Journal of Marketing & Social Research

ISSN (Online): 3008-0711

Volume: 02 | Issue 10 | 2025

Journal homepage: https://jmsr-online.com/

Research Article

The Influence of Artificial Intelligence on Green Purchase Intention: Investigating the Roles of Trust in AI and Environmental Attitude

Alex Benny[1], J. Solomon Thangadurai[2], Ashitha M. K.[3], K.B. Praveen[4], Jenesiszodykha V[5] and Shiji Francis[6]

[1,2,4&5]Department of Commerce, Faculty of Science and Humanities, SRM Institute of Science and Technology, Kattankulathur, Chengalpattu- 603203, Tamil Nadu, India.

[3]Department of Professional Studies, St. Joseph's College (Autonomous)Devagiri, Kozhikode- 673008, Kerala, India

[6]Department of Management, Alphonsa College Thiruvambady, Kozhikode- 673603, Kerala, India

Received: 28/09/2025; Revision: 20/10/2025; Accepted: 08/11/2025; Published: 08/12/2025

Corresponding author: Alex Benny *(ab3898@srmist.edu.in)

Abstract: This study investigates how Artificial Intelligence (AI) affects people's intention to make environmentally friendly (green) purchases. This study based on the Technology Acceptance Model (TAM) by adding two new factors: Trust in AI and Environmental Attitude. The research investigates how perceived ease of use (PEOU), perceived usefulness (PU), and trust in AI influence consumers' green purchase intention, with environmental attitude acting as a mediating factor. A quantitative methodology with cross sectional research design were adopted for data collection and analysis. Data were collected from 394 online shoppers in Kozhikode district, Kerala, using a structured questionnaire with a five-point Likert scale. The participants were chosen using purposive sampling. Present study used Partial Least Squares Structural Equation Modelling (PLS-SEM) with Smart PLS 4 software to test the relationships between the variables. The results confirm that PEOU, PU, and trust in AI significantly influence green purchase intention and environmental attitude plays a significant partial mediating role. The findings show that people are more likely to make eco-friendly (green) purchases when AI tools are easy to use, trustworthy, and add real value. The study offers useful insights for businesses and policymakers. They can use these insights to create AI-enabled strategies that build consumer trust, encourage positive attitudes toward the environment, and increase green purchasing intentions. This helps support sustainable development goals.

Keywords: Artificial Intelligence, Green Purchase Intention, Technology Acceptance Model, Trust in AI, Environmental Attitude.

INTRODUCTION

The growing environmental challenges and global emphasis on sustainability have led consumers to increasingly consider eco-friendly choices in their purchasing behaviour [1]. This change has given rise to the idea of green purchase intention, which means a person's willingness to buy products that are good for the environment [2]. However, people are becoming more aware about environmental issues, do not make them to always choose green products [3], [4]. Artificial Intelligence (AI) is transforming the way marketing strategies by creating personalized experiences, predicting consumer behaviour, and supporting decisions based on emotions [5], [6]. AI technologies such as chatbots, and recommendation systems are shaping consumer intention by providing personalized experiences and product recommendations [7]. AI-based systems are now widely used to encourage consumers toward opting for eco-friendly products, but how they affect individuals' thinking and doing when it comes to purchasing green products is still not well understood [8], [9].

The Technology Acceptance Model (TAM) has been utilized to describe why consumers choose to adopt emerging technologies. However, its main two main construct (independent variables) that is, PU and ease of use may not fully explain how people interact with these AI systems or make environmentally responsible buying decisions [10], [11]. Further studies show that **trust in AI** is an important factor in how consumers respond to AI-based tools [12]. At the same time, a person's **environmental attitude** plays a key role in linking their awareness of environmental issues to actual green buying behaviour [13], [14].

This study proposes an extended TAM framework to investigate the impact of trust in AI on green product purchase intention, with environmental attitude serving as a mediating variable. By integrating technological and environmental behavioural perspectives, this research aims to advance understanding of how AI can ethically and effectively influence sustainable consumer behaviour.

REVIEW OF LITERATURE

As environmental problems continue to grow, people are being encouraged to choose green products as part of the global push for sustainability [3], [4]. However, there exist gap between what consumers know about environmental issues and how they actually behave when making purchases. To help explain this gap, researchers often turn to behavioural theories especially the Technology Acceptance Model (TAM) to understand how people make decisions with the help of technology. Introduced by [15], TAM theory states that a person's intention is affected by

how useful and easy to use they find a technology. This model has been widely used in many digital areas, including studies on green marketing [10], [16].

However, the fast growth of Artificial Intelligence (AI) in online shopping has moved ahead of traditional theories like TAM. AI now powers tools such as green product recommendation systems, chatbots, and predictive models that give real-time personalized suggestions and guide consumer intention [5], [8]. While these tools improve the shopping experience, they also highlight the importance of trust, a factor not fully addressed in the original TAM. Trust in AI defined as the belief that AI systems are reliable and provide ethical suggestions. It has become an important factor in how people accept and use these technologies [12], [17]. Studies show that when people trust AI, they are more likely to follow its recommendations, including those about eco-friendly products [6], [9].

Many studies are also explored environmental attitude as a crucial determinant of green purchase intention. Environmental attitude reflects a consumer's general concern for environmental protection and sustainable living. Previous studies found that positive environmental attitude has a mediating role between the relationship between knowledge and green purchase intentions [13]. Environmental attitude can amplify the effect of marketing interventions, including those delivered via AI platforms, by shaping how consumers interpret product messaging [14].

Recent studies advocate for integrating trust in AI and environmental attitude into established models like TAM to better understand consumer behaviour in tech-enhanced green marketplaces. However, most existing models overlook the mediating role of environmental attitude between trust in AI and purchase behaviour, presenting a notable theoretical gap.

While TAM remains a foundational theory for explaining technology adoption, its predictive power can be enhanced by incorporating trust in AI as an independent variable and environmental attitude as a mediator. This combined approach shows how AI is becoming more important in green consumer choices and helps build a better, more realistic understanding of how people accept and use sustainable technologies.

Research Gap

Although the Technology Acceptance Model (TAM) has been widely used to explain technology adoption, its application in AI-mediated green consumer behaviour remains underdeveloped. Most existing models focus on PU and PEOU while neglecting the rising importance of trust in AI systems, especially in shaping purchase decisions involving value-laden and ethical considerations such as sustainability. While environmental attitude is widely recognized as a key factor influencing green purchase intention, its role as a bridge between trust in AI and green purchase intentions has received little attention. Recent research has focused either on AI in marketing or on sustainability, but there's a noticeable gap when it comes to a combined model, especially how AI influences the purchase intention of green products.

Research Questions

1. To what extent do PU, PEOU, and trust in AI impact consumers' environmental attitudes and their green purchase intentions?
2. How does environmental attitude mediate the relationship between PU, PEOU, and trust in AI, and consumers' green purchase intentions?

Objectives of the study

1. To examine the influence of PU, PEOU, and trust in AI on consumers' environmental attitudes.
2. To investigate the impact of PU, PEOU, and trust in AI on consumers' green purchase intentions.
3. To analyse the mediating role of environmental attitude in the relationship between PU, perceive PEOU, trust in AI, and green purchase intention.

Hypotheses

H1: PU of AI has a positive influence on consumers' environmental attitudes.

H2: PEOU of AI has a positive influence on consumers' environmental attitudes.

H3: Trust in AI has a positive influence on consumers' environmental attitudes.

H4: PU of AI has a positive influence on consumers' green purchase intentions.

H5: PEOU of AI has a positive influence on consumers' green purchase intentions.

H6: Trust in AI has a positive influence on consumers' green purchase intentions.

H7: Environmental attitude mediates the relationship between PU of AI and green purchase intention.

H8: Environmental attitude mediates the relationship between PEOU of AI and green purchase intention.

H9: Environmental attitude mediates the relationship between trust in AI and green purchase intention.

Proposed Conceptual Model

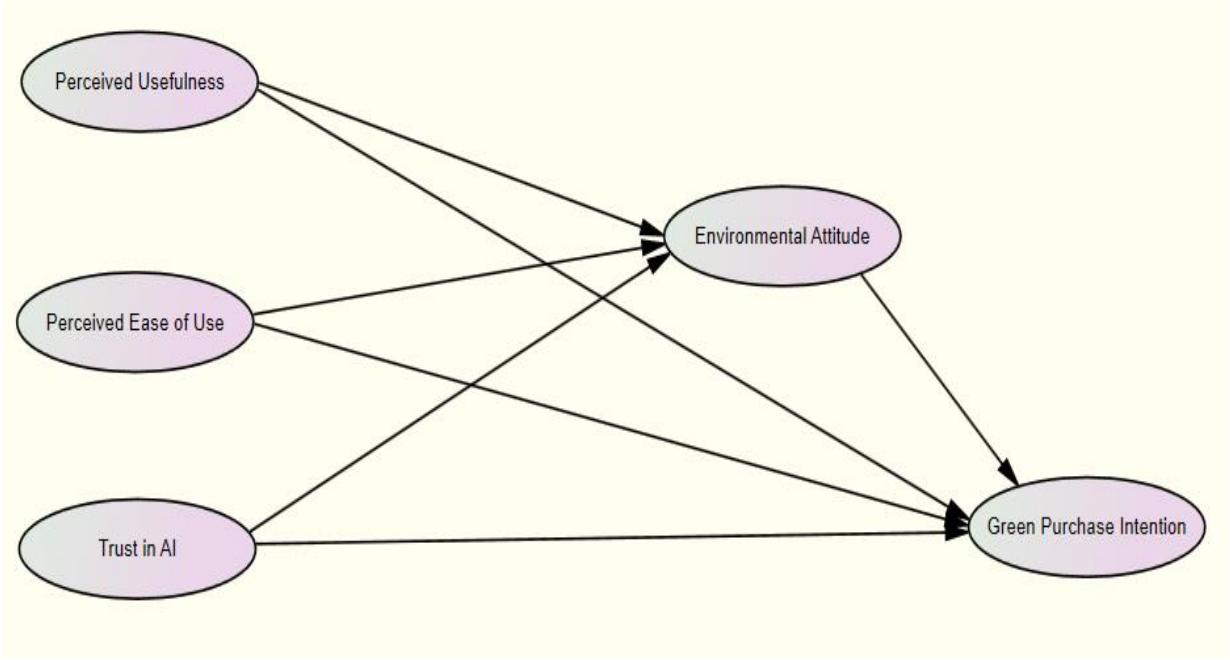

Figure 1: Proposed conceptual model

METHODOLOGY

This study adopted quantitative approach with cross sectional research design for data collection and analysis. Population of this study consist with online consumers in Kozhikode district, Kerala, India. Sampling method used by this study is purposive sampling and data collected from 394 respondents using questionnaire. 5 point Likert scale questions are included in this questionnaire. Data analysis conducted using Smart PLS 4. Partial Least Square Structural Equation Modelling (PLS SEM) is employed for analysing relationship among variables and testing hypotheses.

Data Analysis

Table 1. Demographic Profile of the respondents

Profile	Frequency	Percent
Gender		
Male	120	30.5
Female	274	69.5
Educational Qualification		
SSLC or Below	4	1.0
Plus Two	23	5.8
UG	211	53.6
PG and above	156	39.6
Occupation		
Govt. Employees	57	14.5
Private Employees	243	61.7
Own Business	36	9.1
Student	27	6.8
House wife	31	7.9
Marital status		
Married	170	43.1
Unmarried	224	56.9
Income Level (Monthly)		
Up to 10000	58	14.7
10000 to 25000	193	49.0
25000 to 50000	79	20.1
Above 50000	64	16.2

Source: Author's own elaboration

Interpretation

Table 1 shows that most respondents are female (69.5%) and highly educated because 53.6% of the respondents qualified

undergraduate degrees and 39.6% having postgraduate qualifications. A majority (61.7%) are private employees. Most respondents are unmarried (56.9%). 49% of respondents earn between ₹10,000–₹25,000 monthly.

Table 2. Reliability and Convergent validity test results

	Cronbach's alpha	rho_a	Composite reliability (rho_c)	AVE
Environmental Attitude	0.828	0.843	0.885	0.659
Green Purchase Intention	0.821	0.825	0.882	0.652
PEOU	0.872	0.893	0.911	0.720
PU	0.861	0.886	0.905	0.705
Trust in AI	0.834	0.837	0.882	0.600

Source: Smart PLS Output

Interpretation

The reliability and validity results indicate strong internal consistency for all constructs. Cronbach's alpha values range from 0.821 to 0.872, exceeding the 0.70 threshold [18], confirming acceptable reliability. Composite reliability values for all constructs are above 0.88, and supporting construct reliability. The Average Variance Extracted (AVE) values, in between 0.600 to 0.720, surpass the minimum 0.50 benchmark, exceed the recommended threshold of 0.50. This indicates that the model exhibits adequate convergent validity [19]. These results confirm that there is no reliability and validity issues with in construct and can proceed with further analysis.

Table 3. Discriminant validity with the Cross Loadings

	Environmental Attitude	Green Purchase Intention	PEOU	PU	Trust in AI
EA1	0.802	0.445	0.306	0.310	0.180
EA2	0.869	0.461	0.453	0.266	0.334
EA3	0.743	0.341	0.324	0.276	0.222
EA4	0.829	0.479	0.489	0.353	0.298
GPI1	0.473	0.746	0.319	0.223	0.386
GPI2	0.398	0.831	0.341	0.356	0.352
GPI3	0.395	0.806	0.275	0.290	0.365
GPI4	0.461	0.844	0.371	0.291	0.457
PEU1	0.504	0.395	0.869	0.235	0.189
PEU2	0.449	0.374	0.886	0.350	0.227
PEU3	0.372	0.318	0.815	0.322	0.190
PEU4	0.309	0.268	0.822	0.288	0.147
PU1	0.309	0.268	0.256	0.810	0.116
PU2	0.338	0.300	0.296	0.871	0.149
PU3	0.225	0.222	0.265	0.786	0.037
PU4	0.354	0.384	0.341	0.888	0.127
TR1	0.256	0.398	0.172	0.112	0.728
TR2	0.264	0.333	0.173	0.148	0.823
TR3	0.303	0.416	0.165	0.094	0.767
TR4	0.146	0.322	0.163	0.093	0.761
TR5	0.255	0.390	0.194	0.073	0.790

Source: Smart PLS Output

Interpretation

All indicator loadings on their respective constructs are above the acceptable limit of 0.70, which ensure good indicator reliability[18]. Each item loads highest on its associated construct indicating strong convergent validity. Cross-loadings on other constructs are notably lower, establishing discriminant validity [19]. These results show that the measurement items clearly represent their specific latent variables. This ensures that the construct structure is solid and ready for further structural equation modelling (SEM) analysis.

Table 4. Discriminant validity with the FORNELL- LARCKER Criterion

	Environmental Attitude	Green Purchase Intention	PEOU	PU	Trust in AI
Environmental Attitude	0.812				
Green Purchase Intention	0.537	0.807			
PEOU	0.494	0.407	0.849		
PU	0.372	0.359	0.348	0.840	
Trust in AI	0.324	0.486	0.225	0.134	0.774

Source: Smart PLS Output

Interpretation
The Fornell-Larcker criterion results confirm discriminant validity. The square root of the Average Variance Extracted (AVE) for each construct, shown as diagonal values, is greater than its correlations with other constructs, represented by off-diagonal values [19]. For instance, Environmental Attitude is higher than its correlations with Green Purchase Intention, PEOU, and others. The same pattern applies to all other constructs. This means that each latent variable shares more variance with its indicators than with other variables in the model. This finding supports the distinctiveness of the constructs in the structural model.

Table 5. Discriminant validity with Hetero Trait-Mono Trait ratio (HTMT)

	Environmental Attitude	Green Purchase Intention	PEOU	PU	Trust in AI
Environmental Attitude					
Green Purchase Intention	0.642				
PEOU	0.553	0.468			
PU	0.430	0.416	0.401		
Trust in AI	0.373	0.576	0.259	0.158	

Source: Smart PLS Output

Interpretation
The HTMT values among all construct pairs are below the threshold of 0.85 [20], confirming strong discriminant validity. The highest HTMT value is between Environmental Attitude and Green Purchase Intention, followed by Trust in AI and Green Purchase Intention, both well within acceptable limits. These results indicate that each construct is distinct from the others, supporting the model's structural integrity.

Table 6. Collinearity statistics using VIF (Inner Model)

	VIF
Environmental Attitude -> Green Purchase Intention	1.497
PEOU -> Environmental Attitude	1.182
PEOU -> Green Purchase Intention	1.388
PU -> Environmental Attitude	1.142
PU -> Green Purchase Intention	1.211
Trust in AI -> Environmental Attitude	1.057
Trust in AI -> Green Purchase Intention	1.125

Source: Smart PLS Output

Interpretation
All VIF values in the model range between 1.057 and 1.497, which are well below the commonly accepted threshold of 5.0 [18]. This indicates that multicollinearity is not a concern among the predictor variables. The low VIF values suggest that each independent construct contributes uniquely to the dependent variables without causing distortion due to high intercorrelations. This strengthens the reliability of the regression coefficients and ensures the accuracy of the structural model in assessing the influence of Environmental Attitude, Perceived Ease of Use, Perceived Usefulness, and Trust in AI on Green Purchase Intention.

Table 7. R^2 Results

	R-square	**R-square adjusted**
Environmental Attitude	0.332	0.327
Green Purchase Intention	0.436	0.430

Source: Smart PLS Output

Interpretation
The R-square values indicate that 33.2% of the variance in Environmental Attitude and 43.6% in Green Purchase Intention are explained by the model. These values suggest a moderate level of explanatory power, meaning the predictors meaningfully contribute to understanding both constructs within the proposed framework.

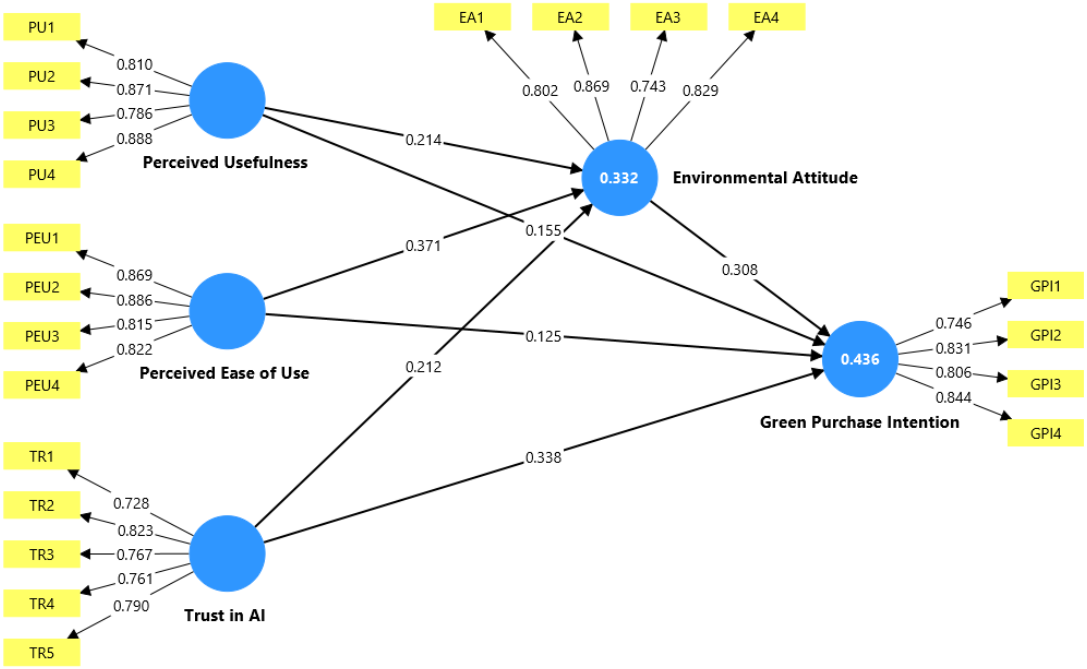

Figure 2: Measurement model assessment

Table 8. Path Coefficient

	Path Coefficient	Standard deviation	T statistics	P values
Environmental Attitude -> Green Purchase Intention	0.308	0.058	5.286	0.000
PEOU -> Environmental Attitude	0.371	0.053	7.015	0.000
PEOU -> Green Purchase Intention	0.125	0.047	2.679	0.004
PU -> Environmental Attitude	0.214	0.062	3.458	0.000
PU -> Green Purchase Intention	0.155	0.047	3.333	0.000
Trust in AI -> Environmental Attitude	0.212	0.048	4.398	0.000
Trust in AI -> Green Purchase Intention	0.338	0.048	6.987	0.000

Source: Smart PLS Output

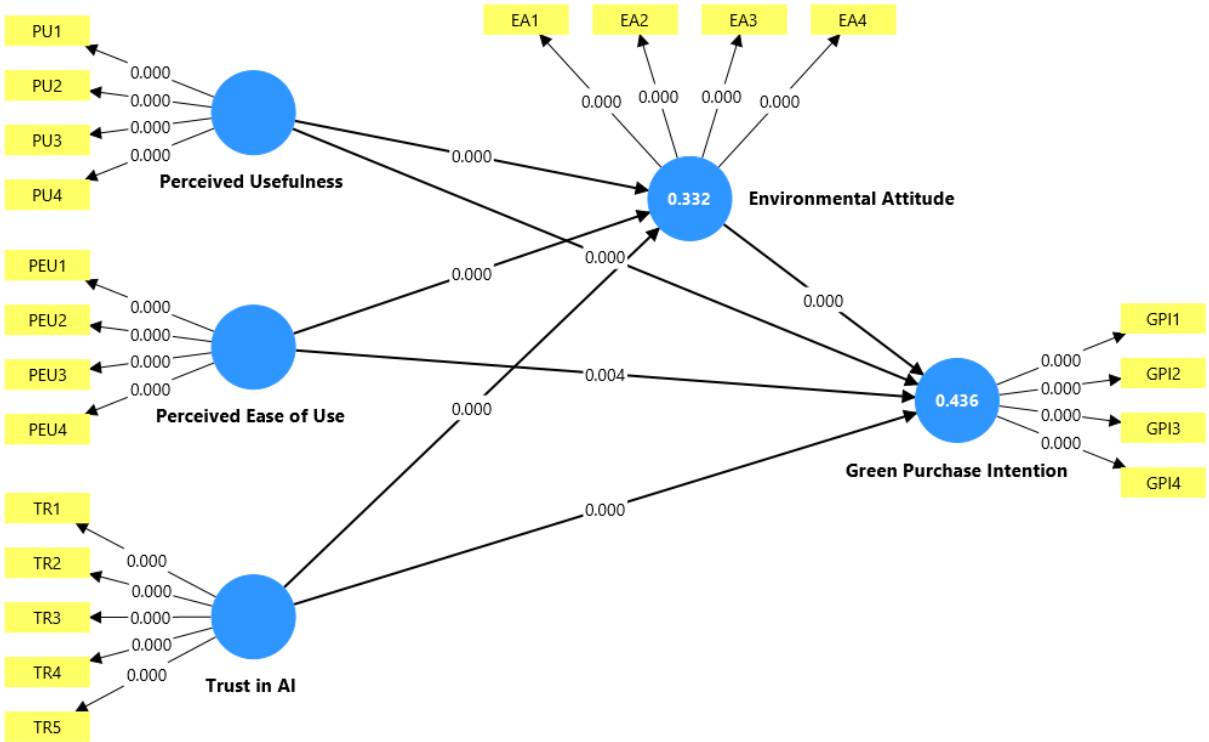

Figure 3: Measurement of structural model

Interpretation
All path coefficients are statistically significant at 95% confidence level, with t-values exceeding the critical value of 1.96 [21]. Trust in AI and Environmental Attitude have strong direct effects on Green Purchase Intention. Perceived Ease of Use significantly affects Environmental Attitude and Green Purchase Intention. Likewise, Perceived Usefulness has a clear impact on both Environmental Attitude and Green Purchase Intention. These results support the proposed relationships and highlight the importance of attitude, ease of use, and trust in predicting sustainable consumer behaviour.

Table 8. Mediation Analysis

	Direct effect	95% confidence interval	Sig	Indirect effect	95% confidence interval	Sig
PEOU -> Environmental Attitude -> Green Purchase Intention	0.125	(0.050 and 0.204)	<0.01	0.114	(0.06 and 0.163)	<0.01
PU -> Environmental Attitude -> Green Purchase Intention	0.155	(0.082 and 0.235)	<0.01	0.066	(0.032 and 0.101)	<0.01
Trust in AI -> Environmental Attitude -> Green Purchase Intention	0.338	(0.261 and 0.417)	<0.01	0.065	(0.032 and 0.108)	<0.01

Source: Smart PLS Output

Interpretation
The results demonstrate that Environmental Attitude significantly mediates the relationships between PEOU, PU and Trust in AI on Green Purchase Intention. All **direct** and **indirect effects** are statistically significant with 95% confidence intervals not containing zero, confirming partial mediation validity [21]. Perceived Ease of Use, Perceived Usefulness, and Trust in AI influence Green Purchase Intention through Environmental Attitude. These findings highlight Environmental Attitude as a key mediating variable in shaping eco-conscious purchasing behaviour.

Findings
The analysis reveals meaningful insights into the relationships among key constructs influencing green purchase behaviour. All measurement indicators showed strong reliability and validity, indicating that the constructs were measured accurately and consistently. The results confirm that each construct is distinct from others, ensuring the validity of the structural model.

The structural path analysis shows that environmental attitude plays a key role in predicting consumers' intentions to engage in green purchasing. It is significantly affected by perceived ease of use, perceived usefulness, and trust in artificial intelligence. This highlights the importance of both technology-related beliefs and psychological attitudes in shaping pro-environmental intentions.

Additionally, trust in AI and environmental attitude are important direct predictors of green purchase intention. These findings indicate that when people trust technology and have positive environmental attitudes, they are more likely to intend to make eco-friendly purchases. Perceived ease of use and perceived usefulness also help, both directly and indirectly, by improving environmental attitude, which then influences purchase intention. The mediation analysis confirms that environmental attitude acts as a bridge between PEOU and PU with behavioural intention. It also mediates the relationship between trust in AI and green purchase intention. This demonstrates that shaping positive environmental attitudes is essential for converting perceptions and trust into action.

Suggestions
Based on the findings, organizations should focus on improving consumers' environmental attitudes through awareness campaigns and sustainability education. Improving the perceived ease of use and usefulness of eco-friendly technologies or platforms can positively influence attitudes and intentions. Building trust in AI-powered green solutions, such as personalized recommendations or eco-rating systems, can further encourage green purchasing behavior. Marketers should clearly communicate the environmental benefits of their products and make green choices more accessible and user-friendly. Overall, combining trust, usability, and environmental concern in marketing and product strategies can effectively promote sustainable consumer behaviour and support long-term environmental goals.

CONCLUSION

This study investigated how PEOU, PU, and trust in AI affect the intention to make green purchases. Environmental attitude serves as an important mediator. The findings show that all these factors significantly impact consumers' intentions to buy eco-friendly products. Environmental attitude acts as a vital connection that turns perceptions and trust into real intentions. The study emphasizes the need to create AI-driven green solutions that are user-friendly, beneficial, and trustworthy to

encourage sustainable buying behavior. By fostering positive environmental attitudes, businesses and policymakers can effectively engage consumers in responsible consumption.

REFERENCES

[1] Y. Joshi and Z. Rahman, "Factors Affecting Green Purchase Behaviour and Future Research Directions," *Int. Strateg. Manag. Rev.*, vol. 3, no. 1, pp. 128–143, 2015, doi: https://doi.org/10.1016/j.ism.2015.04.001.

[2] R. Yadav and G. S. Pathak, "Determinants of Consumers' Green Purchase Behavior in a Developing Nation: Applying and Extending the Theory of Planned Behavior," *Ecol. Econ.*, vol. 134, pp. 114–122, 2017, doi: https://doi.org/10.1016/j.ecolecon.2016.12.019.

[3] M. A. I. Gazi, A. Al Masud, M. F. Yusof, M. A. Billah, M. A. Islam, and M. A. Hossain, "The green mindset: how consumers' attitudes, intentions, and concerns shape their purchase decisions," *Environ. Res. Commun.*, vol. 6, no. 2, Feb. 2024, doi: 10.1088/2515-7620/ad23f4.

[4] M. Hidayati, "the Effect of Environmental Awareness on Consumer Behavior of Eco-Friendly Products Mediated By Eco-Friendly Attitude," *Russ. J. Agric. Socio-Economic Sci.*, vol. 79, no. 7, pp. 270–278, 2018, doi: 10.18551/rjoas.2018-07.29.

[5] B. Frank, "Artificial intelligence-enabled environmental sustainability of products: Marketing benefits and their variation by consumer, location, and product types," *J. Clean. Prod.*, vol. 285, no. November 2020, 2021, doi: 10.1016/j.jclepro.2020.125242.

[6] N. Sharma and A. Paço, "AI and emotions: enhancing green intentions through personalized recommendations—a mediated moderation analysis," *AI Soc.*, vol. 40, no. 4, pp. 2821–2838, 2024, doi: 10.1007/s00146-024-02031-w.

[7] M. H. Huang and R. T. Rust, "Engaged to a Robot? The Role of AI in Service," *J. Serv. Res.*, vol. 24, no. 1, pp. 30–41, Feb. 2021, doi: 10.1177/1094670520902266.

[8] A. Mahajan, S. Sharma, V. Agrawal, and V. Nikalje, "Influence of artificial intelligence on consumers' lifestyle product choices and the key to driving sustainable behaviour," *Young Consum.*, no. October 2024, 2025, doi: 10.1108/YC-10-2024-2307.

[9] O. Sohaib, A. Alshemeili, and T. Bhatti, "Exploring AI-enabled green marketing and green intention: An integrated PLS-SEM and NCA approach," *Clean. Responsible Consum.*, vol. 17, no. July 2023, p. 100269, 2025, doi: 10.1016/j.clrc.2025.100269.

[10] C. A. Lin, X. Wang, and Y. Yang, "Sustainable Apparel Consumption: Personal Norms, CSR Expectations, and Hedonic vs. Utilitarian Shopping Value," *Sustain.*, vol. 15, no. 11, 2023, doi: 10.3390/su15119116.

[11] M. Sarstedt, C. M. Ringle, J. H. Cheah, H. Ting, O. I. Moisescu, and L. Radomir, "Structural model robustness checks in PLS-SEM," *Tour. Econ.*, vol. 26, no. 4, pp. 531–554, 2020, doi: 10.1177/1354816618823921.

[12] A. Bhatnagar and M. Sharma, "Artificial Intelligence and Consumer's Perception: A Research on Environmentally Conscious Consumer," *J. Metaverse*, vol. 4, no. 2, pp. 105–115, 2024, doi: 10.57019/jmv.1488022.

[13] O. Ogiemwonyi, M. N. Alam, R. Alshareef, M. Alsolamy, N. A. Azizan, and N. Mat, "Environmental factors affecting green purchase behaviors of the consumers: Mediating role of environmental attitude," *Clean. Environ. Syst.*, vol. 10, no. June, p. 100130, 2023, doi: 10.1016/j.cesys.2023.100130.

[14] U. Ambreen and K. Sultana, "Artificial Intelligence, Environmental sustainability, Eco-Friendly products, Islamic Values and green Purchase Intension," *J. Excell. Manag. Sci.*, vol. 3, no. 1, pp. 191–210, 2024, doi: 10.69565/jems.v3i1.182.

[15] F. D. Davis, "Perceived usefulness, perceived ease of use, and user acceptance of information technology," *MIS Q. Manag. Inf. Syst.*, vol. 13, no. 3, pp. 319–339, 1989, doi: 10.2307/249008.

[16] M. Tilahun, E. Berhan, and G. Tesfaye, "Determinants of consumers' purchase intention on digital business model platform: evidence from Ethiopia using partial least square structural equation model (PLS-SEM) technique," *J. Innov. Entrep.*, vol. 12, no. 1, Dec. 2023, doi: 10.1186/s13731-023-00323-x.

[17] S. Choi and Y. Yi, "The impact of service agent type on satisfaction in green purchasing: A comparative study of AI and human agents," *J. Retail. Consum. Serv.*, vol. 87, p. 104355, 2025, doi: https://doi.org/10.1016/j.jretconser.2025.104355.

[18] J. F. Hair, J. J. Risher, M. Sarstedt, and C. M. Ringle, "When to use and how to report the results of PLS-SEM," *Eur. Bus. Rev.*, vol. 31, no. 1, pp. 2–24, 2019, doi: 10.1108/EBR-11-2018-0203.

[19] C. Fornell and D. F. Larcker, "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error," *J. Mark. Res.*, vol. 18, no. 1, p. 39, 1981, doi: 10.2307/3151312.

[20] J. Henseler, C. M. Ringle, and M. Sarstedt, "A new criterion for assessing discriminant validity in variance-based structural equation modeling," *J. Acad. Mark. Sci.*, vol. 43, no. 1, pp. 115–135, 2015, doi: 10.1007/s11747-014-0403-8.

[21] J. Hair and A. Alamer, "Partial Least Squares Structural Equation Modeling (PLS-SEM) in second language and education research: Guidelines using an applied example," *Res. Methods Appl. Linguist.*, vol. 1, no. 3, p. 100027, Dec. 2022, doi: 10.1016/J.RMAL.2022.100027.