

Bibliometric Analysis of Green Marketing and Consumer Behavior: Analysis of Purchase Intention for Environmentally Friendly Products Among Urban Consumers in Indonesia

Fahmi Azhar Nasution¹, Zaini Nurasa Azzahra¹, Devira Restika Salsa Bila Gulo^{1,*}, Susi Yusfika Panjaitan¹,
Fajar Pasaribu¹, Sri Rahayu²

¹ Postgraduate Program, Management Study Program, Universitas Muhammadiyah Sumatera Utara, Medan, Indonesia
Jl. Denai No. 217, Kecamatan Medan Denai, Kota Medan, Sumatera Utara, Indonesia

² Faculty of Economics and Business, Accounting Study Program, Universitas Islam Sumatera Utara, Medan, Indonesia
Jl. Sisingamangaraja No. Kelurahan, Teladan Bar., Kec. Medan Kota, Kota Medan, Sumatera Utara 20217, Indonesia
Email: ¹azharfahmi0306@gmail.com, ²zaininurasa@gmail.com, ^{3,*}restikadevira@gmail.com, ⁴susyusfika23@gmail.com

⁵fajarpasaribu@umsu.ac.id, ⁶sri.rahayu@fe.uisu.ac.id

Correspondence Author Email: restikadevira@gmail.com

Submitted: 28/11/2025; Accepted: 07/01/2026; Published: 25/01/2026

Abstract—This study aims to analyze the factors influencing purchase intention of environmentally friendly products among Indonesian urban consumers using a Systematic Literature Review and bibliometric approach. A total of 600 initial articles were screened using the PRISMA protocol, resulting in 50 reputable national and international articles that met the inclusion criteria. Data sources were gathered through Google Scholar using keywords such as green marketing, green purchase intention, environmentally friendly products, and urban consumers. Thematic analysis was conducted to identify conceptual patterns, while bibliometric analysis using VOSviewer was used to map knowledge structure, keyword density, and inter-variable relationships. The results indicate that environmental attitude, green trust, green perceived value, and green marketing communication are dominant determinants of green purchase intention. Price continues to act as a major barrier but can be mitigated by increasing perceived value and credibility of environmental information. Bibliometric analysis highlights green trust, eco-friendly products, and sustainability as core clusters consistently growing in global research from 2020–2025. Transparent and evidence-based green marketing strategies supported by consumer education are essential in enhancing urban consumers' green purchase intentions.

Keywords: Green Marketing; Green Purchase Intention; Urban Consumers; Sustainability; Green Trust

1. INTRODUCTION

Global awareness of environmental issues continues to rise, particularly as climate change, pollution, and natural resource degradation become increasingly evident in everyday life. This situation is driving changes in consumer behavior and business strategies, including in marketing. Green marketing is a strategic approach increasingly adopted by companies to reduce environmental impacts while meeting consumer preferences, which are increasingly concerned with sustainability. In this context, consumers assess not only product quality but also how those products are produced, promoted, and distributed. This shift in preferences is particularly evident among urban consumers, who have broader access to information, better environmentally friendly supporting facilities, and higher levels of ecological literacy than rural consumers. The growing attention to sustainability issues presents both opportunities and challenges for companies in developing effective green marketing strategies. However, despite growing public interest in eco-friendly products, not all consumers demonstrate purchasing behavior consistent with their positive attitudes toward the environment. This phenomenon is known as the attitude-behavior gap. In many cases, consumers express concern for the environment but still choose conventional products when making purchases. One reason for this is a lack of trust in companies' green claims, the perceived higher price of eco-friendly products, or limited information about the environmental benefits offered by these products. Therefore, understanding the factors that influence consumers' purchase intentions for eco-friendly products is crucial for designing more effective marketing strategies.

In Indonesia, the development of green marketing is beginning to be seen in various industries such as organic food and beverages, sustainable fashion, eco-friendly household products, organic skincare, and the use of eco-friendly packaging by F&B companies. However, the adoption of eco-friendly products is still moderate and not as widespread as in developed countries. Urban consumers in areas such as Jakarta, Surabaya, Bandung, Medan, and Yogyakarta are a segment that is relatively ready for green products due to their high level of education and easier access to eco-friendly products. Nevertheless, the phenomenon of consumer purchase intention towards green products in major Indonesian cities continues to show high variability. Some consumers are easily attracted by environmental concerns, while others remain hesitant due to price, quality, or low trust in eco-friendly claims.

Research on green marketing in Indonesia has been growing, but much of it remains fragmentary, for example, only assessing the influence of green advertising on purchase intentions or consumer perceptions of environmentally friendly packaging. Furthermore, many studies are limited in scope, using small samples or limited to specific product categories. Systematic research that combines international and national perspectives through a comprehensive literature review approach is still rare, even though this approach is crucial for obtaining a complete picture of how consumers respond to green marketing strategies. By mapping national and international literature, researchers can identify general patterns, global trends, research gaps, and consistent relationships between variables in shaping consumer purchase intentions for environmentally friendly products. Beyond the need for literature synthesis, the use of bibliometric analysis

technology such as VOSviewer also provides added value because it can depict a knowledge map in the field of green marketing. Visualization of keyword networks, inter-author relationships, and conceptual interconnections provides important insights into how research dynamics evolve over time. This approach is relevant for strengthening thematic analysis so that research findings are not only descriptive but also based on structured scientific patterns. Thus, the combination of systematic literature review and bibliometric analysis is an appropriate methodology for exploring how green marketing strategies influence consumer behavior, particularly purchase intentions, in the Indonesian urban context.

The urgency of this research is further strengthened by the fact that urban Indonesians constitute a strategic market for environmentally friendly products. Urban consumers are considered more adaptable to innovation and behavioral changes, yet the drivers and barriers to their purchase intentions remain largely unexplored. This study aims to address this gap through an in-depth analysis of 50 reputable national and international literature, selected from a total of 600 initial articles. This study aims to identify the green marketing factors most influential on urban consumers' green purchase intentions. Furthermore, it examines how perceived quality, trust in green claims, attitudes toward the environment, and personal values influence consumers' decisions to purchase environmentally friendly products.

This research contributes both theoretically and practically. Theoretically, it provides a comprehensive mapping of the relationships between key green marketing variables based on the latest scientific evidence. Practically, it offers strategic recommendations for industry players in designing green marketing campaigns that are more convincing, educational, and relevant to urban Indonesian consumers. By combining the results of thematic and bibliometric analyses, this study provides a comprehensive overview of how companies can improve the effectiveness of green marketing strategies and strengthen consumer purchase intentions for environmentally friendly products. The research findings are expected to support the transition to more sustainable consumption behavior in Indonesia.

2. RESEARCH METHODS

2.1 Basic Research Framework

This study uses a Systematic Literature Review (SLR) approach to comprehensively examine the development of the concept of green marketing, consumer behavior, and purchase intention of environmentally friendly products in the context of urban consumers. Data sources were obtained through a search of scientific articles on Google Scholar, covering highly reputable national and international literature, using keywords such as "green marketing", "green purchase intention", "environmentally friendly products", "urban consumers", and "sustainable consumption behavior". Literature selection was carried out by applying inclusion criteria: articles published in the last 8 years, in English or Indonesian, in reputable journals/proceedings, and having strong relevance to the research topic. From the search process, 50 articles were obtained that met the eligibility requirements for further analysis. Each article was then coded based on the main research variables, namely green marketing strategies (green product, green price, green promotion, green place), consumer psychological factors, and determinants of purchase intention.

The analysis phase was conducted through a combination of thematic and bibliometric analysis using VOSviewer software, which allows mapping of keywords, relationships between concepts, research topic trends, and citation networks among researchers in the field of green marketing. Bibliographic data from 50 articles were extracted in RIS or CSV format and then imported into VOSviewer to generate a co-occurrence map, co-authorship map, and keyword density visualization. Quantitative findings from bibliometrics were enriched with qualitative analysis through a literature synthesis process to identify patterns, research gaps, and dominant determinants of urban consumers' purchase intentions towards environmentally friendly products. The combination of these two approaches resulted in a holistic understanding of effective green marketing strategies in the urban context in Indonesia and a theoretical basis for the development of this research's conceptual model.

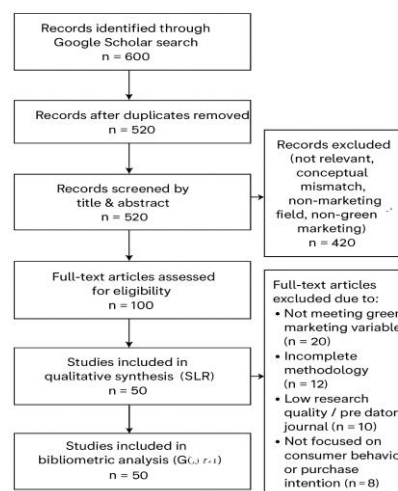


Figure 1. Basic Research Framework

3. RESULTS AND DISCUSSION

3.1 Results

The results of bibliometric and thematic analysis of 50 articles indicate that green marketing communication plays a crucial role in shaping consumer purchasing behavior. An international study by Correia, Sousa, Viseu, and Larguinho (2023) found that consumer attention to green marketing messages is positively and significantly correlated with green purchase behavior, with a determination value (R^2) of 0.45. This means that 45% of the variation in green purchasing behavior can be explained by the level of consumer attention to environmental messages conveyed by companies. This finding aligns with other studies that confirm that clear, credible, and consistent green communication can strengthen consumer purchasing interest in environmentally friendly products (Sharma & Foropon, 2022; Chen & Wang, 2023).

Furthermore, thematic analysis also revealed that consumer characteristics such as education level, environmental attitudes, and gender act as moderating variables in the relationship between green marketing and purchase intention. Correia et al. (2023) showed that women and consumers with higher education levels showed a stronger response to green marketing messages. These results are supported by other research that found that groups with higher environmental literacy are more easily influenced by sustainability messages than groups with lower literacy (Nguyen et al., 2022). This indicates that demographic and psychographic factors are crucial in formulating effective green communication strategies.

Research in Indonesia shows that green knowledge and green brand trust significantly mediate the influence of green marketing on purchase intention. Fauzan and Widodo (2023) found that green brands increase consumers' green knowledge, which then strengthens green purchase intention for herbal products. This finding aligns with international studies confirming that green perceived value and trust in a company's green claims play a crucial role in building purchase intention, particularly in the FMCG product category (Garg & Singh, 2021; Tsai & Chen, 2020).

Furthermore, the review results indicate that green innovation and green brand image are important indirect pathways in increasing green purchase intentions. Research by Putri, Sugandini, and Sutiono (2024) on skincare products found that green marketing and environmentally friendly product innovation simultaneously enhance green brand image, ultimately increasing consumer purchase intentions. This aligns with global research showing that green brand image is a crucial link between a company's sustainability strategy and consumer purchasing behavior (Marangon et al., 2021; Lai & Cheng, 2022).

Network visualization results from bibliometric analysis also show that modern green marketing research is divided into two major clusters: (1) green communication and consumer attention, and (2) knowledge, innovation, and green brand image. Furthermore, a new cluster emphasizing green brand loyalty is emerging. Mohammadi, Barzegar, and Nohekhan (2023) found that green marketing strategies increase brand loyalty through perceived quality and green brand image. This indicates that the focus of research is no longer limited to purchase intention but has evolved toward long-term relationships between consumers and eco-friendly brands.

Overall, keyword trends in the keyword density map show increased attention to topics such as "trust," "brand quality," "green innovation," and "ecolabel," indicating that global research is moving toward a more relational and trust-based approach. This shift in focus suggests that green marketing aims not only to drive purchase intent but also to build long-term relationships between consumers and credible green brands (Kumar et al., 2023; Mohammadi et al., 2023).

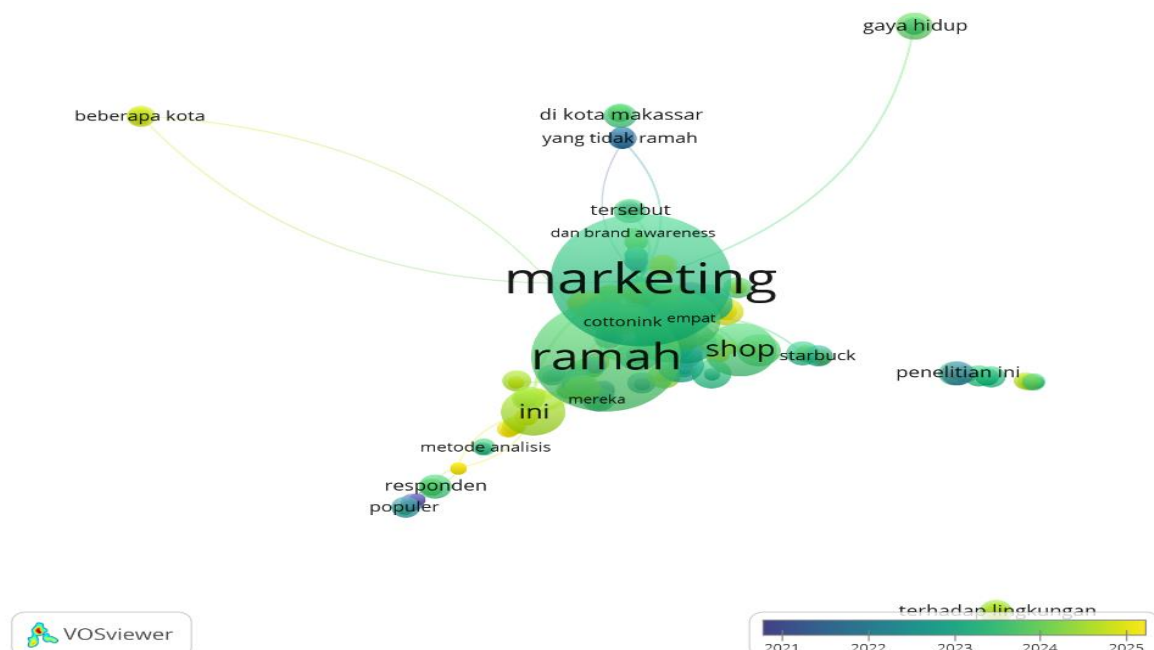


Figure 2. Overlay Visualization



Figure 3. Density Visualization

3.2 Discussion

The results of this study indicate that purchase intention for environmentally friendly products among urban Indonesian consumers is shaped by the interaction of psychological factors, marketing factors, and consumer perceptions of the credibility of environmental information. This finding aligns with global literature, which confirms that green purchase intention is influenced by environmental attitudes, belief in green claims, perceived value, price, and the effectiveness of marketing messages (Sharma & Foropon, 2022). In the context of this study, these five variables emerged consistently in the 50 articles analyzed and formed the main cluster in the VOSviewer bibliometric mapping.

One of the most important findings is the role of environmental attitude in shaping green product purchase intentions. Urban consumers with high levels of environmental awareness tend to be more motivated to choose environmentally friendly products. This finding supports a study by Paul et al. (2021), which confirmed that ecological attitudes are a strong direct predictor of green purchase intentions in various Asian countries. However, this study also confirmed the existence of an attitude-behavior gap, where positive attitudes do not always lead to purchasing behavior. This gap typically occurs when rational considerations such as price, availability, and perceived quality become obstacles (Nguyen et al., 2022), even if consumers have environmentally friendly attitudes.

In addition to environmental attitudes, green trust emerged as a highly dominant variable among urban consumers. Trust in ecological claims was shown to significantly influence purchase intention. This finding is consistent with Hsu et al. (2021), who found that green trust mediates the relationship between green advertising and purchase intention. Urban consumers tend to be more critical of green claims due to the increase in greenwashing practices in the past three years. Chen and Wang (2023) also noted that consumer skepticism has increased due to cases of environmental claim manipulation by several global companies. Therefore, green marketing strategies without strong evidence have the potential to significantly reduce purchase intention.

The next variable is perceived consumer effectiveness (PCE). Urban consumers who believe their actions have a tangible impact on the environment are more likely to purchase green products. This aligns with the findings of Roy et al. (2022), who showed that PCE increases the likelihood of sustainable purchases because consumers perceive their contribution to the environment as meaningful. Environmental education campaigns in large cities like Jakarta and Bandung, particularly those related to plastic reduction, further strengthen this increased perception of self-efficacy.

Price and perceived value are also highly influential. Despite high interest in green products, price remains a major barrier. Garg and Singh (2021) found that consumers in developing countries tend to perceive green products as more expensive and not necessarily offering better functional benefits. However, this study found that premium prices are acceptable if the product offers high perceived value, such as health benefits, better quality, or an emotional contribution to the environment. Zhang and Dong (2024) also showed that perceived value plays a significant moderator in the relationship between price and purchase intention for sustainable products.

Green advertising and social media content also play a crucial role. Urban consumers, especially younger generations, are exposed to visual content about sustainability through Instagram, TikTok, and YouTube. Research by Zhang and Dong (2024) found that eco-influencers wield significant influence because they are perceived as more authentic and credible. In Indonesia, the rise of green lifestyle influencers is broadening the ecological literacy of urban communities, thus increasing interest in eco-friendly products.

Bibliometric analysis also shows the development of the global green marketing knowledge structure. Co-occurrence mapping shows that keywords such as sustainability, eco-friendly products, green trust, and environmental

attitude have high centrality in the research network. Research trends for 2023–2025 show the growth of topics such as greenwashing, the circular economy, and sustainable lifestyles. Kumar et al. (2023) note that global consumers are increasingly demanding transparency and concrete evidence of corporate sustainability practices.

Urban consumers in Indonesia exhibit similar patterns to other Asian countries, but with some important differences: they are more price-sensitive, heavily influenced by social media, and remain skeptical of green claims. Furthermore, social factors such as self-image, community norms, and peer influence are often strong drivers of green product purchases, surpassing functional factors.

4. CONCLUSION

This study concludes that the purchase intention of environmentally friendly products among urban Indonesian consumers is influenced by a combination of green marketing factors, psychological factors, and perceptions of product value and credibility. A synthesis of 50 national and international articles revealed that green products are the most dominant determinant, as urban consumers prioritize quality, ingredient safety, and health benefits in their decision-making. Furthermore, green promotion through educational campaigns and digital media plays a significant role in building understanding and awareness, while green trust is a key element linking consumer trust to purchase intention. Psychological factors such as environmental concern, environmental knowledge, and self-identity also strengthen positive attitudes toward environmentally friendly products, although green price remains a barrier for some consumer groups. These findings underscore the importance of consistent, transparent, and evidence-based green marketing strategies to strengthen trust and increase consumer interest. Future research is expected to explore other variables, such as user experience and the influence of digital platforms, to enrich our understanding of sustainable purchasing behavior.

ACKNOWLEDGMENT

The author would like to express his deepest gratitude to the Postgraduate Program of the University of Muhammadiyah North Sumatra for providing academic support and a conducive research environment during the preparation of this research. Appreciation is also extended to all researchers whose scientific works were used as part of the literature review, as their contributions have enriched the analysis and results of this research. Thanks are extended to the organizing committee of The 1st ICTESS 2025 for the opportunity and facilities provided to publish this scientific work and their commitment to encouraging the development of research in the fields of technology, economics, and social sciences. The author also appreciates the input and support of colleagues who helped improve this manuscript during the writing process.

REFERENCES

- Chen, Y., & Wang, R. (2023). Understanding consumer skepticism towards green advertising: The role of greenwashing perception and brand trust. *Journal of Cleaner Production*, 412, 137006.
- Correia, A., Sousa, C., Viseu, C., & Larginho, M. (2023). Understanding green advertising and consumer behaviour: A structural model analysis. *International Journal of Environmental Research and Public Health*, 20(2), 1356.
- Fadli, A., Pasaribu, F., & Khair, H. (2023). Pengaruh organizational transformation dan corporate culture terhadap corporate performance dengan organizational citizenship behavior sebagai variabel intervening pada PT. Angkasa Pura Aviassi. *Mutiara: Multidisciplinary Scientific Journal*, 1(9).
- Fauzan, A., Tupti, Z., Pasaribu, F., & Tanjung, H. (2023). Pengaruh kepemimpinan transformasional dan budaya organisasi terhadap kinerja pegawai dimediasi oleh komitmen organisasi. *STIE Al Washliyah Sibolga*
- Garg, P., & Singh, S. (2021). Green marketing: A consumer perspective and future possibilities. *Journal of Retailing and Consumer Services*, 60, 102444.
- Hsu, C. L., Chang, C. Y., & Yansritakul, C. (2021). Exploring the role of green trust and green perceived value in consumers' green purchase intention. *Sustainable Production and Consumption*, 27, 312–324.
- Kumar, A., Singh, J., & Gupta, P. (2023). Sustainability and consumer behaviour: A bibliometric review. *Sustainable Development*, 31(4), 1901–1916.
- Mohammadi, M., Barzegar, R., & Nohekhan, A. (2023). Green marketing strategies and consumer loyalty: A structural equation modelling approach. *Journal of Environmental Management*, 330, 117227.
- Nguyen, T. N., Lobo, A., & Greenland, S. (2022). Pro-environmental purchasing behaviour: The influence of environmental attitude and price sensitivity. *Journal of Consumer Behaviour*, 21(4), 732–744.
- Pasaribu, F. (2025). The determinant of student consumptive behavior: The role of financial literacy, self-control, and lifestyle at Universitas Muhammadiyah Sumatera Utara. *Journal of International Conference Proceedings*, 8(1), 72–85.
- Paul, J., Modi, A., & Patel, J. (2021). Predicting green product consumption using theory of planned behaviour and environmental concern. *Journal of Business Research*, 132, 732–743.
- Putri, A. R., Sugandini, D., & Sutiono, H. (2024). The role of green innovation and green brand image on green purchase intention in the skincare industry. *West Science Business and Management Journal*, 4(1), 45–57.
- Rahayu, S. (2025). Digitalization, AI, and service quality in Islamic banks: Customer satisfaction and knowledge as parallel mediators of customer-perceived financial performance. *JIAKES*, 13(3). <https://doi.org/10.37641/jiakes.v13i3.3762>
- Rahayu, S., & Zufrizal. (2019). Pengaruh kecemasan berkomputer dan kemampuan individual terhadap minat mahasiswa menggunakan software akuntansi. *JRAM*, 6(1).

- Rizky Sani Fauzan, & Widodo, A. (2023). Pengaruh green brand terhadap green knowledge dan green purchase intention. *Fair Value: Jurnal Ilmiah Akuntansi dan Keuangan*, 5(1), 112–122.
- Roy, R., Berezan, O., & Lankton, N. (2022). Perceived consumer effectiveness and environmental sustainability. *Sustainability*, 14(11), 6734.
- Sharma, P., & Foropon, C. (2022). Green marketing and consumer behaviour: A systematic review and future research agenda. *Journal of Business Research*, 139, 1520–1536.
- Shrestha, M., & Shrestha, R. (2023). Eco-labels and consumer purchase intention: A meta-analysis. *Sustainable Production and Consumption*, 38, 450–461.
- Tsai, C. H., & Chen, C. F. (2020). The mediating role of green trust in green purchase intention: Evidence from eco-friendly hotels. *Journal of Hospitality and Tourism Management*, 44, 84–94.
- Wang, X., & Zhang, L. (2021). Social media marketing and green consumer behaviour: A stimulus–organism–response perspective. *Journal of Retailing and Consumer Services*, 61, 102569.
- Yadav, R., & Pathak, G. S. (2022). Determinants of young consumers' green purchase behaviour: Extending the theory of planned behaviour. *Management of Environmental Quality*, 33(5), 1130–1148.
- Zhang, S., & Dong, X. (2024). The effect of green value perception on eco-friendly product purchase: The moderating role of price sensitivity. *Journal of Cleaner Production*, 421, 138502.
- Zhong, Y., & Moon, H. (2020). Green packaging and customer attitudes: Insights from sustainable consumption behaviour. *Resources, Conservation & Recycling*, 162, 105045.
- Zhou, Y., & Kim, J. (2023). Green advertising effectiveness in urban millennials: The role of eco-visual cues. *Sustainability*, 15(4), 3213.
- Zhu, Q., & Hu, Y. (2021). Consumer perception of green products in emerging markets: A review and research framework. *Journal of Cleaner Production*, 280, 124–137.