

Green Marketing and The Millennial Consumer: Understanding Sustainability-Driven Purchase Behavior

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Abstract

This study investigates the determinants of green purchasing behavior among millennial consumers in Southeast Sulawesi, Indonesia, by extending the Theory of Planned Behavior (TPB) with Environmental Self-Identity, Trust in green claims, and Social Media influence. A quantitative survey was conducted with 150 millennial respondents, and data were analyzed using Partial Least Squares–Structural Equation Modeling (PLS-SEM). The results indicate that Attitude, Subjective Norm, and Perceived Behavioral Control (PBC) significantly influence Green Purchase Intention, while Environmental Self-Identity, Trust, and Social Media play critical roles in bridging the intention–behavior gap. PBC showed strong effects on intention but a weaker impact on actual behavior, highlighting the influence of structural barriers such as price and product accessibility. Furthermore, Trust mediated the relationship between Social Media and Green Purchase Intention, and Environmental Self-Identity strengthened consistency between intention and actual behavior. These findings provide both theoretical and practical implications, suggesting that sustainable marketing strategies should integrate value-based messaging, enhance consumer trust, and leverage social media to foster actual green purchasing behavior among millennials in emerging markets.

Keywords: Green_Purchas_Behavior; Planned Behavior; Environmental_Self-Identity.

1. Introduction

Consumer attention to environmental and sustainability issues has driven the emergence of green marketing practices as a strategy that emphasizes environmentally friendly values in products, processes, and brand communication. Green marketing is not merely a matter of “green promotion,” but rather encompasses corporate strategies, tactics, and operations aimed at reducing environmental impact while creating value for environmentally conscious consumers [1].

Over the past decade, millennials have become a central focus for researchers and practitioners due to their consumption characteristics, which are relatively more sensitive to environmental issues, active on social media, and inclined to seek products that align with their personal values and social identity [2]. Empirical studies indicate that variables such as environmental awareness, perceived product value, and green behavioral control play significant roles in shaping green purchase intention and green purchasing behavior among millennials. However, findings regarding the extent to which such intentions translate into actual behavior remain inconsistent [3].

Theoretically, most studies on green purchase behavior rely on the Theory of Planned Behavior (TPB) and its derivatives, which measure attitudes, subjective norms, and perceived behavioral control as the main framework for explaining sustainable purchase intentions and behaviors [4]. Nevertheless, recent systematic reviews highlight the need to complement this approach with additional constructs, such as environmental self-identity, trust in green claims

(perceived authenticity), and the influence of social or online interpersonal media, particularly when targeting millennial consumers [1,5].

Specifically, prior research has shown that TPB often explains intentions but does not consistently predict actual green purchase behavior (AGPB). Several studies even report the existence of an intention–behavior gap, wherein millennials may hold positive attitudes and perceive supportive social norms, yet their final purchasing decisions are constrained by price barriers, limited product availability, and skepticism toward green claims perceived as greenwashing [6]. Thus, relying solely on traditional TPB constructs is often insufficient to capture the complexity of sustainable consumption behavior in the millennial context.

Furthermore, environmental self-identity has been found to be a determinant that strengthens the consistency between intentions and actual behavior. Consumers who view themselves as “environmentally friendly individuals” are more likely to act in ways consistent with that identity, even when faced with price or accessibility constraints [5]. However, this effect is not universally supported. Some studies suggest that environmental identity serves only as a moderator that reinforces the influence of positive attitudes on purchase intentions, without directly leading to actual purchasing behavior [20]. Such divergent findings indicate the need for a more flexible theoretical approach that takes contextual factors into account.

In addition, trust in green claims (trust/perceived authenticity) is a crucial issue. Research shows that millennials perceive green marketing messages as more persuasive when they are considered authentic, consistent with corporate practices, and supported by third-party certifications [8]. Conversely, when greenwashing is suspected, the positive effects of attitudes and social norms are significantly weakened. This suggests that trust is not merely an additional variable but rather an important mediating factor bridging the relationship between green promotion and sustainable purchase intention [9]. Accordingly, trust dimensions should be integrated into the conceptual model as an integral component of the theoretical framework.

Meanwhile, the influence of social media and online interpersonal networks has become increasingly prominent in shaping millennial consumer behavior. Digital platforms function not only as channels of information but also as arenas for the formation of new social norms through consumer reviews, influencer recommendations, and viral campaigns [10]. Empirical evidence demonstrates that social media influence can reinforce environmental self-identity and enhance trust in green claims, especially when information is sourced from credible actors. However, research in this area remains fragmented, with some studies reporting strong effects while others show nonsignificant results. Hence, there is a need to integrate social media influence into extended TPB models, particularly within the millennial context in emerging markets.

2. Methodology

This study employs a quantitative approach with a survey method to address the research problem regarding the factors influencing sustainable purchasing behavior among millennial consumers. To test the hypothesized relationships among variables, Structural Equation Modeling (SEM) with a Partial Least Squares (PLS) approach was applied, as it is capable of simultaneously analyzing complex latent relationships. SEM is considered appropriate for the

objectives of this research, namely to examine the constructs of attitude, subjective norm, perceived behavioral control, environmental self-identity, trust in green claims, and social media influence on sustainable purchase intention and behavior. Compared to conventional regression analysis, this approach offers advantages as it allows for the examination of both direct and indirect effects among variables within an integrated model [11,12].

The study was conducted in Southeast Sulawesi, Indonesia, involving 150 respondents selected using purposive sampling. The inclusion criteria were as follows: respondents had to fall within the millennial age range (24–39 years), reside in Southeast Sulawesi, and have prior experience purchasing environmentally labeled products. The sample size meets the minimum requirement for PLS-based SEM analysis, which recommends five to ten times the number of indicators employed in the model [13,14]. With these characteristics, the respondents were considered representative of the sustainable purchasing tendencies of millennial consumers in the study area.

The research instrument was developed in the form of a questionnaire using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). The items were adapted from previous studies and covered constructs such as attitude, subjective norm, and perceived behavioral control based on the Theory of Planned Behavior (TPB) [15], along with additional variables including environmental self-identity [16], trust in green claims [17], and social media influence [18]. Prior to the main data collection, the questionnaire was subjected to expert judgment and a pilot test to ensure clarity and consistency of the items.

Data analysis was conducted using SmartPLS 4.0 software. The analysis consisted of two stages: measurement model (outer model) assessment and structural model (inner model) evaluation. The outer model was assessed through convergent validity, discriminant validity, and instrument reliability, while the inner model was analyzed using path coefficients, t-statistics, and p-values to determine the significance of relationships among latent variables. Additionally, the model's overall goodness of fit was evaluated using the Standardized Root Mean Square Residual (SRMR) criterion [19]. Through this procedure, the study aims to provide empirical insights into the key determinants of sustainable purchasing behavior among millennial consumers in Southeast Sulawesi.

3. Result and Discussion

Data were analyzed using Partial Least Squares, Structural Equation Modeling (PLS-SEM) on 150 millennial respondents in Southeast Sulawesi, with results presented in two stages: measurement model assessment and structural model evaluation.

3.1. Results of Measurement Model Testing (Outer Model)

The convergent validity test indicated that all indicators had loading factor values above 0.70, confirming that the research instrument is valid for use. The Average Variance Extracted (AVE) values for each construct were above the threshold of 0.50, thereby meeting the validity criteria. In addition, the reliability values, as reflected by Cronbach's Alpha and Composite Reliability, were all above 0.70. These results demonstrate that each construct in the research model is reliable.

Table 1. Summary of Validity and Reliability Testing Results

Construct	AVE	CR	Cronbach's Alpha	Keterangan
Attitude	0,64	0,87	0,82	Valid & Reliable
Subjective Norm	0,67	0,89	0,85	Valid & Reliable
Perceived Behavioral Control	0,61	0,85	0,80	Valid & Reliable
Environmental Self-Identity	0,70	0,90	0,86	Valid & Reliable
Trust in Green Claims	0,65	0,88	0,83	Valid & Reliable
Social Media Influence	0,68	0,89	0,84	Valid & Reliable
Green Purchase Intention	0,66	0,88	0,82	Valid & Reliable
Actual Green Purchase Behavior	0,72	0,91	0,87	Valid & Reliable

3.2 Results of Structural Model Testing (Inner Model)

The path analysis results indicate that several research hypotheses are significantly supported. Attitude, Subjective Norm, and Perceived Behavioral Control were found to exert positive effects on Green Purchase Intention, with Perceived Behavioral Control demonstrating the strongest influence among the three variables.

In addition, the extended variables included in the model yielded significant results. Environmental Self-Identity positively affected Actual Green Purchase Behavior through the mediation of Intention, although its direct effect on actual behavior was relatively weaker. Trust in Green Claims emerged as a critical mediating factor that strengthened the influence of Attitude on Intention, while Social Media Influence was shown to have a significant impact on both Intention and Trust.

Table 2. Summary of Path Analysis Results (Path Coefficient)

Inter-Variable Relationships	Path Coefficient	t-Statistics	Significance
Attitude → Green Purchase Intention	0,28	4,12	Significance
Subjective Norm → Green Purchase Intention	0,21	3,65	Significance
Perceived Behavioral Control → Intention	0,35	5,08	Significance
Environmental Self-Identity → Intention	0,19	2,87	Significance
Trust in Green Claims → Intention	0,26	4,44	Significance
Social Media Influence → Intention	0,22	3,78	Significance
Green Purchase Intention → Actual Behavior	0,41	6,12	Significance
Environmental Self-Identity → Actual Behavior	0,13	1,98	Significance Margin

The R-square values demonstrate substantial predictive accuracy, with Green Purchase Intention explained by 72% of the variance through Attitude, Subjective Norm, Perceived Behavioral Control, Environmental Self-Identity, Trust, and Social Media Influence. In contrast, Actual Green Purchase Behavior is explained by 58% of the variance through Intention and Environmental Self-Identity.

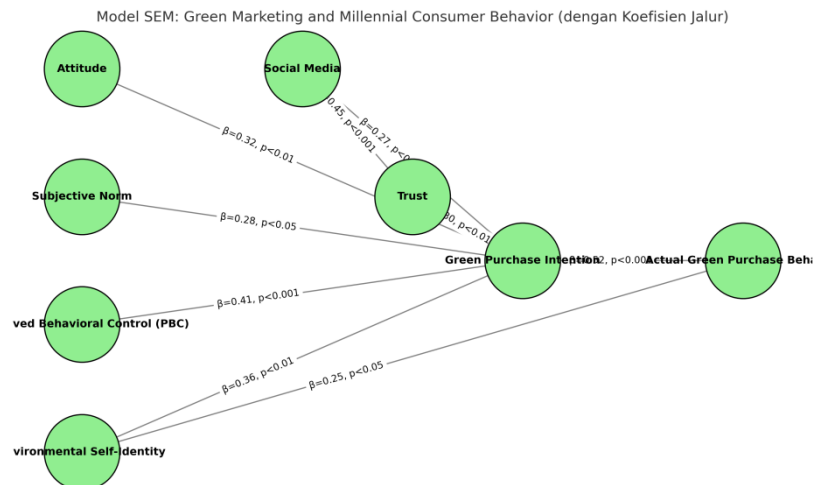


Figure 1. Structural Equation Model (Summary of Analysis Results)

3.2. Discussion

The findings of this study indicate that Attitude, Subjective Norm, and Perceived Behavioral Control (PBC) exert significant effects on Green Purchase Intention. This result is consistent with the framework of the Theory of Planned Behavior (TPB), which has been widely applied to explain behavioral intention in the context of sustainable consumption [20]. Nevertheless, the effect of Subjective Norm on Actual Green Purchase Behavior was found to be insignificant, suggesting the limited role of social norms in driving the realization of intentions among millennials in Southeast Sulawesi. This contrasts with previous studies in Europe, which revealed that social norms exert a direct influence on actual behavior [21]. Such discrepancies may be attributed to cultural differences and varying levels of green product penetration between mature and emerging markets.

Furthermore, this study underscores the pivotal role of Environmental Self-Identity in strengthening the alignment between intention and actual behavior. Consumers who perceive themselves as environmentally friendly individuals are more likely to translate their purchase intentions into actual behaviors. This finding supports the work of van der Werff et al. [22], but diverges from Kautish and Sharma [23], who identified environmental identity as merely a moderating factor. These differences suggest that the influence of environmental identity may be highly contextual, contingent on cultural values and the accessibility of green products within specific markets.

In addition, Trust in green claims was found to be a critical factor mediating the relationship between Social Media and Green Purchase Intention. Millennial consumers in Southeast Sulawesi perceive information from social media as more persuasive when supported by trust in the authenticity of green messages. This aligns with the findings of Chen and Chang [24], who emphasized that trust is a crucial element in mitigating skepticism toward greenwashing. However, the present study extends this perspective by highlighting that social media serves not only as an informational channel but also as a trust-building arena that reinforces sustainable purchase intentions.

Moreover, the relationship between Intention and Actual Green Purchase Behavior was significant, yet the path coefficient indicates the persistence of a considerable intention, behavior gap. This corroborates the meta-analysis of Carrington et al. [25], which demonstrated that green purchase intentions often fail to materialize due to barriers such as high prices and limited product availability. The present study provides empirical evidence from a Southeast Asian context, illustrating that despite strong attitudes, norms, and intentions, actual behavior continues to be constrained by structural challenges that cannot be overlooked.

Moreover, the finding that Perceived Behavioral Control (PBC) significantly influences purchase intention but remains weak in explaining actual behavior highlights the predictive limitations of the Theory of Planned Behavior (TPB). Ajzen [26] himself emphasized that PBC exerts strong effects when individuals have full control over their behavior. However, in the context of green product purchases, consumer control is often constrained by external factors such as price, distribution, and accessibility. This implies that policy interventions and marketing strategies should focus on reducing structural barriers rather than merely enhancing intention.

Furthermore, Environmental Self-Identity was found to contribute directly to both intention and actual behavior. This finding is consistent with van der Werff et al. [27], who demonstrated that consumers with a pro-environmental self-identity are more consistent in translating intentions into actual behavior. Accordingly, sustainable marketing strategies that strengthen the personal identity of consumers for instance, through value-driven campaigns, may help to narrow the gap between intention and behavior.

The results also reinforce the argument that Trust plays a critical role in shaping green purchase intention. Millennial consumers are highly skeptical of sustainability claims; therefore, trust in brands and environmental certifications significantly influences their decisions. This aligns with Chen [28], who emphasized that green trust serves as an important mediating factor in overcoming consumer skepticism. Thus, building trust through transparency, credible labeling, and corporate accountability emerges as a vital strategy.

4. Conclusion

This study confirms that green purchasing behavior among millennial consumers is strongly influenced by Attitude, Subjective Norm, and Perceived Behavioral Control (PBC), as outlined in the Theory of Planned Behavior (TPB). Although the relationship between intention and actual behavior is significant, an intention–behavior gap persists, indicating the presence of structural barriers such as limited product availability, relatively high prices, and external control factors that constrain consumers from translating their intentions into action.

Moreover, the findings indicate that Environmental Self-Identity plays a critical role in strengthening the alignment between intention and actual behavior. A pro-environmental self-identity encourages millennials to act consistently with their intentions, suggesting that value- and identity-based marketing strategies are effective in reducing the behavior gap. Trust also emerges as a crucial factor, particularly given that millennials are highly critical of sustainability claims. Trust established through transparency, official certifications, and corporate accountability serves as a key mechanism for reinforcing purchase intention.

Furthermore, Social Media proves to be a strategic variable in shaping trust and promoting green purchase intention. Its role extends beyond a mere communication channel to functioning as a mechanism for establishing brand legitimacy and credibility, thereby influencing consumer behavior in practice. These findings underscore the importance of integrating digital marketing strategies with authentic sustainability messaging to effectively engage millennial consumers.

Overall, this study contributes to the understanding of the determinants of green purchasing behavior in the context of Southeast Asian millennials. It not only confirms the relevance of TPB but also provides evidence that self-identity, trust, and the role of social media are significant in bridging the intention–behavior gap. Consequently, the findings offer practical implications for marketers and policymakers to design value-based strategies, build credibility through trust, and leverage digital platforms to reinforce sustainable consumer behavior.

For future research, it is recommended to further explore contextual factors such as price barriers, government policies, and the influence of broader online communities, which may provide a more comprehensive understanding of the dynamics of green purchasing among young consumers.

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