

Investigating the Determinants of Green Loyalty: Understanding Factors Influencing Customer Commitment to Sustainable Brands in Indonesia

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Abstract

The global emphasis on ecological sustainability and green marketing has revolutionized consumer preferences and behavior in recent decades. As businesses strive to meet the growing demand for eco-friendly products and services, understanding and assessing customer green loyalty have become pivotal objectives for sustained success. This research investigates the determinants of customers' green loyalty towards environmentally conscious goods and/or services. In order to achieve this objective, a quantitative analysis approach was adopted. A questionnaire-based survey was conducted using Google Forms, targeting 238 respondents. The collected data was subjected to descriptive statistics and partial least squares structural equation modelling (PLS-SEM) for comprehensive analysis. The findings of this study underscore the significant influence of two crucial factors - green trust and green image - on customers' green loyalty. The positive relationship between green trust and green loyalty highlights the importance of establishing trust in eco-friendly brands. The positive impact of a green image signifies the role of a brand's environmental reputation in fostering customer loyalty. These insights hold paramount importance for both theory and practice, shedding light on customers' loyalty patterns towards green brands in Indonesia. As businesses navigate the dynamic landscape of sustainability-driven consumer preferences, this research can guide strategic marketing efforts and promote eco-friendly practices to attract and retain loyal customers.

Keywords: Green Image, Green Loyalty, Green Trust, PLS-SEM

A. INTRODUCTION

As of 2020, Indonesia has emerged as the fifth-largest global waste contributor, as the World Bank reported in 2023. The high quantity of waste in Indonesia can be attributed to the nation's consumption activities, exacerbated by its large population (Gischa, 2023). In response to this pressing issue, the Indonesian government has demonstrated significant efforts to curtail the country's waste production. Notably, their commitment to achieving net-zero emissions by 2060 is a testament to their dedication to environmental preservation (Kemenkeu, 2022). This initiative has been pivotal in fostering greater environmental awareness among the populace.

Consequently, consumer demand and behavior have had a noticeable impact, spurred by the growing trend toward ecological sustainability and green marketing. As individuals become more conscious of the environmental challenges, they are increasingly inclined to support eco-friendly products and brands, driving a significant shift in consumer preferences and behaviors in Indonesia. Chen (2008) reinforces this notion by asserting that consumers have become increasingly conscientious of environmental issues, primarily driven by growing global warming concerns. In order to appeal to customers who adopt environmentally conscious lifestyles, companies employ advertising strategies that emphasize eco-friendliness or make green assertions (Divine and Lepisto, 2005). This is supported by a statement by Bhatia and Jain (2013), which stated that manufacturers had exhibited significant attention toward the marketing and sales of ostensibly "green" items in response to their heightened consumer demand. Businesses have been attempting to meet the market's green expectations by offering environmentally friendly goods and services. In general, it can be said that customers are moving towards more environmentally friendly buying

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behavior, and businesses are competing with each other to fulfill the market's demand for green products. In Indonesia, many industries have shifted to more environmentally friendly business practices. It was reported that the number of consumers in Indonesia that care for eco-friendly products has risen to 112% in 2020 (Nariswari, 2022).

In light of this phenomenon, it becomes imperative for businesses to ensure that their eco-conscious initiatives effectively sustain customer loyalty. This is because customer loyalty is a crucial objective for numerous companies, given that loyal customers exhibit behaviors such as repeat purchases, dedicating a larger share of their income to the supplier, and displaying reduced price sensitivity, in contrast to other customers (Williams & Naumann, 2011). As Dick and Basu (1994) posited, green loyalty can be defined as the extent of a consumer's dedication to purchasing or consistently utilizing a green brand repeatedly. Within the context of this research, green loyalty pertains to the consumer's inclination to persistently use a particular product promoted for its positive environmental impact.

Several past pieces of literature have examined the factors influencing green consumer loyalty, unveiling a multitude of significant contributors. These include the transparency and fairness of trade practices (Kaufmann et al., 2012), the environmental reputation of companies (Schwepker and Comwell, 1991), the credibility of environmental advertising (Thøgersen, 2000), as well as the attributes of green reliability and green appearance (Maniatis, 2016).

Despite this, green loyalty in developing countries, including Indonesia, remains underexplored in the existing research. Notably, a 2021 study by PwC revealed that 86% of Indonesian consumers exhibit conscious green buying behavior, surpassing the global rate of 50%. This substantial market potential highlights the need for a dedicated study on green loyalty in the emerging Indonesian market. Therefore, this research aims to address this critical gap and provide valuable insights into understanding green consumer behavior in Indonesia.

Based on a comprehensive review of existing literature, four variables have been identified to be compatible with this research. These variables are Green Trust, Green Image, Green Satisfaction, and Green Loyalty. (Martinez, 2015; Lin, Lobo, & Leckie, 2017; Gupta, 2020; Chrisjatmiko, 2018). According to Chen and Chang (2012), "green trust" refers to consumers' willingness to place reliance on a product or service based on their belief or expectation that it is credible, benevolent, and capable of contributing to environmental performance. Furthermore, Chen (2009) suggests that a "green image" encompasses customers' perceptions of a company's environmental commitments and concerns. Additionally, "green satisfaction" is the subjective experience of fulfillment and pleasure derived from consuming products that align with environmental objectives, sustainability demands, and the consumer's perceived green standards (Chen, 2010).

The relationship among the variables has been established through a thorough review of previous literature. The connection between "green trust" and "green loyalty" is rooted in the belief that trust serves as a foundational element for cultivating and sustaining long-term relationships, as proposed by (Spekman, 1988). The (Martinez, 2015) study shows a positive correlation between green trust and loyalty. Regarding the relationship between the "green image" and "green loyalty," it is observed that the overall perception of a company's environmental commitments, known as the "green image," influences customers' emotional responses. These responses, in turn, impact customer behavioral outcomes, such as their likelihood to engage in recommendation and repurchase behaviors, collectively called "green loyalty" (Martinez, 2015). A positive and credible green image can foster emotional connections with customers, leading to greater loyalty and advocacy for environmentally responsible products and services. Regarding this, (Lin et al., 2017) research reveals a direct relationship between green brand image and brand loyalty.

Furthermore, (Oliver, 1999) argues that "satisfaction" is an indicator of loyalty, as loyalty tends to develop after a customer experiences satisfaction with a particular product or service. This indicates a link

between customer satisfaction and the likelihood of building loyalty. Additionally, the (Gupta, 2020) investigation demonstrates that green satisfaction significantly enhances loyalty. (Chrisjatmiko, 2018) study further supports these observed correlations of variables with green loyalty.

Building upon these findings, the following study hypotheses are formulated:

H1: Green trust positively affects green loyalty.

H2: Green image positively affects green loyalty.

H3: Green satisfaction positively affects green loyalty.

B. RESEARCH METHOD

This study commences by investigating consumer green behavior in response to green marketing within the context of the burgeoning green awareness in Indonesia and its subsequent influence on customer green loyalty. The researcher employs a quantitative approach utilizing online questionnaires administered through Google Forms to gather the necessary data. The collected questionnaire data will be subjected to rigorous analysis to draw conclusive insights and formulate appropriate recommendations based on the research findings.

The study collects data from 238 Bandung, Indonesia respondents who have purchased green products. Following the theory proposed by (Malhotra, 2010), the targeted number of respondents is set at 200, deemed sufficient for marketing research. Purposive sampling, a non-probability sampling technique, is employed in the participant selection.

The online survey comprises 13 questions, utilizing a 5-point Likert scale to gauge respondents' level of agreement. The researcher will utilize the Likert scale, a widely recognized and fundamental psychometric tool, to assess respondents' attitudes (Joshi et al., 2015). The questionnaire is adapted from prior studies to suit the context of this research and is translated into Bahasa Indonesia to align with the language of the target respondents. The key variables under investigation are Green Trust (GT), Green Image (GI), Green Satisfaction (GS), and Green Loyalty (GL). These indicators are primarily drawn from previous studies with similar objectives, including (Martinez, 2015; Lin et al., 2017; Gupta, 2020; Chrisjatmiko, 2018).

The data acquired from the preceding questionnaire will undergo analysis utilizing descriptive statistics. The techniques utilized to summarize, organize, visualize, and clarify quantitative data are procedures for descriptive statistics (Vogt & Johnson, 2015). Moreover, Structural Equation Modeling (SEM) is used to visually examine the interrelationships between relevant (Wong, 2013). The researcher will employ a specific form of SEM analysis called Partial Least Squares (PLS) technique in this study. The primary objective of PLS-SEM is to evaluate the predictive association between variables and ascertain the presence or absence of relationships or influences among them (Wong, 2013). Furthermore, PLS-SEM is a suitable tool for confirmatory research, as it can indicate the presence or absence of relationships between variables (Chin & Maracoulides, 1998). The choice of this method in the current research is based on its appropriateness and compatibility for addressing the research objectives.

C. RESULTS AND ANALYSIS

Descriptive Analysis

The results of the descriptive analysis conducted in this study are displayed in Table 1. In accordance with (Mishra et al., 2019) research, the mean, which represents the average value of the dataset, is a fundamental statistical measure commonly employed for comparative purposes.

Table 1. Descriptive Analysis

Variable	Label	Min	Max	Mean	Standard Deviation
Green Trust	GT1	1	5	4.127	0.837
	GT2	1	5	4.241	0.756
	GT3	1	5	4.181	0.761
Green Image	GI1	1	5	3.992	0.842
	GI2	1	5	3.962	0.873
	GI3	1	5	4.021	0.864
	GI4	1	5	4.017	0.9
Green Satisfaction	GS1	1	5	4.076	0.742
	GS2	1	5	4.025	0.89
	GS3	1	5	4.017	0.785
Green Loyalty	GL1	1	5	4.025	0.811
	GL2	1	5	4.021	0.803
	GL3	1	5	4.076	0.878

Source: research data, 2023

Reliability

To assess the reliability of the latent variables, it is recommended that the composite reliability value for each variable should exceed 0.7, as proposed by (Wong, 2013). In this study, all indicators surpassed this threshold, indicating their reliability. These results are presented in Table 2, showing consistent outer loading values above 0.7, which further confirms the indicators' reliability. In order to ensure the validation of the variables, the Average Variance Extracted (AVE) score for each variable must exceed 0.5. As displayed in Table 2, the validation results indicate that all variables have AVE values surpassing the 0.5 threshold. Thus, it can be deduced that all variables considered in this study exhibit satisfactory validity.

Table 2. Outer Loadings, Composite Reliability, AVE

Variable	Label	Items	Outer Loading	Composite Reliability	AVE
Green Trust	GT1	I find the use of environmentally friendly products to be reliable.	0.848	0.877	0.705
	GT2	I perceive the credibility of environmental claims associated with environmentally friendly products.	0.777		
	GT3	The environmental aspect of green products meets your expectations.	0.774		
Green Image	GI1	This product is considered a benchmark for environmental commitments.	0.839	0.843	0.641
	GI2	This product has a strong reputation for its environmental impact.	0.829		
	GI3	This product successfully prioritizes environmental protection.	0.809		
	GI4	This product is deemed trustworthy in keeping its environmental promises.	0.819		
Green Satisfaction	GS1	I am delighted with the choice of this product due to its environmental commitment.	0.823	0.944	0.68
	GS2	I believe purchasing this product is right because of its environmental commitment.	0.878		
	GS3	I am content with this product's environmental performance.	0.817		
Green Loyalty	GL1	I consistently prefer this product as my top choice.	0.829	0.861	0.674
	GL2	I intend to continue choosing this product in the future.	0.81		
	GL3	I would positively recommend this product to my family and friends.	0.837		

Source: research data, 2023

Structural Path

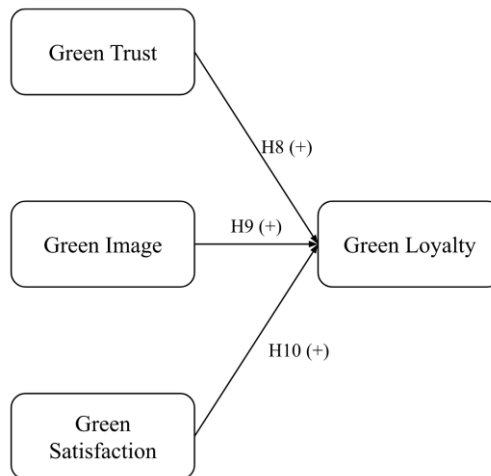


Figure 1. Structural Framework

Table 3 includes results from the evaluation of R^2 and Q^2 . R^2 measures the extent of variance the structural model explains, with values above 0.75 considered strong, above 0.50 as medium, and below 0.25 as weak, following Wong (2013). The Stone-Geisser (Q^2) test assesses predictive accuracy, with a threshold of 0.05 for successful predictions. Goodness of Fit (GoF) is determined by multiplying the average Q^2 by the square root of the average R^2 , as per Wong (2013). GoF, ranging from 0 to 1, evaluates the alignment between observed and expected data, accounting for effect size and convergent validity (Garson, 2016; Tenenhaus et al., 2005).

Table 3. Goodness-of-Fit

Variable	Coefficient of Determination (R^2)	Cross- validated Redundancy (Q^2)
Green Image	0.521	0.627
Green Loyalty	0.682	0.595
Green Satisfaction	0.418	0.498
Green Trust	0.585	0.581
GoF	0.5632498336	

Source: research data, 2023

Table 3 presents the results of the goodness of fit (GoF) analysis. The obtained GoF value, exceeding 0.1, indicates the model's effectiveness in accurately describing the empirical data.

Hypothesis Testing

The T-values and path coefficients within the inner model were thoroughly examined to evaluate the validity of the hypotheses. The results of the hypothesis testing are presented in Table 4. At a significance level of 0.05, H1 and H2 were found to have a significant influence. Conversely, H3 did not demonstrate a significant influence.

Table 4. Hypothesis Testing

Hypothesis	Structural Path	T Statistics ($ O/STDEV $)	P Values	Result
H1	Green Trust -> Green Loyalty	3.061	0.002	Accepted
H2	Green Image -> Green Loyalty	5.354	0	Accepted
H3	Green Satisfaction -> Green Loyalty	1.353	0.176	Rejected

Source: research data, 2023

Hypothesis 1: Green trust positively affects green loyalty.

The statistical analysis confirms a significant positive relationship between green trust and loyalty (T-value = 3.061, exceeding the critical value of 1.96 at a 0.05 significance level). Thus, the first hypothesis is accepted, aligning with (Martinez, 2015; Chrisjatmiko, 2018), who also found a positive correlation between green trust and loyalty. The findings suggest a positive relationship between increasing consumers' green trust and increasing green loyalty. As consumers' green trust grows, their loyalty also tends to increase in tandem. Due to this focusing on building and increasing Indonesian consumers' green trust can be an effective approach to increasing green loyalty.

Hypothesis 2: Green image positively affects green loyalty.

The results support the second hypothesis, indicating a significant positive relationship between green image and green loyalty (T-value = 5.354, exceeding the critical value of 1.96 at a 0.05 significance level). Hence, the ninth hypothesis is accepted, consistent with findings by (Martinez, 2015; Chrisjatmiko 2018; Lin et al., 2017), who also observed a positive association between green brand image and brand loyalty. The results indicate that enhancing consumers' green image positively impacts green loyalty. As consumers' perception of a green image improves, their green loyalty also experiences a positive influence. This means businesses can focus on strengthening their green branding and environmental reputation to increase consumers' green loyalty in Indonesia.

Hypothesis 3: Green satisfaction positively affects green loyalty.

Contrary to the third hypothesis, the statistical analysis does not demonstrate a significant positive relationship between green satisfaction related to reusable bags from food delivery services and green loyalty (T-value = 1.353, not exceeding the critical value of 1.96 at a 0.05 significance level). Therefore, the tenth hypothesis is not accepted, contradicting findings by (Martinez, 2015; Chrisjatmiko 2018; Gupta, 2020), which suggested a positive impact of green satisfaction on green loyalty. Further investigation is warranted to understand the reasons for the discrepancy between this study and prior research.

D. CONCLUSION

Through an in-depth analysis of the questionnaire results, several factors were identified with the potential to influence green loyalty. The application of PLS-SEM revealed that consumers' green loyalty is positively influenced by two significant factors: green trust and green image. Specifically, higher levels of green trust and favorable perceptions of the green image positively impact green loyalty. This suggests that consumers who perceive a higher level of trust in the brand's environmental practices and those who hold a positive view of the brand's eco-friendly image are more likely to exhibit stronger green loyalty towards the brand or service.

The results of this study have important implications, both practical and theoretical. On the practical front, the findings can be utilized in real-world scenarios to provide valuable guidance and recommendations for decision-making and actions related to customers' behavior concerning green loyalty. These practical implications can inform businesses and marketers on effectively fostering and maintaining green loyalty among their customers. Theoretically, the study's findings contribute to existing knowledge by either challenging current theories, proposing new hypotheses, or exploring areas that have not been extensively researched. These theoretical implications shape the future direction of research in this domain and contribute to a more comprehensive understanding of the significance of this study. By analyzing both practical applications and broader theoretical contributions, this research enriches the body of knowledge on green loyalty and the consumer behavior that lead to it.

Several recommendations are put forth to enhance the quality of future research in this area. Firstly, researchers are encouraged to broaden the scope of their investigations by including diverse industries and conducting cross-cultural studies to unveil potential variations in consumer responses across different countries and cultural contexts. This approach will enable a more comprehensive understanding of how green cultural factors and industry-specific dynamics influence loyalty. Secondly, incorporating additional variables in the research is advisable to deepen the investigation and gain a more comprehensive understanding of the determinants of green loyalty. Researchers can understand the complexities in shaping consumers' green loyalty behaviors by including relevant factors. Lastly, future studies should explore the impact of different age groups, generational cohorts, and social upbringings on consumer responses to the determinants of green loyalty. By examining whether attitudes, beliefs, and behaviors related to green loyalty vary among demographic segments, researchers can develop tailored strategies to address specific issues and better target their efforts.

By following these recommendations, future research endeavors in this domain can advance knowledge of green loyalty's intricacies, offering valuable insights for businesses and policymakers seeking to promote sustainable consumer behavior and environmentally conscious practices.

REFERENCES

Journal Article:

- Bhatia, M., and A. Jain. (2013). Green marketing: A study of consumer perception and preferences in India. *Electronic Green Journal*, 1(36).
- Dick, A., & Basu, K. (1994). Customer loyalty: Towards an integrated framework. *Journal of the Academy of Marketing Science*, 22(2), 99-113.
- Divine, R.L., and L. Lepisto. (2005). Analysis of the healthy lifestyle consumer. *Journal of Consumer Marketing*, 22 (5), 275-283.
- Chen, Y.S. (2008). The driver of green innovation and green image—green core competence. *Journal of Business Ethics*, 81(3), 531-543.
- Chen, Y.-S. (2009) "The drivers of green brand equity: green brand image, green satisfaction, and green trust," *Journal of Business Ethics*, 93(2), pp. 307–319. Available at: <https://doi.org/10.1007/s10551-009-0223-9>.
- Chen, Y.S. and Chang, C.H. (2012) "Enhance green purchase intentions," *Management Decision*, 50(3), pp. 502–520. Available at: <https://doi.org/10.1108/00251741211216250>.
- Chin, W.W. (1998) "The partial least squares approach for structural equation modeling. " *Modern Methods for Business Research [Preprint]*. Available at: <https://psycnet.apa.org/record/1998-07269-010>.
- Chrisjatmiko, K. (2018). Towards green loyalty: the influences of green perceived risk, green image, green trust, and green satisfaction. *IOP Conference Series*, 106, 012085. <https://doi.org/10.1088/1755-1315/106/1/012085>
- Gupta, V. (2020) "ENHANCING GREEN PRODUCT PURCHASE BEHAVIOR: THE ROLE OF GREEN SATISFACTION AND GREEN LOYALTY," *International Journal on Customer Relations*, 8(1).
- Kaufmann, H.R., Panni, M.F.A.K. and Orphanidou, Y. (2012) "Factors Affecting Consumers' green Purchasing Behavior: An Integrated Conceptual framework," *Amfiteatru Economic*, 14(31), pp. 50–69. Available at: https://www.amfiteatruconomic.ro/temp/Article_1100.pdf.

- Lin, J., Lobo, A., & Leckie, C. (2017). Green brand benefits and their influence on brand loyalty. *Marketing Intelligence & Planning*, 35(3), 425–440. <https://doi.org/10.1108/mip-09-2016-0174>
- De Leaniz, P. M. G. (2015). Customer loyalty: exploring its antecedents from a green marketing perspective. *International Journal of Contemporary Hospitality Management*, 27(5), 896–917. <https://doi.org/10.1108/ijchm-03-2014-0115>
- Maniatis, P. (2016) "Investigating factors influencing consumer decision-making while choosing green products," *Journal of Cleaner Production*, 132, pp. 215–228. Available at: <https://doi.org/10.1016/j.jclepro.2015.02.067>.
- Mishra, P., Pandey, C. K., Singh, U., Gupta, A., Sahu, C., & Keshri, A. (2019). Descriptive statistics and normality tests for statistical data. *Annals of Cardiac Anaesthesia*, 22(1), 67. https://doi.org/10.4103/aca.aca_157_18
- Oliver, R.L. (1999), Whence consumer loyalty? *Journal of Marketing*, Vol. 63 No. 4_suppl1, pp. 33-44.
- Schwepker, C.H. and Cornwell, T.B. (1991) "An examination of ecologically concerned consumers and their intention to purchase ecologically packaged products," *Journal of Public Policy & Marketing*, 10(2), pp. 77–101. Available at: <https://doi.org/10.1177/074391569101000205>.
- Spekman, R.E. (1988) "Strategic supplier selection: Understanding long-term buyer relationships," *Business Horizons*, 31(4), pp. 75–81. Available at: [https://doi.org/10.1016/0007-6813\(88\)90072-9](https://doi.org/10.1016/0007-6813(88)90072-9).
- Thøgersen, J. (2000) "Psychological determinants of paying attention to Eco-Labels in purchase decisions: model development and multinational validation," *Journal of Consumer Policy*, 23(3), pp. 285–313. Available at: <https://doi.org/10.1023/a:1007122319675>.
- Williams, P. and Naumann, E. (2011) "Customer satisfaction and business performance: a firm-level analysis," *Journal of Services Marketing*, 25(1), pp. 20–32. Available at: <https://doi.org/10.1108/08876041111107032>.
- Wong, K. (2013). Partial Least Squares Structural Equation Modeling (PLS-SEM) Techniques Using SmartPLS. *Marketing Bulletin*. http://marketing-bulletin.massey.ac.nz/V24/MB_V24_T1_Wong.pdf

Book

- Malhotra, N.K. (2010) *Marketing Research: An Applied Orientation*. Pearson.\
- Vogt, W. and Johnson, R.B. (2015) *The SAGE Dictionary of Statistics & Methodology: A nontechnical guide for the social sciences*. Available at: <https://www.amazon.com/Sage-Dictionary-Statistics-Methodology-Nontechnical/dp/1483381765>.

Internet Source

- "Atlas of the Sustainable Development Goals 2023: From World Development Indicators" (no date) Atlas of Sustainable Development Goals 2023 [Preprint]. Available at: <https://doi.org/10.60616/7GHG-N333>.
- Gischa, S. (2023) "Faktor yang Memengaruhi Jenis dan Jumlah Sampah Halaman all - Kompas.com," *KOMPAS.com*, 14 March. Available at: <https://www.kompas.com/skola/read/2023/03/14/200000269/faktor-yang-memengaruhi-jenis>

Kementerian Keuangan Republik Indonesia (no date). Available at: <https://www.kemenkeu.go.id/informasi-publik/publikasi/berita-utama/Ini-Komitmen-Indonesia-Mencapai-Net-Zero-Emission.dan-jumlah-sampah?page=all>.

Nariswari, S.L. (2022). Survei: Konsumen Indonesia Makin Peduli Produk Ramah

Lingkungan Halaman all. [online] KOMPAS.com. Available at: <https://lifestyle.kompas.com/read/2022/09/20/184205220/survei-konsumen-indonesia-makin-peduli-produk-ramah-lingkungan?page=all> [Accessed 4 Apr. 2023].