Durbin–Watson = 1.849

5. DISCUSSION

5.1. Discussion of Findings

This study examined how consumers' intentions to recommend sustainable products are influenced by utilitarian, emotional, and social value. The results provide partial support for the proposed framework. Specifically, emotional value (H2) and social value (H3) significantly predicted recommendation intention, whereas utilitarian value (H1) did not have a significant unique effect in the regression model. The model demonstrated meaningful explanatory power within a parsimonious value-based framework by explaining 35.2% of the variance in recommendation intention.

Social value emerged as the strongest predictor of sustainable product recommendation intention. This result supports the Theory of Planned Behaviour, which emphasizes that subjective norms influence behavioural intentions, particularly when behaviours are socially visible (Ajzen, 1991). Recommending sustainable products can be understood as a public act that enables consumers to express identity, gain social approval, and position themselves positively in relation to others. Therefore, consumers may be more willing to recommend sustainable products when doing so strengthens their

desired social image and aligns with perceived social expectations.

The findings are also consistent with research on environmental self-identity, which suggests that individuals are more likely to engage in pro-environmental behaviour when such behaviour supports their self-concept and social image (van der Werff, Steg and Keizer, 2013). Similarly, recent sustainability research shows that identity-related motives and social influence mechanisms play an important role in advocacy and word-of-mouth behaviour (Ribeiro et al., 2023). In the present study, the strong effect of social value indicates that recommendation intention is not merely a product-related judgment, but also a socially embedded behaviour shaped by reputational and identity-related considerations.

Emotional value also had a significant positive effect on recommendation intention, supporting H2. This finding is consistent with consumer value theory, which acknowledges emotional and psychological benefits as important components of perceived value (Sweeney and Soutar, 2001). In sustainable consumption contexts, emotional value is particularly relevant because consumers may associate sustainable choices with moral satisfaction, pride, warm-glow feelings, and a sense of personal contribution. Hartmann and Apaolaza-Ibáñez (2012) similarly show that emotional and psychological benefits can strengthen favourable consumer responses toward green products. The positive effect of emotional value is also in line with previous studies showing that trust, satisfaction, and positive psychological responses can encourage green word-of-mouth and recommendation-related behaviour. For example, Chen, Chang and Lin (2015) show that favourable psychological reactions, such as trust and reduced perceived risk, strengthen sustainability-related behavioural intentions. Hameed et al. (2022) also demonstrate that satisfaction and trust contribute to green word-of-mouth, while Román-Augusto et al. (2023) show that perceived value, trust, and satisfaction are linked to green word-of-mouth. The present study extends this line of research by showing that emotional value does not only influence purchase-related outcomes, but also plays an important role in consumers' willingness to actively recommend sustainable products to others. In contrast, utilitarian value did not significantly predict recommendation intention when emotional and social value were included in the regression model. Therefore, H1 was not supported. Although utilitarian value was positively correlated with recommendation intention, its unique effect became non-significant in the multivariate analysis. This suggests that practical benefits, functional performance, and price-value perceptions may be important for evaluating sustainable products, but they may be less influential in motivating consumers to actively recommend them. One possible explanation is that recommendation behaviour differs from purchase behaviour. Purchase decisions often depend strongly on functional usefulness, quality, and price, whereas recommendation behavior requires consumers to publicly endorse a product to others. Such public endorsement involves social visibility and potential reputational risk. Therefore, consumers may be more influenced by emotional rewards and social meaning than by purely functional evaluations when deciding whether to recommend sustainable products. This interpretation is consistent with Molinari, Abratt and Dion (2008), who suggest that perceived quality and value can stimulate positive word-of-mouth, but that recommendation behaviour is also shaped by broader evaluative and relational processes.

The non-significant effect of utilitarian value does not mean that functional value is irrelevant. Rather, it suggests that utilitarian value may operate as a basic condition rather than as the main driver of recommendation intention. Consumers may still need to believe that sustainable products are useful, reliable, and worth their price before they feel comfortable recommending them. However, the decision to actively recommend sustainable products appears to depend more strongly on whether recommendation provides emotional satisfaction or social value. This interpretation is also consistent with sustainability research showing that green consumer behaviour is shaped not only by practical product benefits, but also by symbolic, affective, and identity-related motives (Chen, Chang and Lin, 2015; Nekmahmud et al., 2022). Overall, the findings highlight the importance of understanding sustainable product recommendation intention as a socially rooted and emotionally reinforced behavioural outcome. The study contributes to the literature by showing that social and emotional value are more important than utilitarian value in explaining recommendation intention. This supports the argument that sustainable product advocacy should be treated as a distinct behavioural outcome rather than merely as an extension of purchase intention.

5.2. Theoretical Implications

This study contributes to sustainable consumption research in three ways. First, it treats sustainable product recommendation intention as a distinct behavioural outcome rather than as a secondary extension of purchase intention, loyalty, WOM, or eWOM. This distinction is important because recommendation behaviour involves interpersonal communication, social visibility, and reputational considerations.

Second, the study integrates utilitarian, emotional, and social value into a single parsimonious framework. Prior studies often examine different value constructs separately or combine recommendation-related outcomes with broader behavioural intentions. By comparing the three value dimensions within one model, this study clarifies their relative explanatory power in the context of sustainable product recommendation intention.

Third, the findings show that emotional and social value are more influential than utilitarian value in explaining

recommendation intention. This supports the argument that sustainable product advocacy is not driven only by functional product evaluations, but also by affective rewards, moral satisfaction, identity expression, and social approval. The study therefore extends consumer value theory by showing that socially visible sustainability behaviours may activate different value mechanisms than private purchase decisions.

5.3. Practical Implications

The findings provide several practical implications for firms seeking to encourage consumer-driven advocacy for sustainable products. First, companies should design communication strategies that strengthen the social value of recommending sustainable products. This can be achieved through referral campaigns, customer testimonials, user-generated content, community-based campaigns, and messages showing that recommending sustainable products is socially valued and positively perceived by others.

Second, firms should emphasize emotional value by linking sustainable product use and recommendation to feelings of pride, personal contribution, and moral satisfaction. Campaigns should not only describe environmental benefits, but also show how consumers can feel personally involved in creating positive change. Storytelling, customer narratives, and messages about collective impact may be especially effective.

Third, although utilitarian value was not a significant unique predictor, firms should not ignore functional performance. Consumers may hesitate to recommend sustainable products if they doubt their quality, durability, price fairness, or reliability. Therefore, companies should provide clear evidence of product performance through certifications, transparent product information, quality guarantees, reviews, and comparisons with conventional alternatives.

Finally, firms should avoid relying only on generic "green" claims. Because sustainable products are often associated with scepticism and greenwashing concerns, recommendation behaviour requires trust. Practical communication should combine emotional and social appeals with credible evidence, so consumers feel confident that recommending the product will not damage their credibility.

6. CONCLUSION

6.1. Summary of Findings

This study investigated how utilitarian, emotional, and social value influence consumers' intention to recommend sustainable products. Drawing on consumer value theory and a systematic literature review, the study developed and tested a parsimonious model using survey data from 172 consumers in Germany. The findings show that social value and emotional value significantly predict sustainable product recommendation intention, while utilitarian value does not have a significant unique effect when the three value dimensions are considered simultaneously. Social value was the strongest predictor, suggesting that recommendation behaviour is strongly connected to social approval, identity expression, and normative influence.

6.2. Limitations

This study has several limitations. First, the data were collected through a convenience sample recruited via Facebook and Instagram. Although this approach was appropriate for accessing consumers with recent sustainable product experience, it limits the generalizability of the findings. Second, the sample consisted of consumers in Germany only, meaning that the results may not fully apply to other cultural or market contexts. Third, the cross-sectional research design does not allow causal conclusions. Fourth, the study relied on self-reported data, which may be affected by social desirability bias, especially because sustainability-related behaviour is socially valued. A further limitation concerns the wording of the emotional and social value items. Several items were adapted around the act of recommending sustainable products, which places them conceptually close to the dependent variable, recommendation intention. Although exploratory factor analysis supported the empirical distinctiveness of the constructs, some degree of conceptual overlap cannot be excluded. Therefore, the effects of emotional and social value may partly reflect the recommendation-related wording of the predictor items. Finally, the study used composite scores and multiple linear regression rather than SEM or PLS-SEM. This was appropriate for the direct and parsimonious model tested in this study, but it does not provide the same level of latent-variable measurement modelling as SEM-based approaches.

6.3. Future Research

Future research should test the model with larger and more representative samples to improve generalizability. Cross-cultural studies could examine whether the relative importance of utilitarian, emotional, and social value differs across countries and cultural contexts. Longitudinal research would also be useful to examine whether value perceptions lead to actual recommendation behaviour over time.

Future studies should also refine the measurement of emotional and social value by using items that refer more broadly to sustainable product consumption or ownership experience rather than to the act of recommending itself. This would help separate predictor constructs more clearly from recommendation intention. In addition, future research could apply SEM or PLS-SEM to test more complex models, including mediating variables such as trust, satisfaction, environmental concern, perceived credibility, or green scepticism.

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7. APPENDIX A: TABLE A1. CLASSIFICATION OF CONSUMER VALUE CATEGORIES IN SUSTAINABLE PRODUCT RECOMMENDATION RESEARCH

Number	Factor description	Functional Value	Economic Value	Emotional Value	Psychological Value	Ethical–Moral Value	Social–Epistemic Value
1	Functional performance of sustainable products	x					
2	Product quality and reliability	x					
3	Long-term durability / lifetime value	x					
4	Value-for-money perception		x				
5	Perceived price fairness		x				
6	Satisfaction from sustainable consumption			x			
7	Positive emotions (e.g. pride, enjoyment)			x			
8	Warm-glow feelings from acting sustainably			x			
9	Trust in sustainable product claims				x		
10	Perceived credibility of sustainable brands				x		
11	Self-consistency and self-verification				x		
12	Environmental responsibility					x	
13	Moral obligation toward sustainability					x	
14	Altruistic and biospheric values					x	

Number	Factor description	Functional Value	Economic Value	Emotional Value	Psychological Value	Ethical–Moral Value	Social–Epistemic Value
15	Social approval from recommending sustainable products						x
16	Influence of peers and social norms						x
17	Identity expression through recommendation						x
18	Sustainability knowledge and awareness						x