Public Intention to Use EVs in East Java: Key Drivers

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ABSTRACT

This research examines the primary factors that influence public interest in adopting electric vehicles (EVs), with a particular focus on residents of East Java. Indonesia. Using a quantitative research design. data were gathered from 250 participants through a convenience sampling technique. The data were analyzed using Partial Least Squares–Structural Equation Modeling (PLS-SEM) to assess construct validity and test the research hypotheses. The results indicate that four variables are perceived as ease of use, perceived usefulness, and green marketing. and perceived value each significantly and positively affect individuals' intention to adopt EVs. These findings underscore the significance of personal perceptions and environmentally focused marketing strategies in promoting EV adoption on a practical level. The study provides valuable guidance for EV manufacturers in developing marketing strategies that emphasize user-friendliness, practical benefits, and environmental awareness. Overall. This research contributes to the literature on sustainable transportation by highlighting the crucial role of consumer perception and strategic messaging in promoting the adoption of electric vehicles, particularly in developing markets such as Indonesia.

Keywords*: Consumer Behavior, Electric Vehicle, Green Marketing, Perceived Value, Technology Acceptance Model, Technology Adoption.*

ABSTRAK

Penelitian ini mengkaji faktor-faktor utama yang mempengaruhi minat masyarakat untuk mengadopsi kendaraan listrik (EV), dengan fokus khusus pada warga Jawa Timur. Indonesia. Menggunakan desain penelitian kuantitatif. Data dikumpulkan dari 250 peserta melalui teknik convenience sampling. Data dianalisis menggunakan Partial Least Squares–Structural Equation Modeling (PLS-SEM) untuk menilai validitas konstruksi dan menguji hipotesis penelitian. Hasilnya menunjukkan bahwa empat variabel dianggap sebagai kemudahan penggunaan, kegunaan yang dirasakan, dan pemasaran hijau. dan nilai yang dirasakan masing-masing secara signifikan dan positif memengaruhi niat individu untuk mengadopsi EV. Temuan ini menggarisbawahi pentingnya persepsi pribadi dan strategi pemasaran yang berfokus pada lingkungan dalam mempromosikan adopsi EV pada tingkat praktis. Studi ini memberikan panduan berharga bagi produsen EV dalam mengembangkan strategi pemasaran yang menekankan keramahan pengguna, manfaat praktis, dan kesadaran lingkungan. Keseluruhan. Penelitian ini berkontribusi pada literatur tentang transportasi berkelanjutan dengan menyoroti peran penting persepsi konsumen dan pesan strategis dalam mempromosikan adopsi kendaraan listrik, khususnya di pasar berkembang seperti Indonesia.

Kata kunci *Perilaku Konsumen, Kendaraan Listrik, Pemasaran Hijau, Nilai yang Dirasakan, Model Penerimaan Teknologi, Adopsi Teknologi.*

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INTRODUCTION

Public health, both individually and collectively, has increasingly been influenced by a range of environmental issues. As a result, consumers have become more cautious in shaping their preferences, making purchasing decisions, and forming attitudes toward environmental concerns (Vebriyanto & Hadi, 2023; Febrian & Ramli, 2024). The act of purchasing eco-friendly products involves selecting items that are not harmful to the environment, commonly referred to as sustainable or green products. Environmentally conscious consumption typically reflects more responsible consumption behaviors, where individuals consider the environmental impact of using, buying, and disposing of products, as well as utilizing services that minimize ecological harm (Ransure, 2017; Mauliza et al., 2019). Eco-friendly products are characterized by their non-polluting nature, conservation of natural resources, and recyclability. In recent years, numerous international organizations have begun producing these types of products, and their emergence has been positively received by various stakeholders (Yamuna, 2014; Soomro et al., 2020).

The number of electric vehicles (EVs) in Indonesia remains relatively low compared to the number of fossil-fueled vehicles. As of early 2024, the Central Bureau of Statistics (Badan Pusat Statistik, 2024) reported 157.080.504 fuel-powered vehicles, including 18.285.293 passenger cars, 269.710 buses, 6.091.822 trucks, and 132.433.679 motorcycles, highlighting a stark contrast to EV adoption. The Ministry of Energy and Mineral Resources aims to convert 150.000 motorcycles to electric in 2024, up from 50.000 in 2023. While optimism is supported by increasing consumer interest in eco-friendly products, green products still account for only 1–3% of the total market share, despite rising environmental awareness and positive attitudes (Solihin et al., 2019; Soomro et al., 2020).

The high levels of pollution and low life expectancy, along with the still limited number of electric vehicle (EV) users in Indonesia, indicate that consumer preferences remain focused on conventional fuel-powered vehicles. This indicates that the EV industry has yet to meet its targets and must intensify efforts to attract consumer interest in more sustainable options, such as electric cars and motorcycles. As technology evolves, users are increasingly encouraged to adopt tech-based products (Zhou et al., 2005; Silaban et al., 2021). Sustainable business strategies now encompass all aspects of strategic planning, from vision and mission to tactical approaches, such as the marketing mix. The marketing mix, as a controllable marketing tool, directly shapes consumer behavior by delivering added value. In this framework, green marketing employs the marketing mix to promote environmentally conscious behavior and advance sustainability goals.

This study aims to examine whether the Technology Acceptance Model (TAM), Green Marketing, and Perceived Value can act as primary determinants in predicting consumer motivation to adopt or shift toward electric vehicles as a future mode of transport (Sefora et al., 2019; Manutworakit & Choocharukul, 2022). The research is intended to provide new insights and contribute to the ongoing discussion on sustainable marketing practices (Bestari & Butarbutar, 2021). Unlike previous studies, this research centers explicitly on consumer purchasing behavior related to electric vehicles as eco-friendly products (Barbarossa et al., 2017; Amoako et al., 2022). Most prior empirical studies have generally focused on broader sustainability-related behaviors, such as public responses to sustainable development goals, environmentally conscious purchasing among younger consumers with environmental attitudes as mediators (Soomro et al., 2020), green marketing strategies and consumer trust in the MSME sector, and consumer decisions regarding green products in retail settings (Braga Junior et al., 2019). Broader research has also explored green marketing, sustainable consumption, and evolving patterns in consumer behavior (Narula & Desore, 2016).

Although electric vehicle (EV) adoption supports environmental sustainability and sustainable transportation, consumer acceptance is crucial for long-term success, as individual preferences and behavior heavily influence it (Liu et al., 2019). This study is timely in examining the factors that affect EV adoption at the individual level.

Previous research has examined factors influencing electric vehicle (EV) adoption from a consumer perspective. Wu et al. (2019) found that environmental awareness significantly impacts public acceptance of autonomous EVs. Similarly, Moons and De Pelsmacker (2015) used the Theory of Planned Behaviour to identify attitude, subjective norms, and perceived behavioural control as key drivers of EV adoption. Purwanto and Rini (2024) also confirmed that attitude is the most influential factor, followed by subjective norms. Building on these findings, this study seeks to evaluate an EV adoption model by integrating several key variables relevant to the Indonesian context.

LITERATURE REVIEW & HYPOTHESIS DEVELOPMENT

Influence of Green Marketing and Perceived Ease of Use on Intention to Use EVs

Green marketing and perceived ease of use are two key variables that significantly influence consumers' intentions to adopt electric vehicles (EVs). Green marketing, through strategies such as eco-labeling, eco-packaging, and eco-branding, enhances consumers' perceptions of EVs as environmentally friendly products (Koul & Eydgahi, 2018; Mishra & Sheikh, 2023). Research by Bi et al. (2023) and Ramachandaran et al. (2023) demonstrates that green-focused advertising is more effective than conventional methods in increasing purchase intentions by strengthening perceived green value and fostering positive product attitudes. Additionally, consumer attitudes, social influence, environmental awareness, and pricing have also been found to shape green purchase behavior for EVs (Lakshika & Hemamali, 2020; Bektaş & Akyıldız Alçura, 2024). Environmental concern plays a crucial role in shaping attitudes and perceived behavioral control, which, in turn, affect sustainable consumption intentions (Dutta & Hwang, 2021).

In parallel, the Technology Acceptance Model (TAM) provides a strong theoretical framework to examine how perceived ease of use influences EV adoption. Defined as the degree to which consumers believe that using a particular technology will be free of effort, perceived ease of use has been shown to positively impact the intention to use EVs (Ambak et al., 2006). Several studies have expanded the TAM framework by incorporating elements such as pro-environmental motivations and social comparison influences, further strengthening its relevance (Diandra et al., 2023; Shanmugavel et al., 2022). Perceived usefulness often acts as a mediating factor between ease of use and adoption, while demographic variables such as age, gender, and income may moderate the strength of this relationship.

H1: Green marketing influences intention to use EVs.
H2: Perceived ease of use influences intention to use EVs.

The Influence of Perceived Usefulness and Perceived Value on Intention to Use EVs

Perceived usefulness and perceived value are two critical determinants that shape consumers' intention to adopt electric vehicles (EVs). According to the Technology Acceptance Model (TAM), perceived usefulness refers to the degree to which a person believes that using a particular technology will enhance their performance or bring practical benefits. This variable has been widely applied in studies of EV adoption and has consistently shown a significant influence on user intention (Ambak et al., 2006; Sukma et al., 2023). Research has also expanded TAM by integrating pro-environmental motivations and innovation-driven behaviors, along with social comparison elements such as informational and value-expressive influences (Shanmugavel et al., 2022). Perceived usefulness often functions as a mediating variable between external factors and behavioral intention, with demographic factors such as age, income, and gender moderating its effect (Diandra et al., 2023).

Alongside usefulness, perceived value also plays a central role in shaping behavioral intentions toward EV adoption. Perceived value reflects the consumer's overall assessment of the benefits received relative to the costs incurred and includes financial savings, environmental contribution, and psychological satisfaction (Hu et al., 2023;

Oktafiyanti et al., 2024). High-quality information about the environmental and performance benefits of EVs enhances perceived value, which in turn positively influences satisfaction and adoption decisions (Zhang et al., 2022). Both functional and symbolic values contribute to this intention, with symbolic value often playing a more prominent role (Du & Wang, 2020). Environmental responsibility, trust, and supportive policies further strengthen this relationship, although excessive information can reduce its impact (Loudiyi et al., 2022; Sukma et al., 2023).

H3: Perceived usefulness influences intention to use EVs.
H4: Perceived value influences intention to use EVs.

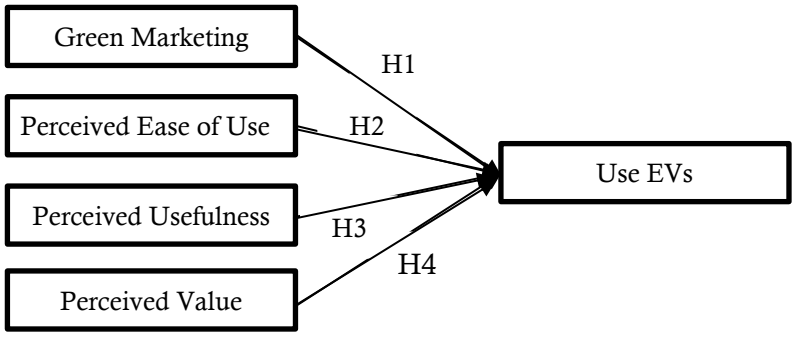

Figure 1. Research Framework

Figure 1 illustrates a conceptual model of research on factors that influence people's intention to use electric vehicles (EVs). This model consists of four independent variables: Green Marketing, Perceived Ease of Use, Perceived Usefulness, and Perceived Value, each of which is assumed to have a direct influence on the dependent variable, intention to use EVs.

RESEARCH METHOD

This study employs a quantitative associative approach to examine the factors that influence consumers' intentions to adopt electric vehicles (EVs) in East Java Province, Indonesia. This research method was chosen to statistically explore the relationships among key variables, namely Green Marketing, Perceived Ease of Use, Perceived Usefulness, and Perceived Value, within the framework of the Technology Acceptance Model (TAM). The purpose is to determine how these variables impact consumer behavioral intentions to adopt EVs as a sustainable mode of transportation. The sample of 250 respondents was drawn using a convenience sampling technique to ensure accessibility and efficiency in data collection, particularly considering the diverse and dispersed population of vehicle users in East Java. The model was constructed based on the Technology Acceptance Model (TAM), incorporating additional constructs such as green marketing and perceived value to enhance explanatory power. Measurement items for each variable were adapted from validated prior studies and assessed using a Likert scale to ensure reliability and construct validity. Data were collected through the distribution of structured questionnaires, which contained both demographic and perception-based questions measured using a Likert scale.

The data analysis utilized Partial Least Squares Structural Equation Modeling (PLS-SEM), a robust analytical technique suitable for examining complex causal relationships involving latent constructs. This analysis was conducted using the SmartPLS software, which facilitates the assessment of measurement models and structural models. Prior to hypothesis testing, a series of validity and reliability tests were conducted, including outer loadings, composite reliability, Cronbach's alpha, and Average Variance Extracted (AVE), to ensure that the measurement instruments used were statistically sound and appropriate for further analysis. In light of increasing environmental challenges and declining public health conditions associated with pollution, the adoption of

environmentally friendly alternatives like EVs is gaining importance. Eco-conscious consumption behavior, reflected in the preference for non-polluting, resource-conserving, and recyclable products, is shaping modern purchasing decisions. However, despite rising environmental awareness, Indonesia's EV market remains underdeveloped.

Data from the Central Bureau of Statistics (2024) reported that fuel-powered vehicles dominate the roads with over 157 million units, whereas the number of EVs is still minimal. To address this gap, the Ministry of Energy and Mineral Resources set a target of converting 150,000 motorcycles to electric in 2024, an ambitious leap from 50,000 conversions in 2023. The rationale for this study is also supported by the growing demand for sustainable business strategies that integrate marketing efforts with environmental objectives. The marketing mixes, particularly when applied through green marketing strategies, play a vital role in influencing environmentally responsible purchasing behaviors by delivering value and shaping consumer preferences. By focusing on EV adoption in the Indonesian context, this research contributes to the broader discourse on sustainable consumption and marketing. It differentiates itself from previous studies by integrating TAM with green marketing and perceived value constructs, aiming to present a comprehensive understanding of the motivational drivers behind EV use from a consumer behavior standpoint.

RESULTS

Table 1 presents the demographic characteristics of the respondents in this study, comprising 250 individuals. Based on age, most respondents were under 20 years old (34.40%), followed by the 21–30 age group (26.00%), and the 31–40 age group (21.60%). As many as 63.20% of respondents were male, while 36.80% were female. In terms of education, most respondents had a bachelor's degree (54.00%), followed by high school graduates (36.80%) and master's (9.20%). These data indicate that the majority of respondents were young men with a higher educational background.

Table 1. Characteristics of Research Subjects

Characteristics		N	Percentage (%)
Age	< 20 Years	86	34.40%
	21 - 30 years	65	26.00%
	31 - 40 years	54	21.60%
	41 – 50 years	32	12.80%
	> 50 Years	13	5.20%
Gender	Male	158	63.20%
	Female	92	36.80%
Education	Senior High School	92	36.80%
	Bachelor's Degrees	135	54.00%
	Master Degree	23	9.20%

The evaluation of the reflective measurement model involves assessing the relationship between a construct and its indicators, typically illustrated with arrows pointing from the construct (represented by an ellipse) to its indicators (represented by rectangles). This evaluation process consists of two key stages: testing for convergent validity and discriminant validity.

Convergent Validity is used to determine the extent to which a variable's indicators reflect the underlying theoretical construct. This assessment involves three key components: outer loadings, composite reliability, and Average Variance Extracted (AVE). Outer loadings measure the correlation between each indicator and its associated latent construct, with a threshold value of 0.5 or higher indicating acceptable validity. These values are typically retrieved from the PLS Algorithm Report generated in SmartPLS. To visualize the relationship between indicators and their respective constructs, a path diagram (Inner Model) is presented in the following figure.

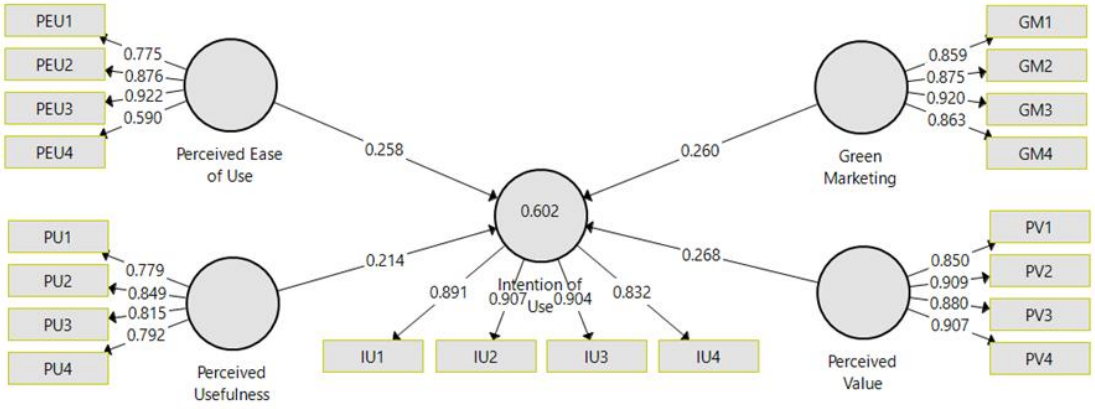

Figure 2. Research Structure Model (Measurement Outer Model)

Based on the calculated loading factor values for each indicator associated with the construct. the findings indicate that all indicators meet the required validity standard on Figure 2, as each loading factor surpasses the 0.50 threshold. Therefore, the outer loading validity test is deemed satisfactory, indicating that the measurement model is suitable for further analysis. An alternative presentation of the outer loading results is available in Table 2.

Table 2. Outer Loading

Variable	Indicators	Outer Loading
Green Marketing	GM1	0.859
	GM2	0.875
	GM3	0.920
	GM4	0.863
	IU1	0.891
Intention of Use	IU2	0.907
	IU3	0.904
	IU4	0.832
Perceived Ease of Use	PEU1	0.775
	PEU2	0.876
	PEU3	0.922
	PEU4	0.590
Perceived Usefulness	PU1	0.779
	PU2	0.849
	PU3	0.815
	PU4	0.792
Perceived Value	PV1	0.850
	PV2	0.909
	PV3	0.880
	PV4	0.907

Table 2 presents the outer loading results for each indicator that measures the five variables in this study: Green Marketing, Intention of Use, Perceived Ease of Use, Perceived Usefulness, and Perceived Value. All indicators show outer loading values above 0.70, which means they have met the convergent validity criteria, except for one indicator in the Perceived Ease of Use (PEU4) variable, which has a value of 0.590 but is still minimally acceptable. The highest value is in the GM3 indicator (0.920), and the lowest value is in PEU4. Overall, these results indicate that the indicators used are strong enough to represent each construct.Referring to Table 3, the results of the composite reliability test indicate that all constructs meet the reliability requirements, with each construct exhibiting a composite reliability score above 0.7. Alongside composite reliability, the Average Variance Extracted (AVE) is also employed to evaluate reliability. AVE represents the proportion of variance a construct captures from its indicators while accounting for measurement error. As a validity metric, AVE is considered more rigorous

than composite reliability. All constructs in this study have AVE values above 0.6, confirming that they possess strong convergent validity.

Table 3. Construct Reliability and Validity

Variable	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Green Marketing	0.903	0.932	0.774
Intention of Use	0.906	0.935	0.782
Perceived Ease of Use	0.805	0.875	0.642
Perceived Usefulness	0.827	0.883	0.655
Perceived Value	0.910	0.936	0.786

Discriminant validity assesses how well an indicator distinguishes its intended construct from others. It is typically evaluated through cross-loading analysis, where an indicator is considered valid if its loading on its own construct is higher than on others. Another method involves comparing the square root of the Average Variance Extracted (√AVE) with inter-construct correlations. Validity is confirmed if the √AVE exceeds these correlations. In Smart PLS, this validity is commonly tested using the Fornell-Larcker Criterion and cross-loading values.

Table 4. Cross Loading

Indicator	Green Marketing	Intention of Use	Perceived Ease of Use	Perceived Usefulness	Perceived Value
GM1	0.859	0.441	0.365	0.199	0.312
GM2	0.875	0.492	0.390	0.190	0.401
GM3	0.920	0.504	0.425	0.204	0.484
GM4	0.863	0.580	0.511	0.255	0.613
IU1	0.554	0.891	0.582	0.429	0.583
IU2	0.453	0.907	0.614	0.409	0.553
IU3	0.577	0.904	0.582	0.539	0.549
IU4	0.453	0.832	0.552	0.402	0.605
PEU1	0.302	0.404	0.775	0.429	0.581
PEU2	0.448	0.644	0.876	0.456	0.461
PEU3	0.407	0.598	0.922	0.462	0.527
PEU4	0.392	0.402	0.590	0.198	0.500
PU1	0.268	0.450	0.341	0.779	0.242
PU2	0.127	0.377	0.477	0.849	0.308
PU3	0.107	0.283	0.427	0.815	0.233
PU4	0.238	0.466	0.373	0.792	0.396
PV1	0.419	0.486	0.563	0.282	0.850
PV2	0.440	0.551	0.555	0.348	0.909
PV3	0.481	0.651	0.541	0.363	0.880
PV4	0.520	0.585	0.577	0.324	0.907

To assess cross-loading validity on Table 4, the focus is placed on the highlighted loading values, which indicate the correlation between each indicator and its designated construct. When these values are consistently higher than their cross-loadings with other constructs. it suggests that the indicators accurately represent their respective constructs. Thus, it can be concluded that the discriminant validity across all variables is adequate. The following step is to compare the correlations between constructs with the square root of the Average Variance Extracted (√AVE). A measurement model is deemed to have strong discriminant validity if the √AVE of each construct exceeds its correlation with any other construct. These √AVE values are derived from the Fornell-Larcker Criterion output in Smart PLS., as displayed in the corresponding table.

Table 5. Fornell-Larcker Criterion

Variable	Green Marketing	Intention of Use	Perceived Ease of Use	Perceived Usefulness	Perceived Value
Green Marketing	0.880				
Intention of Use	0.579	0.884			
Perceived Ease of Use	0.487	0.659	0.801		
Perceived Usefulness	0.244	0.505	0.494	0.809	
Perceived Value	0.527	0.647	0.629	0.374	0.887

The Fornell-Larcker Criterion is interpreted by analyzing the values in each row of Table 5. For example, the Green Marketing variable has a √AVE value of 0.880, which is higher than its highest correlation with any other variable, recorded at 0.579. This demonstrates that Green Marketing's √AVE surpasses its correlations with other constructs. The same pattern is observed for all other variables, where each √AVE value is greater than the respective correlations with other constructs. As a result, it can be concluded that the model meets the discriminant validity requirements according to the √AVE criterion.

The R Square value for the Intention of Use variable is 0.602, indicating that 60.2% of the variance in individuals' intention to use is explained by the model's independent variables.

The R Square value for the intention to use variable is 0.602, which means that green marketing, perceived ease of use, perceived usefulness, and perceived value together account for 60.2% of the variance in the intention to use. The remaining 39.8% is attributed to other variables not examined in this model. In addition, the significance of each proposed path is assessed using p-values, with a significance threshold of $\alpha = 0.05$. A p-value below 0.05 indicates a significant effect and supports the acceptance of the hypothesis, whereas a p-value above 0.05 suggests no significant effect, resulting in hypothesis rejection. These structural model assessments are based on the Bootstrapping Report generated by Smart PLS.

Table 6. Hypothesis Test

Hypothesis	Original Sample	T- Statistics	P-Values	Information
Green Marketing -> Intention of Use	0.260	4.575	0.000	Accepted
Perceived Ease of Use -> Intention of Use	0.258	3.365	0.001	Accepted
Perceived Usefulness -> Intention of Use	0.214	3.689	0.000	Accepted
Perceived Value -> Intention of Use	0.268	3.363	0.001	Accepted

Among the four proposed hypotheses listed in Table 6, all show p-values below 0.05, indicating that each hypothesis is accepted. This means that the relationships between the exogenous variables, perceived ease of use, perceived usefulness, green marketing, and perceived value, and the endogenous variable, intention to adopt electric vehicles (EVs), are all statistically significant. Among them, the perceived value variable shows the strongest influence on intention to adopt EVs, with the highest coefficient or original sample value of 0.268.

DISCUSSION

Electric vehicles are increasingly seen as a key solution to addressing environmental issues, particularly air pollution caused by emissions from fossil fuel-powered vehicles. Amid growing public awareness of the importance of environmental sustainability, green marketing strategies have become essential tools for companies in promoting eco-friendly products like electric vehicles (Lestaluhu et al., 2023; Marbun et al., 2024). Green marketing not only focuses on promoting the technical advantages of electric vehicles, but also emphasizes the sustainability values they offer. In East Java, where conventional

vehicle usage is still quite high, this strategy has proven effective in encouraging the public's intention to switch to electric vehicles (Solekah et al., 2023; Bi et al., 2023). The positive impact of green marketing on the intention to use electric vehicles in East Java can be seen through various indicators, such as increased purchase interest, greater demand for information about electric vehicles, and consumer test drives. Green marketing has succeeded in building the perception that switching to electric vehicles is not only an economic decision but also an ethical and responsible step towards safeguarding the environment's future.

In the contemporary era, electric vehicles provide eco-friendly and energy-efficient alternatives. Nevertheless, the public acceptance of electric vehicles in East Java is contingent not only on environmental considerations but also on the perceived ease of use (Hussain & Qureshi, 2024). This perception plays a significant role, as the simpler a technology is to use, the higher the probability of its adoption (Chen & Lu, 2016). Factors such as operational simplicity, charging convenience, minimal maintenance, and accessibility of technological information influence an individual's inclination towards electric vehicles. In essence, the greater the ease of use of an electric vehicle, the higher the likelihood of its adoption.

In the adoption of electric vehicle technology, Perceived Usefulness stands out as a crucial factor influencing public decision-making. This concept refers to the extent to which individuals believe that utilizing specific technology will enhance their effectiveness or deliver practical advantages in daily activities. In East Java, this perception plays a pivotal role in shaping the public's intention to use electric vehicles, commonly referred to as the intention of use. Perceived Usefulness reflects the belief that electric vehicles provide not only environmental benefits, but also concrete, measurable advantages across various aspects of use. The strong link between Perceived Usefulness and the intention to adopt electric vehicles in East Java is supported by factors such as reduced operational expenses, greater energy efficiency and performance, positive environmental impact, ease of technological adaptation, and long-term benefits (Hussain & Qureshi, 2024).

Perceived Usefulness plays a vital role in shaping the intention to adopt electric vehicles in East Java. When individuals recognize that electric vehicles offer concrete advantages, whether through cost savings, improved performance, or positive environmental effects, they become more inclined to consider and ultimately adopt this technology (Chen & Lu, 2016). As a result, the higher the perceived benefits, the stronger the motivation among the public to transition toward more sustainable transportation options.

Similarly, Perceived Value is a major determinant influencing the willingness to use electric vehicles in East Java (Xu et al., 2024). This concept refers to how consumers assess the benefits they gain from a product in relation to the costs or sacrifices they must incur (Chen & Lu, 2016). When individuals perceive that electric vehicles offer value that meets or surpasses their investment, their interest in adopting the technology increases. In urban centers such as Surabaya, Malang, and Sidoarjo, Perceived Value significantly drives the public's shift away from fossil-fueled vehicles. This effect is supported by several contributing factors: a favorable benefit-to-cost ratio, environmental advantages, greater user convenience, social and lifestyle relevance, and the appeal of advanced safety and technological innovations. Collectively, these elements underscore the strong and positive influence of Perceived Value on the intention to adopt electric vehicles in East Java.

CONCLUSION

This study reveals that all four proposed hypotheses, Perceived Ease of Use, Perceived Usefulness, Green Marketing, and Perceived Value, have a significant positive effect on the intention to adopt electric vehicles (EVs) in East Java. These findings indicate that improved public perceptions of these variables substantially increase interest in using EVs. The results offer empirical confirmation that psychological, technological, and marketing-related factors are influential in shaping EV adoption behavior at the individual level.

From a practical standpoint, these findings provide essential insights for policymakers and industry stakeholders. The government is advised to intensify programs that promote the use of electric vehicles as a solution to environmental degradation, while also encouraging behavioral change toward more sustainable transportation choices. Furthermore, Green Marketing strategies must be reinforced through comprehensive public awareness campaigns and environmental education integrated into all levels of schooling. Automotive producers are also expected to enhance the accessibility of EVs by offering more affordable models, thereby stimulating wider adoption among the general population.

Theoretically, this study contributes to the ongoing development of EV adoption models by validating the applicability of the Technology Acceptance Model (TAM) in the context of sustainable transportation. The inclusion of Green Marketing and Perceived Value further strengthens the multidimensional framework for analyzing consumer behavior in environmentally conscious contexts. However, this study has limitations, including its geographic focus on East Java and the limited range of variables considered.

Future research should broaden the scope by incorporating additional behavioral, infrastructural, and policy-related factors across diverse regions in Indonesia. By doing so, subsequent studies can offer a more comprehensive understanding of the public's readiness to transition to electric vehicles, thereby supporting both academic discourse and environmental sustainability efforts.

REFERENCES

[1] Ambak, K., Harun, N. E., Rosli, N., Daniel, B. D., Prasetijo, J., & Ezree, M. (2006). Driver intention to use electric cars using technology acceptance model. *Age, 3*(7), 1–4.

[2] Amoako, G. K., Dzogbenuku, R. K., Doe, J., & Adjaison, G. K. (2022). Green marketing and the SDGs: Emerging market perspective. *Marketing Intelligence & Planning, 40*(3), 310–327.

[3] Barbarossa, C., De Pelsmacker, P., & Moons, I. (2017). Personal values, green self-identity and electric car adoption. *Ecological Economics, 140*(1), 190–200.

[4] Bektaş, B. C., & Akyıldız Alçura, G. (2024). Understanding electric vehicle adoption in Türkiye: Analyzing user motivations through the technology acceptance model. *Sustainability, 16*(21), 9439–9450.

[5] Bestari, D. K. P., & Butarbutar, D. A. (2021). Implementation of green marketing strategies and green purchase behavior as efforts to strengthen the competitiveness of MSMEs in Indonesia. *Budapest International Research and Critics Institute (BIRCI-Journal): Humanities and Social Sciences, 4*(1), 243–254.

[6] Bi, C., Jin, S., Li, S., & Li, Y. N. (2023). Can green advertising increase consumers' purchase intention of electric vehicles? An experimental study from China. *Journal of Cleaner Production, 8*(4), 419–426.

[7] Braga Junior, S., Martínez, M. P., Correa, C. M., Moura-Leite, R. C., & Da Silva, D. (2019). Greenwashing effect, attitudes, and beliefs in green consumption. *RAUSP Management Journal, 54*(2), 226–241.

[8] Chen, S.-Y., & Lu, C.-C. J. (2016). Exploring the relationships of green perceived value, the diffusion of innovations, and the technology acceptance model of green transportation. *Transportation Journal, 4*(5), 51–77.

[9] Diandra, D., Ruswanti, E., Hidayah, Z., & Azmy, A. (2023). Electric vehicle adoption and sustainability in the urban city: A technology acceptance model analysis. *Proceeding of The International Seminar on Business, Economics, Social Science and Technology, 1*(1), 1–10.

[10] Du, H., & Wang, Y. (2020). An empirical study on the relationship among perceived value, satisfaction and behavioral intentions of battery electric vehicle user in China. *IOP Conference Series: Earth and Environmental Science, 546*(1), 1–10.

[11] Dutta, B., & Hwang, H.-G. (2021). Consumers purchase intentions of green electric vehicles: The influence of consumers technological and environmental considerations. *Sustainability, 13*(4), 1205–1218.

[12] Febrian, L., & Ramli, Y. (2024). The influences of environmental knowledge and awareness towards electric car purchase intention mediated by green purchase attitude. *Journal of Sustainable Economic and Business, 1*(4), 201–209.

[13] Hu, X., Zhou, R., Wang, S., Gao, L., & Zhu, Z. (2023). Consumers' value perception and intention to purchase electric vehicles: A benefit-risk analysis. *Research in Transportation Business & Management, 5*(6), 49–58.

[14] Hussain, S., & Qureshi, I. M. (2024). Electric vehicle adoption: The nexus of knowledge, perceived usefulness, and ease of use. *Qlantic Journal of Social Sciences and Humanities, 5*(2), 154–161.

[15] Koul, S., & Eydgahi, A. (2018). Utilizing technology acceptance model (TAM) for driverless car technology adoption. *Journal of Technology Management & Innovation, 13*(4), 37–46.
[16] Lakshika, V. G. P., & Hemamali, K. A. G. A. (2020). Antecedents of the green purchase intention towards electric cars: The Sri Lankan customers' perspective. *Journal of Business Studies, 7*(1), 65–78.
[17] Lestaluhu, S., Baharuddin, T., & Wance, M. (2023). Indonesian policy campaign for electric vehicles to tackle climate change: Maximizing social media. *International Journal of Sustainable Development & Planning, 18*(8), 123–134.
[18] Liu, Y., Ouyang, Z., & Cheng, P. (2019). Predicting consumers' adoption of electric vehicles during the city smog crisis: An application of the protective action decision model. *Journal of Environmental Psychology, 6*(4), 30–38.
[19] Loudiyi, H., Chetioui, Y., & Lebdaoui, H. (2022). Economics of electric vehicle adoption: An integrated framework for investigating the antecedents of perceived value and purchase intent. *International Journal of Economics and Financial Issues, 4*(2), 32–46.
[20] Manutworakit, P., & Choocharukul, K. (2022). Factors influencing battery electric vehicle adoption in Thailand—Expanding the unified theory of acceptance and use of technology's variables. *Sustainability, 14*(14), 84–92.
[21] Marbun, L. B., Bukit, R. P., & Pane, S. G. (2024). The influence of using green marketing on intention to purchase environmentally friendly products. *Journal of Education Technology Information Social Sciences and Health, 3*(1), 634–648.
[22] Mauliza, P., Fauzi, P. D. A., & Rini, D. E. S. (2019). The influence of green product, green advertising, and green brand on decision to buy through consumers' trust in Tupperware products at SMPN Beureunerun. *International Journal of Research & Review, 6*(5), 149–166.
[23] Mishra, S. S., & Sheikh, Y. (2023). A study on impact of green marketing influences on consumers' decision to purchase electric vehicles in the automobile industry: With reference to Raipur City. *Praxis International Journal of Social Science and Literature, 7*(3), 345–354.
[24] Moons, I., & De Pelsmacker, P. (2015). An extended decomposed theory of planned behaviour to predict the usage intention of the electric car: A multi-group comparison. *Sustainability (Switzerland), 7*(5), 6212–6245.
[25] Narula, S. A., & Desore, A. (2016). Framing green consumer behaviour research: Opportunities and challenges. *Social Responsibility Journal, 12*(1), 1–22.
[26] Oktafiyanti, D., Anasti, A., & Aras, M. (2024). The influence of environmental communication, advertising, and eWOM toward purchase intention of electric vehicle in Indonesia. *Jurnal Ekonomi, 13*(2), 1536–1546.
[27] Purwanto, S., & Rini, H. P. (2024). Analysis of green moral obligation on intention to adopting electric vehicles (EV) with openness to changes and self enhancement as moderating variables. *East Asian Journal of Multidisciplinary Research, 2*(12), 5161–5174.
[28] Ramachandaran, S. D., Ng, H., Rajermani, R., & Raman, A. (2023). Factor influencing consumer's adoption of electric car in Malaysia. *TEM Journal, 12*(4), 260–278.
[29] Ransure, P. (2017). Green marketing: Its impact on society—Emerging challenges & opportunities. *International Research Journal of Multidisciplinary Studies, 3*(9), 4–6.
[30] Sefora, I., Chuchu, T., Chiliya, N., & Ndoro, T. (2019). An investigation of young consumers' perceptions towards the adoption of electric cars. *African Journal of Business and Economic Research, 14*(2), 107–120.
[31] Shanmugavel, N., Alagappan, C., & Balakrishnan, J. (2022). Acceptance of electric vehicles: A dual-factor approach using social comparison theory and technology acceptance model. *Research in Transportation Business & Management, 4*(3), 65–78.
[32] Silaban, P. H., Silalahi, A. D. K., & Octoyuda, E. (2021). Understanding consumers' addiction to online mobile games and in apps purchase intention: Players stickiness as the mediation. *Jurnal Manajemen Dan Pemasaran Jasa, 14*(2), 165–178.
[33] Solekah, N. A., Ratnasari, K., & Hirmawan, A. P. (2023). Prediction of green purchase intention for electric vehicles: A theory of planned behavior approach. *Jurnal Minds: Manajemen Ide dan Inspirasi, 10*(2), 297–320.
[34] Solihin, F., Yulisetiarini, D., Wihelmina, I. D., & Wardana, F. R. (2019). The effect of green marketing strategy on purchasing decisions: A review of previous research. *International Journal of Scientific & Technology Research, 8*(12), 3662–3665.
[35] Soomro, R. B., Mirani, I. A., Sajid Ali, M., & Marvi, S. (2020). Exploring the green purchasing behavior of young generation in Pakistan: Opportunities for green entrepreneurship. *Asia Pacific Journal of Innovation and Entrepreneurship, 14*(3), 289–302.
[36] Sukma, A., Suroso, A. I., & Hermadi, I. (2023). The effect of environmental concerns and government policies on the intention to buy electric car. *Business Review and Case Studies, 4*(1), 52–60.
[37] Vebriyanto, S., & Hadi, E. D. (2023). Faktor yang mempengaruhi green purchase intention: Dimediasi oleh green trust. *REVITALISASI: Jurnal Ilmu Manajemen, 12*(2), 283–291.
[38] Wu, J., Liao, H., Wang, J.-W., & Chen, T. (2019). The role of environmental concern in the public acceptance of autonomous electric vehicles: A survey from China. *Transportation Research Part F: Traffic Psychology and Behaviour, 6*(2), 37–46.

[39] Xu, Y., Shan, X., Guo, M., Gao, W., & Lin, Y.-S. (2024). Design and application of experience management tools from the perspective of customer perceived value: A study on the electric vehicle market. *World Electric Vehicle Journal, 15*(8), 378–390.

[40] Yamuna, S. M. (2014). A study on consumer preference towards green marketing products. *International Journal of Scientific Research, 3*(2), 185–187.

[41] Zhang, W., Wang, S., Wan, L., Zhang, Z., & Zhao, D. (2022). Information perspective for understanding consumers' perceptions of electric vehicles and adoption intentions. *Transportation Research Part D: Transport and Environment, 1*(2), 10–23.

[42] Zhou, K. Z., Kin, C., Yim, B., & Tse, D. K. (2005). The effects of strategic orientations on technology- and market-based breakthrough innovations. *Journal of Marketing, 42*(2), 1–10.