
Journal of Sustainable Economic and Business (JOSEB)

Vol. 2 No. 2 April 2025: 181-190

ISSN (Online): 3063-0207

<https://journal.arepublisher.com/index.php/joseb>

The Influence of Green Knowledge and Concern on Purchase Intention for Eco-Friendly Bottles Mediated by Trust

Ranumi Wijaya Sumanjay^{1*)}; Dudi Permana²⁾

¹⁾ rd.ranu@yahoo.com, Universitas Mercu Buana, Jakarta, Indonesia

²⁾ dudi.permana@mercubuana.ac.id, Universitas Mercu Buana, Jakarta, Indonesia

*) Corresponding Author

ABSTRACT

Objectives: The research analyzes the influence of Green Knowledge and Environmental Concern on green purchase intention and mediates the above-mentioned factors through Green Trust regarding eco-friendly bottles.

Methodology: The participants in the study were consumers using or interested in eco-friendly drinking bottles. The sample for this study comprised 125 respondents. The sampling technique employed was non-probability sampling; the sampling method was purposive sampling. Quantitative approach method was implied. Otherwise, techniques for the collection of data in this study were questioned by questionnaires administered via Google Forms as a primary source of data. The employed statistical analysis was SEM PLS 4.0 for analysis of data.

Conclusion: Findings have established that Green Knowledge has a positive and significant effect on Green Trust and Green Purchase Intention. Environmental Concern was found to have a positive and significant effect on Green Trust and Green Purchase Intention. Findings further suggest that Green Trust has a positive and significant effect on Green Purchase Intention. Findings show that Green Trust also mediates between Green Knowledge and Environmental Concern, exerting positive and significant effects on Green Purchase Intention.

Keywords: Green Knowledge; Environmental Concern; Green Trust; Green Purchase Intention.

Article Doi: <https://doi.org/10.70550/joseb.v2i2.66>

How to Cite: Sumanjay, R. W., & Permana, D. (2025). The Influence of Green Knowledge and Concern on Purchase Intention for Eco-Friendly Bottles Mediated by Trust. *Journal of Sustainable Economic and Business*, 2(2), 181-190. <https://doi.org/10.70550/joseb.v2i2.66>

Submitted: 01-02-2025

Revised: 13-03-2025

Accepted: 26-03-2025

INTRODUCTION

For Indonesia, the changes brought by modernity in terms of conveniences and consumerism, together with economic growth that raises the purchasing powers of its populace, have resulted in a more-than-tripling of daily plastic consumption. As Indonesian Plastic Industry Association (INAPLAS) and the Central Bureau of Statistics (BPS) report, 64 million tons of plastic wastes produced annually in Indonesia, with 3.2 million tons entering the ocean. The same information sources state that approximately 10 billion plastic bags, or 85,000 tons, are disposed of into the environment every year (Indonesia.go.id, 2019).

Used drinking bottles are one of the most common types of inorganic waste found in our surroundings. Most plastic bottle packaging is not recommended for repeated use, as it can have

negative health effects, even over a relatively long period (Khalil et al, F. I, 2024). Plastic bottle waste becomes even more hazardous when exposed to heat, such as sunlight. In addition to humans, animals are also affected by plastic bottle waste, as many animals consume plastic waste because they cannot distinguish it from their food. This is extremely dangerous if done regularly, as it can cause digestive problems in animals and even lead to death (Dalilah, E. A. 2021). The primary focus of the plastic waste issue this time is to address the dangers of single-use drinking bottle packaging. In addition to humans, animals are also affected by plastic bottle waste. Plastic waste not only impacts the environment and human health but can also contaminate agricultural areas (Dalilah, E. A. 2021).

The use of green products, such as reusable drinking bottles, serves as an alternative solution to reduce plastic consumption and a preventive measure to tackle environmental pollution while providing positive impacts on the surrounding environment (Kuswardhani et al., 2023). Utilizing eco-friendly bottles not only contributes to environmental sustainability but also enhances customers' confidence that they are actively participating in environmental conservation efforts. A growing awareness among society is reflected in the practice of carrying reusable drinking bottles wherever they go. By using reusable bottles, such as tumblers, individuals can reduce their dependence on single-use plastic bottles, which often end up as environmental waste. Bringing a tumbler to every activity is a proactive step in reducing plastic waste.

The attitude of individuals behaving towards exploiting green products like reusable bottles is governed by three important determinants: Green Knowledge, Environmental Concern, and Green Trust. Green Knowledge refers to an awareness of and knowledge about environmental problems and sustainable consumption. Environmental Concern refers to the overall state of awareness and concern people feel towards environmental issues that push them to take affirmative action to reduce the environmental footprint of human activities on Earth. Green Trust is another important component in consumer decision-making, i.e., the trust consumers have in a product's environmental claims; this would influence the likelihood of purchase intention for such a product.

Even though Environmental Concern and Green Knowledge are purported to exert a great influence on green purchase intention, the mediating effect of Green Trust in this framework hasn't been very much understood in literature. Thus, in this study, we intend to fill this gap by exploring the mediation effect of Green Trust on the relationship from Green Knowledge and Environmental Concern towards consumers' Green Purchase Intention for the eco-friendly bottles purchase.

LITERATURE REVIEW

Green Purchase Intention

Green purchase intention is defined as the intention of a consumer to choose products that are environmentally friendly over those that are conventional (Zhuang et al., 2021). Factors propelling such intention include: Environmental consideration, perceived value of the product in question, and the trust in claims of the product's sustainability. Other past studies show that the

more aware the potential buyer is of environmental issues, the more likely he or she will practice sustainable purchasing behavior (Ahmed & Zhang, 2020).

Green Knowledge

Green Knowledge indicates the understanding and awareness of environmental issues and how it influences consumption patterns at the individual level. Research revealed that consumers with greater environmental knowledge are biased towards making more sustainable purchasing decisions (Ryantari et al., 2020). The knowledge factor would, therefore, enhance consumer confidence in their selection of eco-friendly products and, hence, positively influence purchase intention (Amoako et al., 2020).

Environmental Concern

Environmental concern is defined as the degree of consciousness concerning environmental issues and willingness to undertake corrective actions (Chuah et al., 2020). According to the findings by Suhartanto (2023), consumers who are highly concerned about environmental issues are more likely to show pro-environmental behavior regarding sustainable products such as reusable bottles.

Green Trust

Green Trust is most critical in the consumer's mind when determining whether or not a person really thinks that the product or brand has a genuine commitment toward environmental sustainability (Antonius et al., 2018). Studies showed that trust in green products will encourage the customer to purchase them because it reduces skepticism about the product and improves the product's credibility (Pradnyadewi & Warmika, 2019).

The Influence of Green Knowledge on Green Purchase Intention.

Green Knowledge carries a very strong force concerning Green Purchase Intention because it has a direct correlation to one who would buy more the more an individual knows about the environment and eco-products. If consumers are aware of the negative effects of single-use plastic and sustainable consumption, they could very well bring them closer to making decisions favoring the earth. In fact, Moslehpour et al. (2023) and Ryantari & Giantari (2020) commented on Green Knowledge as a positive effect of Green Purchase Intention since people who tend to understand green products would feel more secure and, therefore, inclined to contribute little in buying behavior towards environmental conservation.

H1: In relation to Green Purchase Intention, the influence of Green Knowledge is positive.

The Influence of Environmental Concern on Green Purchase Intention

Environmental Concern has a positive influence on Green Purchase Intention; hence, people who care about environmental issues tend to purchase eco-friendly products in an attempt to reduce negative environmental effects. Mongula et al. (2023) and Hengboriboon et al. (2020)

have shown that the greater the extent of environmental awareness in an individual, the higher the intention to buy green products. Saputri et al. (2021) also confirm that environmental concern drives sustainable consumption behavior and this in turn increases the intention to buy eco-friendly products.

H2: Positive and considerable influence of Environmental concerns.

The Influence of Green Trust on Green Purchase Intention

Green Trust always comes up as a positive influence for Green Purchase Intention in the sense that most consumers will purchase products along the lines of an existing or strong environmental claim. Such trust in the credibility and sustainability of green products thus reduces consumer skepticism by increasing one's support for eco-friendly brands. According to Meilisa (2020) and Chairy & Alam (2019), higher Green Trust would lead toward a stronger intention to purchase environmentally friendly products. Moreover, Antonius et al. (2018) also established that trust would be an essential factor that builds consumer confidence in green products and further influence their buying behavior on the same.

H3: Green Trust seems to have a significant positive impact on Green Purchase Intention.

The Influence of Green Knowledge on Green Purchase Intention

Green Knowledge enhances Green Trust in a positive way, whereby consumers with better awareness of environmental issues or sustainable products tend to place greater trust in eco-friendly brands. Knowledge about the environmental consequences of conventional products and the advantages of green alternatives increases consumer confidence in the authenticity of sustainability claims. Research conducted by Hossain et al. (2022) and Tan et al. (2022) confirms that more Green Knowledge means more Green Trust, resulting in consumers feeling that green products indeed lead to contributing towards sustainability of the environment.

H4: Green Knowledge has a positive and significant impact on Green Trust.

The Influence of Environmental Concern on Green Trust

Environmental Concern promotes Green Trust in individuals; such people are likely to trust eco-friendly products and brands. Consumers with more significant environmental concern usually critically assess sustainability claims and put more trust in products that have a perfect match to their environmental values. According to research conducted by Li et al. (2021) and Abraham et al. (2022), people's higher concern for environment-related issues increases their trust in green products and consequently boosts their confidence in purchasing sustainable goods.

H5: The positive and significant effect of Environmental Concern on Green Trust.

Green Trust mediated the relationship between Green Knowledge and Green Purchase Intention

The results further indicate that Green Trust mediates the association between Green Knowledge and Green Purchase Intention such that the consumer with high environmental

knowledge is likely to develop trust in green products. This, in turn, will enhance the intention to purchase them. Therefore, Green Knowledge will have a direct impact on purchase intention while strengthening this relationship in that it will give an assurance to consumers' minds that the said green products are actually meeting the sustainability claim. This has been confirmed in the research of Wiranto & Adialita (2020) and Tan et al. (2022), which asserts that such consumers would be having more degree of trust towards eco-friendly products and thereby increasing buying intention on these products.

H6: Green Trust fully mediated the relationship between Green Knowledge and Green Purchase Intention.

Green Trust mediated the relationship between Environmental Concern and Green Purchase Intention

Changing degrees of environmental concern increase trust in environmentally concerned goods and then make purchase intention with regard to such goods higher. So, the mediator green trust developed between Environmental Concern and Green Purchase Intention. Environmental Concern directly affects the intention to purchase by whether or not the product fits with consumers' environmental values and sustainability expectations; with that, green trust carries on: strengthening this relationship. The two studies conducted by Abraham et al. (2022) and Li et al. (2021) take further into account how high Environmental Concern results in the greater trust placed in so-called green products and ultimately ends up creating a greater propensity to purchase these products sustainably.

H7: Green Trust mediates the relationship between Environmental Concern and Green Purchase Intention.

Based on the aforementioned explanation, the conceptual framework is structured as follows:

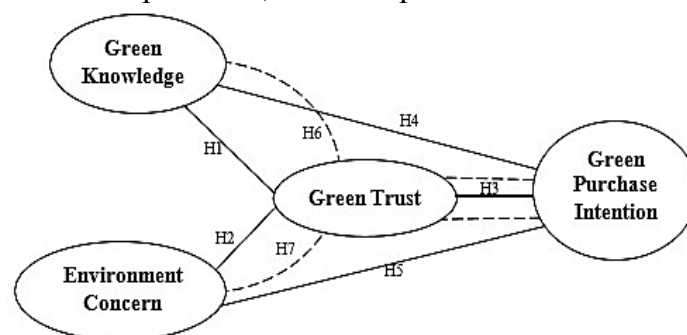


Figure 1. Conceptual Framework METHOD Research Design

In this study, the research targets a quantitative methodology designed to analyze how green knowledge and environmental concern impact green purchase intention-and Green Trust mediates this relationship-as in the case of green bottled products. Evidence gathered for this study adopts a causal explanatory design so as to be able to ascertain if there are causal relationships among the variables.

METHOD

The research targets consumers who have used or are interested in using eco-friendly drinking bottles, with 125 respondents selected through purposive non-probability sampling, based on their awareness of environmental issues related to sustainable consumption. Data were collected via an online survey using Google Forms, with a Likert scale (1 to 5) measuring responses on Green Knowledge, Environmental Concern, Green Trust, and Green Purchase Intention. Variables were measured by assessing consumers' awareness of environmental issues, their concern for sustainability, their trust in eco-friendly bottles, and their purchase intention for these products. Data analysis was conducted using Partial Least Squares (PLS) version 4.0 for Structural Equation Modeling (SEM), evaluating reliability, validity, and internal consistency, followed by hypothesis testing using bootstrapping to determine the significance of relationships among variables.

RESULTS AND DISCUSSION

The former typically constitutes two analytical techniques: the outer model and the inner model applied in PLS. Now we will discuss the results of the evaluation of both the outer and inner evaluations.

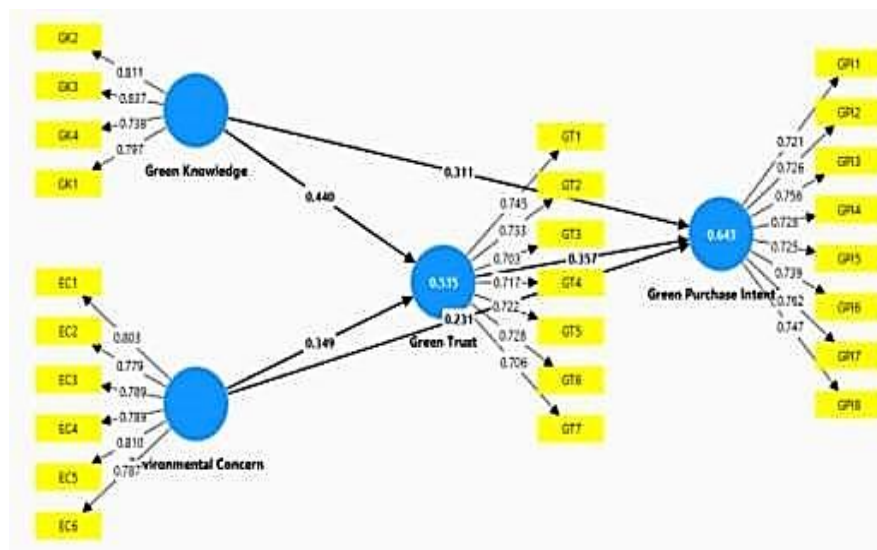


Figure 2. Outer Model

With loading factor values above 0.7, Figure 2 confirms that each indicator meets the standard for convergent validity; this means that all indicators in this study can be considered valid.

Table 1. Average Variance Extracted (AVE)

Variabel	Average Variance Extracted (AVE)	Requirements	Results
Green Knowledge (X1)	0.629	> 0.5	Valid
Environmental Concern (X2)	0.634	> 0.5	Valid
Green Trust (Z)	0.545	> 0.5	Valid
Green Purchase Intention (Y)	0.522	> 0.5	Valid

This signifies that these constructs have attained a satisfactory level of convergent validity; in other words, the majority of the variance in the indicators is accounted for by their respective constructs, as shown in Table 1, wherein the AVE values are more than 0.5.

Table 2. Results of Direct and Indirect Hypothesis Testing

	Original Sample (O)	Mean Sample (M)	Standard Deviation (STDEV)	t-Statistics (O/STDEV)	p-Value
Green Knowledge -> Green Trust	0.440	0.438	0.108	4.075	0.000
Environmental Concern -> Green Trust	0.349	0.360	0.114	3.056	0.002
Green Trust -> Green Purchase Intention	0.357	0.357	0.110	3.236	0.001
Green Knowledge -> Green Purchase Intention	0.469	0.469	0.095	4.908	0.000
Environmental Concern -> Green Purchase Intention	0.356	0.361	0.109	3.268	0.001
Green Knowledge -> Green Trust -> Green Purchase Intention	0.157	0.159	0.068	2.314	0.021
Environmental Concern -> Green Trust -> Green Purchase Intention	0.125	0.126	0.052	2.399	0.0016

From the analysis of data in Table 8, results of hypothesis testing for direct and indirect relationship show that all proposed hypotheses are supported. Direct relationships analysis shows significant influence of independent variables (Green Knowledge and Environmental Concern) on dependent variable (Green Purchase Intention) with the statistically significant path coefficients ($p < 0.05$). Further, the mediation analysis shows that there are significant indirect effects

confirming that Green Trust plays a mediating role in between Green Knowledge and Environmental Concern on Green Purchase Intention. It suggests that trust in green products would further enhance the impact of environmental awareness and knowledge on consumers' purchase intentions. Hence, all findings indicated that the proposed model clearly and extensively explains the relationship among studied parameters and thereby gives all the valuable insight into factors influencing green purchase behavior.

CONCLUSION

1. Green Knowledge significantly affects Green Trust positively. It implies that the person's Green Knowledge is also a pivotal motivator in the establishment of a green trust.
2. Environmental Concern has been shown to have a positive and significant influence on Green Trust. So, the environmental concern of the person affects his trust in using environmentally sustainable products.
3. Green Trust positively influences and significantly predicts Green Purchase Intention. This means that the higher the environment trust that a person possesses, the more resistant they become to using products packed in single-use plastic bottles.
4. Green Knowledge holds a positive and significant impact on Green Purchase Intention; thus, a person's Green Knowledge may affect the purchase intention of environmentally-friendly products instead of disposable plastic bottles.
5. Environmental Concern positively and significantly influences the well intention toward purchase regarding green products. This indicates that the higher the concern of a person on the individuals, that person becomes more concerned toward him/herself and others about purchasing green products: he/she will help green products be purchase intend.
6. Positive green trust was shown to act as a significant mediator between environmental concern and green purchase intention. This implies that positive perception towards green trust can further strengthen the impacts of environmental concern, thus heightening green product purchase interest.
7. Increasing the level of trust in green products acts as a mediator in the relationship between green knowledge and green purchase intention. That is to say that higher trust will further enhance the favorable influence that green knowledge has on the intention to purchase green products.

REFERENCES

- Abraham, T. C., Nasa, F., Mursid, H. P., Hotmaduma, A. B., & Fajar, H. (2022). Peran *Green Trust* dan theory planned behavior pada konsumerisme produk hijau. *Indonesian Business Review*, 5(1), 42-57.
- Ahmad, W., & Zhang, Q. (2020). Green purchase intention: Effects of electronic service quality and customer green psychology. *Journal of cleaner production*, 267, 122053.
- Amoako, G. K., Dzogbenuku, R. K., & Abubakari, A. (2020). Do green knowledge and attitude influence the youth's green purchasing? Theory of planned behavior. *International*

- Journal of Productivity and Performance Management, 69(8), 1609-1626.
- Antonius, F. (2018). Pengaruh Green Perceived Value, Green Perceived Risk, Green Consumer Confusion, Green Trust, Consumer Guilt, Self Monitoring, Pride Dan Perceived Consumer Effectiveness Terhadap Green Purchase Intention (Kasus Starbucks Jakarta). *Jurnal Manajemen Bisnis Dan Kewirausahaan*, 2(4), 106-111
- Chairy, C., & Alam, M. E. N. (2019). The influence of *Environmental Concern*, green perceived knowledge, and *Green Trust* on *Green Purchase Intention*. *Jurnal Manajemen (Edisi Elektronik)*, 10(2), 131-145.
- Chuah, S. H. W., El-Manstrly, D., Tseng, M. L., & Ramayah, T. (2020). Sustaining customer engagement behavior through corporate social responsibility: The roles of *Environmental Concern* and *Green Trust*. *Journal of Cleaner Production*, 262, 121348.
- Dalilah, Else A. "Dampak Sampah Plastik Terhadap Kesehatan Dan Lingkungan." OSF Preprints, 7 Oct. 2021. Web.
- Hengboriboon, L., Inthirak, A., Yeoh, K. H., & Pattanakitdamrong, T. (2020, March). The effects of green knowledge awareness toward consumer purchase intention on the bio-waste product in Thailand. In *2020 6th international conference on information management (ICIM)* (pp. 95-100). IEEE.
- Hossain, I., Nekmahmud, M., & Fekete-Farkas, M. (2022). How do environmental knowledge, eco-label knowledge, and green trust impact consumers' pro-environmental behaviour for energy-efficient household appliances?. *Sustainability*, 14(11), 6513.
- Khalifa, M., Fayed, R. H., Ahmed, Y. H., Abdelhameed, M. F., Essa, A. F., & Khalil, H. (2024). Ferulic acid ameliorates bisphenol A (BPA)-induced Alzheimer's disease-like pathology through Akt-ERK crosstalk pathway in male rats. *Psychopharmacology*, 1-20
- Kuswardhani, N., Andriyani, I., Nasir, M. A., & Alfarisy, F. K. (2023). Pengembangan Ekonomi Masyarakat Sucopangepok Melalui Produksi Sedotan Bambu Sebagai Upaya Mengurangi Sampah Plastik Di Kabupaten Jember. *Selaparang: Jurnal Pengabdian Masyarakat Berkemajuan*, 7(2), 1366-1372.
- Meilisa, M. (2020). Kontribusi Green Perceived Value, Green Perceived Risk, *Green Trust*, dan Green Awareness dalam Meningkatkan Green Phurchase Intention. *Jurnal Inspirasi Bisnis dan Manajemen*, 4(1), 31-44.
- Mongula, A., Masnita, Y., & Kurniawati, K. (2023). Environmental Concern: Does It Drive Green Purchase Intention Of Sustainable Packaging?. *Jurnal Ekonomi Bisnis dan Kewirausahaan*, 12(3), 290-308.

- Moslehpour, M., Yin Chau, K., Du, L., Qiu, R., Lin, C. Y., & Batbayar, B. (2023). Predictors of *Green Purchase Intention* toward eco-innovation and green products: Evidence from Taiwan. *Economic research-Ekonomska istraživanja*, 36(2).
- Pradnyadewi, N. L. P. M., & Warmika, I. G. K. (2019). *Peran Green Trust Memediasi Pengaruh Green Perceived Value Terhadap Green Purchase Intentions* (Doctoral dissertation, Udayana University).
- Ryantari, W., Ayu, G., & Giantari, I. G. A. K. (2020). *Green Knowledge, green attitude, dan Environmental Concern berpengaruh terhadap niat beli* (Doctoral dissertation, Udayana University).
- Saputri, N. P., & Rahman, M. A. (2021). Hubungan Antara Environmental Knowledge, Environmental Concern Dan Enviromental Attitude Serta Pengaruhnya Terhadap Purchase Intention Green Product Lgcc Dengan Perbedaan Gender Sebagai Variabel Moderasi. *MANDAR: Management Development and Applied Research Journal*, 3(2), 28-39.
- Suhartanto, D., Mohd Suki, N., Najib, M., Suhaeni, T., & Kania, R. (2023). Young Muslim consumers' attitude towards green plastic products: the role of *Environmental Concern*, knowledge of the environment and religiosity. *Journal of Islamic Marketing*, 14(12), 3168-3185.
- Tan, Z., Sadiq, B., Bashir, T., Mahmood, H., & Rasool, Y. (2022). Investigating the impact of green marketing components on purchase intention: The mediating role of brand image and brand trust. *Sustainability*, 14(10), 5939.
- Wiranto, A., & Adialita, T. (2020). Pengaruh Green Product Knowledge, Green Trust Dan Perceived Price Terhadap Green Purchase Intention Konsumen Amdk Merek Aqua Dengan Botol 100% Recycled. *Jurnal Administrasi Bisnis*, 16(2), 174-184.
- Zhuang, W., Luo, X., & Riaz, M. U. (2021). On the factors influencing green purchase intention: A meta-analysis approach. *Frontiers in psychology*, 12, 644020.