

The Effects of Environmental Awareness and Green Marketing on Electric Vehicle Purchase Intention Among Millennials

Ernawan Dwi Hanartyo¹, Tio Lina Sinaga²

Esa Unggul University Jakarta, Indonesia

E-mail: ernawanhanartyo@gmail.com¹, tiolinanaga30@student.esaunggul.ac.id²

Correspondence: ernawanhanartyo@gmail.com

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ABSTRACT

The increasing attention to climate change and sustainability issues is driving the development of electric vehicles as a more environmentally friendly transportation alternative. However, the adoption rate of electric vehicles in Indonesia still faces various challenges, so it is necessary to understand the factors that can shape consumer purchase intentions. This study aims to analyze the role of environmental awareness and the green marketing mix in shaping the purchase intention of millennials regarding electric vehicles in Jakarta. This study uses a quantitative approach with a purposive sampling technique by distributing questionnaires to 180 millennial respondents in Jakarta. Data analysis was conducted using Structural Equation Modeling-Partial Least Squares (SEM-PLS). The results show that all proposed hypotheses are acceptable. Environmental awareness is the most dominant factor in shaping purchase intentions. In addition, the green marketing mix also contributes to shaping purchase intentions, although green price has the lowest contribution compared to other variables. These findings indicate that millennials not only consider the price aspect, but also pay more attention to environmental benefits, product characteristics, ease of access to infrastructure, and the effectiveness of green marketing communications before developing the intention to own an electric vehicle. This research offers practical implications for electric vehicle manufacturers and stakeholders in designing integrated green marketing strategies through increased environmental education, sustainable product development, and the provision of supporting infrastructure. Future research is recommended to expand the scope of the study, involve a wider range of respondent characteristics, and add other relevant variables to gain a more comprehensive understanding of purchase intentions for electric vehicles.

Keywords: *Environmental Awareness, Green Product, Green Price, Green Place, Green Promotion, Purchase Intention.*

INTRODUCTION

In the rapidly evolving era of globalization, technological advancement has had various impacts on the environment. Environmental degradation and global warming are among the most common negative effects (Amika & Riorini, 2023). These phenomena have heightened public environmental awareness and the attitude of valuing and preserving nature to prevent further damage caused by human activity (Sanjaya et al., 2023). This awareness encourages people to care more about environmental sustainability and to consider the ecological implications of their consumption habits (Hamzah et al., 2023). The transportation sector is one of the largest contributors to emissions in Indonesia. The ever-increasing need for transportation, driven by high market demand, is reflected in data from Gaikindo (2025), which recorded a total of 865, 723 four-wheeled vehicle sales throughout 2024. From an environmental perspective, Indonesia's transportation sector accounts for approximately 25% of the total national energy-related emissions, equivalent to 202 million tons of CO₂ in 2024, and without a serious decarbonization strategy, these emissions could nearly triple by 2060 (Ministry of Energy and Mineral Resources, 2025). This situation indicates an urgent need for solutions within Indonesia's transportation sector to mitigate its environmental impact.

In response to the urgent need for decarbonization, electric vehicles (EVs) have emerged as a strategic solution to reduce greenhouse gas emissions and enhance energy efficiency compared to conventional vehicles (Nur & Kurniawan, 2021; Zhang et al., 2023; Pratama, 2024). Despite substantial fiscal incentives and policy support from the government, EV adoption in Indonesia has yet to meet established targets; data from the Ministry of Industry (2025) indicate that the EV population reached only 207,000 units in 2024, a

figure far below the 600,000-unit target set for 2030 (Ministry of Industry, 2025). This gap between government policy and market reality suggests that consumer purchase interest remains low (Yuniarti et al., 2024). This phenomenon underscores the need for an in-depth analysis of the determinants of consumer behavior regarding green technology adoption to ensure a more optimal clean energy transition within the transportation sector.

To encourage the adoption of electric vehicles, companies need to implement comprehensive green marketing strategies using the green marketing mix approach. The first element, the green product, refers to products designed to minimize environmental impact through eco-friendly materials and energy efficiency factors proven to positively influence consumer purchase intention (Hernizar et al., 2020; Dewi et al., 2020). The second element, green price, reflects both the economic value and ecological benefits perceived by consumers; a price perception aligned with environmental value serves as a crucial determinant of purchasing decisions (Ogiemwonyi, 2022; Karunarathna, 2020). The third element is a green place distribution strategy that ensures easy access for consumers to acquire eco-friendly products and their supporting facilities, thereby significantly enhancing convenience and purchase intention (Bastian et al., 2021). Finally, green promotion through the effective communication of environmental benefits plays a vital role in shaping positive consumer perceptions regarding product superiority (Karunarathna, 2020; Ramli et al., 2020; Putra et al., 2024). By integrating these four elements, it is expected that consumer psychological barriers can be overcome, leading to a significant increase in purchase intention for electric vehicles.

Various studies have identified factors influencing the purchase intention for electric vehicles. Among these, environmental awareness is identified as a primary motivator for consumers to choose electric vehicles (Tripopsakul, 2024). Research by Yaputra et al. (2023) also suggests that sustainability and "green" values can drive purchase intentions for electric vehicles. Furthermore, Bhutto et al. (2021) found that environmentally conscious consumers tend to hold positive attitudes and are willing to pay a premium for electric vehicles. In addition to environmental awareness, effective green marketing strategies have been shown to build trust and strengthen consumer purchase intentions regarding eco-friendly products (Dangelico & Vocalelli, 2022; Ramadhan et al., 2024).

Based on the above description, this study aims to fill the research gap regarding the adoption of electric vehicles in Indonesia by analyzing the influence of environmental awareness and green marketing on the purchase intention of electric vehicles (EV) among the millennial generation in Jakarta. Although previous research, such as Tripopsakul (2024), Yaputra et al. (2023), and Bhutto et al. (2021), has confirmed that environmental awareness and sustainability values are the main drivers of purchase intention, the majority of these studies still focus on environmental concern or environmental knowledge variables separately. Unlike previous research, this study contributes novelty through simultaneous testing of environmental awareness as an internal consumer factor and green marketing strategy (4P) as an external stimulus in one comprehensive behavioral model. In addition, research from Dangelico & Vocalelli (2022) and Ramadhan et al. (2024) tends to study green products in general, while this research focuses on the unique behavior of the millennial generation in Jakarta, who have different accessibility characteristics and technology preferences. Thus, it is hoped that this research will enrich the literature on green consumer behavior and provide practical implications for EV manufacturers and policy-makers in designing more targeted marketing strategies to accelerate the adoption of electric vehicles in Indonesia.

LITERATURE REVIEW

Electric Vehicles

According to Kusuma et al. (2024), an electric vehicle is a vehicle that utilizes an electric motor as its primary propulsion system, drawing energy from a battery or another electrical source. Siombo and Adi (2025) explain that battery-based electric vehicles use electrical energy as their main power source to support energy transition programs and carbon emission reductions aimed at achieving Net Zero Emissions. Mara et al. (2023) add that electric vehicles employ electric motors as their primary propulsion system, using electricity as an alternative to fossil fuels, which are becoming increasingly scarce and have negative environmental impacts.

Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (TPB), developed by Ajzen (1991), serves as a primary framework for predicting individual intentions and behaviors. According to Ajzen, an individual's purchase intention is shaped by three key determinants: attitude toward the behavior, subjective norms, and perceived behavioral control. In this study, TPB is employed to explain that environmental awareness plays a role in shaping consumers' positive attitudes, while green marketing strategies reinforce subjective norms and perceived

behavioral control, thereby simultaneously driving the formation of purchase intentions for electric vehicles among millennials in Jakarta.

Theory of Consumption Values (TCV)

Sheth (1991) et al. 's Theory of Consumption Values (TCV) is used to complement the Theory of Planned Behavior (TPB) by explaining product choice motives based on consumers' perceived values (Tanrikulu, 2021). This theory encompasses five value dimensions: functional value, social value, emotional value, epistemic value, and conditional value. In this context, TCV explains that environmental awareness and green marketing play a role in shaping consumer perceptions regarding the functional and social values of electric vehicles, which ultimately strengthens consumer purchase intention.

Environmental Awareness

Environmental awareness is the attitude of valuing and preserving the natural environment. It represents an internal drive to prevent human-induced environmental degradation (Sanjaya et al., 2023). According to Hamzah et al. (2023), environmental awareness refers to an individual's level of understanding and concern regarding environmental sustainability, which underpins responsible consumption behavior. Zhuang et al. (2021) define environmental awareness as an individual's ability to comprehend the impact of human activities on ecosystems. Meanwhile, Suki et al. (2016) state that environmental awareness reflects an individual's moral responsibility to choose cleaner products to mitigate global warming.

Green Marketing

According to Sharma (2021), green marketing is defined as activities aimed at satisfying consumer needs in an environmentally responsible manner while simultaneously creating economic and ecological value. It is emphasized that this strategy represents not only corporate social responsibility but also a potential source of competitive advantage in an increasingly environmentally conscious market (Bhutto et al., 2021). Rizaldi and Fachroddi (2025) found that functional, conditional, and environmental consumption values positively influence consumer "green trust," which in turn strengthens green purchase intentions for eco-friendly products, indicating that effective green marketing must be capable of genuinely building consumer trust. In this study, green marketing is treated as four distinct constructs: green product, green price, green place, and green promotion, each representing consumer perceptions of a specific dimension of a company's eco-friendly marketing activities (Ramli et al., 2020).

Kotler and Keller (2022) explain that green marketing can be measured through four key dimensions, representing extensions of the traditional marketing mix (4Ps) that are oriented toward environmental sustainability: (1) Green Product, which refers to products designed and manufactured with consideration for their environmental impact, including the selection of raw materials, production processes, and post-use disposal, such as the use of recyclable and low-emission materials; (2) Green Price, which involves pricing strategies that consider investments in environmentally friendly technologies and production processes while remaining competitive and providing consumers with value commensurate with the environmental benefits offered; (3) Green Place, which encompasses distribution strategies and sales channels designed to minimize environmental impact, for example, through transportation efficiency, reduced carbon emissions throughout the distribution process, and the provision of supporting infrastructure, such as strategically located and environmentally friendly charging stations; and (4) Green Promotion, which refers to marketing communication activities that transparently and honestly communicate information about a product's environmental benefits, thereby fostering consumer trust and reducing the risk of perceived greenwashing. These four dimensions are employed in this study as distinct constructs to measure consumers' perceptions of environmentally oriented product, pricing, distribution, and promotional strategies implemented by electric vehicle companies (Dangelico & Vocalelli, 2022; Ramli et al., 2020).

Purchase Intention

According to Yuniarti et al. (2024), purchase intention refers to a consumer's inclination or plan to purchase a product in the future. According to Ramadhan et al. (2024), purchase intention is the result of a consumer's positive attitude toward technological innovation. According to Ramli et al. (2020), purchase intention is the stage at which an individual has a conscious plan to make a purchase due to value alignment. According to Peña-García et al. (2020), purchase intention is a decision influenced by motivation, perceived risk, product value, and attitude toward the brand. According to Zhuang et al. (2021), purchase intention is formed through a combination of perceived value, perceived quality, and perceived price.

THEORETICAL FRAMEWORK AND HYPOTHESES**Environmental Awareness with Purchase Intention**

Based on the Theory of Planned Behavior, Ajzen (1991) explains that an individual's intention to perform a behavior is influenced by their attitude toward that behavior. In the context of electric vehicles, consumers with high environmental awareness tend to form a positive attitude toward electric vehicles, as they are perceived to align with concerns for environmental sustainability. This positive attitude can subsequently foster purchase intention. This relationship is supported by research from Yuniarti et al. (2024) and Tripopsakul (2024), which indicates that concern for environmental issues can drive consumers to form an intention to purchase eco-friendly products, including electric vehicles. However, Kautish et al. (2021) demonstrate that environmental awareness does not always directly drive purchase intention, particularly when consumers have not yet experienced the tangible benefits of the product. Based on the Theory of Planned Behavior and findings from previous research, environmental awareness is expected to have a positive influence on the purchase intention for electric vehicles. Therefore, the research hypothesis is formulated as follows:

H₁: Environmental Awareness has a positive effect on Purchase Intention.

Green Products with Purchase Intention

A green product is defined as one designed to minimize negative environmental impacts through the use of eco-friendly materials, energy efficiency, and the capacity to reduce emissions. In the context of electric vehicles, this is exemplified by the vehicle's ability to generate lower emissions compared to conventional vehicles, thereby supporting environmental sustainability. Hernizar et al. (2020) state that green products have a positive and significant influence on green purchase intention. Green products are manufactured and marketed with due regard for their environmental impact; they are characterized by the use of safe, recyclable materials free from hazardous substances, as well as the use of eco-friendly packaging (Aulia et al., 2024). With rising environmental awareness, consumers are increasingly considering sustainability aspects when selecting products (Fianda et al., 2021). Eco-friendly products offer not only functional utility but also reflect values and an identity associated with sustainability. Such products can steer consumer lifestyles toward greener practices; products designed with sustainability principles foster a perception of added value that boosts purchase intention, including among environmentally conscious consumers (Hartanto et al., 2023). Research by Dewi et al. (2020) further demonstrates that a product's eco-friendly characteristics can enhance consumer purchase interest. Consequently, the more positive the consumer perception regarding the eco-friendly attributes of electric vehicles, the greater the consumer interest in purchasing them. Based on the foregoing discussion, the following hypothesis is proposed:

H₂: Green Products have a positive effect on Purchase Intention.

Green Price with Purchase Intention

Green price refers to a consumer's perception regarding the alignment between a product's price and the environmental benefits it provides. In green marketing, price is viewed not merely as a cost incurred by the consumer but also as the value derived from the economic and environmental benefits offered by the product. Research by Tian et al. (2022) explains that price perceptions of eco-friendly products influence consumer evaluations in forming green purchase intentions, particularly when the price is deemed commensurate with the quality and environmental benefits obtained. Furthermore, research by Tan et al. (2025) demonstrates that consumer perceptions of green product prices positively influence green purchase intention; consumers are more inclined to purchase when the price is considered reasonable and aligned with the value received. This is further supported by earlier research (Nabilah & Iriantini, 2022), which states that green price has a positive and significant effect on green purchase intention, meaning that an increase in green price leads to an increase in green purchase intention. Therefore, if consumers perceive the price of electric vehicles as being in line with the benefits obtained, their purchase intention regarding electric vehicles will increase. Based on the preceding discussion, the following hypothesis is formulated:

H₃: Green Price has a positive effect on Purchase Intention.

Green Place with Purchase Intention

In the context of electric vehicle marketing, "green place" is not limited to the availability of physical distribution channels or dealerships; crucially, it encompasses the accessibility and availability of supporting infrastructure, particularly public electric vehicle charging stations. The availability of adequate charging stations at strategic locations is a primary determinant of consumer convenience in operating electric vehicles and helps alleviate "range anxiety" (the fear of running out of power). Logically, broader coverage and easier

access to charging stations enhance the perceived ease of using electric vehicles, which in turn strengthens consumer purchase intention. Research by Bastian et al. (2021) supports this argument, stating that distribution effectiveness and the accessibility of supporting facilities significantly influence consumer perceptions and purchase intentions. Therefore, guaranteed ease of access to the charging ecosystem is a key determinant driving consumers to purchase electric vehicles. Based on the empirical findings above, the following hypothesis is proposed:

H₄: Green Place has a positive effect on Purchase Intention.

Green Promotion with Purchase Intention

Green promotion refers to promotional activities that highlight a product's environmental benefits to consumers. Through effective promotion, companies can enhance consumer understanding of a product's environmental advantages, thereby fostering a positive perception of the product. Karunarathna (2020) found that eco-friendly promotion influences consumer purchase intention. Furthermore, Ramli et al. (2020) demonstrated that green marketing has a positive impact on customer awareness and purchase decisions. Putra et al. (2024) also found that green marketing strategies positively influence purchase intention. Thus, the more effective a company's eco-friendly promotion is, the higher the consumer interest in purchasing electric vehicles. Accordingly, based on the preceding discussion, the following hypothesis is proposed:

H₅: Green Promotion has a positive effect on Purchase Intention.

Based on the theoretical logic explanation above, the following research model was created:

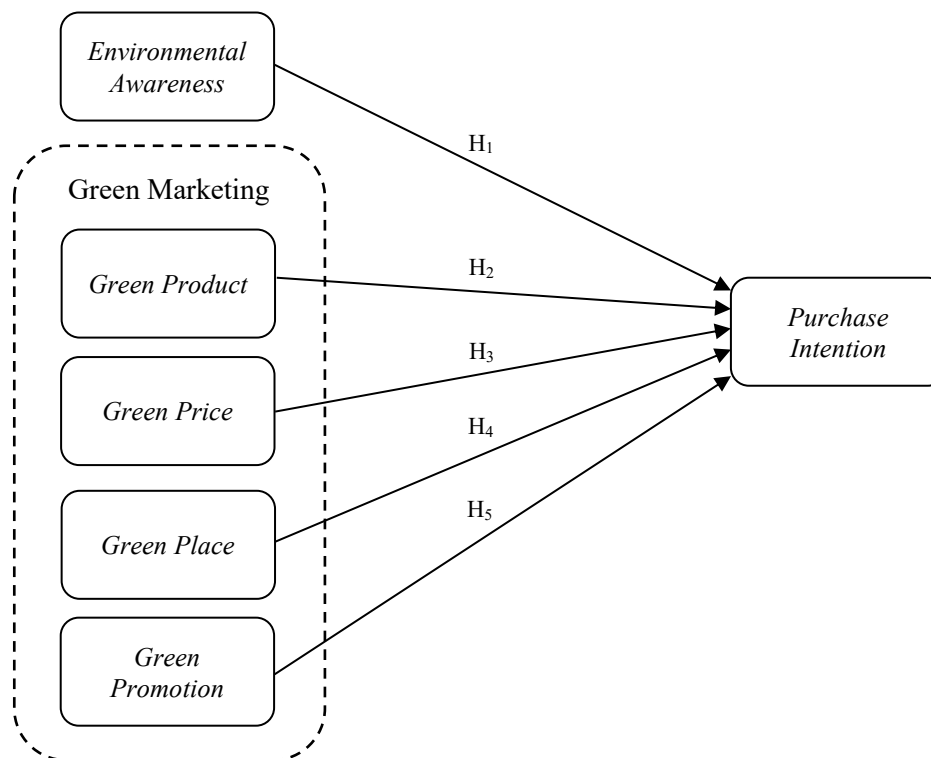


Figure 1. Conceptual Framework

RESEARCH METHOD

Based on the research model shown in Figure 1, this study employs five independent variables, specifically environmental awareness and the green marketing mix, and one dependent variable: purchase intention. The green marketing variable is broken down into four dimensions, each with its own distinct path of influence on purchase intention: green product (H_2), green price (H_3), green place (H_4), and green promotion (H_5). Meanwhile, the environmental awareness variable is tested directly as a single predictor of purchase intention (H_1). Thus, the model simultaneously examines five influence paths (H_1 through H_5), all of which converge on a single dependent variable: the purchase intention for electric vehicles among Millennials in Jakarta.

This study adapted instruments from previously validated journals, resulting in 20 indicators in the research questionnaire. The measurement of the Environmental Awareness variable comprises five statements adopted from Kautish et al. (2021) to assess an individual's level of concern regarding ecosystem sustainability. The measurement of Green Marketing consists of ten statements adopted and developed from

Dangelico & Vocalelli (2022), Kotler & Keller (2022), and Chairunnisa et al. (2019); these are treated as four separate variables or constructs based on their respective dimensions: Green Product (two statements), Green Price (two statements), Green Place (three statements), and Green Promotion (three statements). This separation was implemented because each dimension is tested as a distinct path of influence on Purchase Intention (H2 through H5) rather than as a single, unified construct. Finally, the measurement of the Purchase Intention variable comprises five statements adopted from Astuti & Susanto (2024) to gauge the extent of consumers' readiness and plans to purchase electric vehicles in the near future.

This study employs a non-probability sampling technique, specifically purposive sampling, whereby the sample is selected based on criteria aligned with the research objectives. The study population consists of Millennials residing in Jakarta who are aware of the existence of electric vehicles. The selection of Millennials is based on relevant demographic and digital characteristics. BPS (2024) notes that Millennials constitute the second-largest population group in Indonesia, numbering 69.38 million (25.87%), while APJII (2024) reports an internet penetration rate of 93.17% among this demographic. Furthermore, PwC Indonesia (2023) found that Millennials accounted for 72% of respondents in an electric vehicle readiness survey, showing purchase interest of 78% for electric cars and 74% for electric motorcycles. Based on these considerations, the sample criteria for this study are Millennials aged 30–45 who reside in Jakarta and are aware of the existence of electric vehicles.

Data collection was conducted by distributing an online questionnaire via Google Forms. The questionnaire utilized a 5-point Likert scale, where a score of 5 indicated "Strongly Agree" (SS), 4 indicated "Agree" (S), 3 indicated "Neutral" (N), 2 indicated "Disagree" (TS), and 1 indicated "Strongly Disagree" (STS). This study employed a quantitative research design using the structural equation modeling (SEM) method. Sample size determination was based on the recommendations of Hair et al. (2022), who suggested that the sample size for SEM analysis should range from 5 to 10 times the number of indicators used. As this study involved 20 indicators, the sample size was set at 180 respondents, which is nine times the number of indicators (20×9), and falls within the recommended range. A pre-test involving 30 respondents was conducted to evaluate the research instrument. Subsequently, construct validity and reliability were tested using the PLS-SEM method through an evaluation of the outer model, encompassing outer loading values, Average Variance Extracted (AVE), Composite Reliability (CR), and Cronbach's Alpha (Hair et al., 2021). Indicators were considered to meet convergent validity requirements if they exhibited an outer loading of at least 0.70 and an AVE value greater than 0.50. Meanwhile, indicators were deemed reliable if both their CR and Cronbach's alpha values exceeded 0.70.

Subsequently, the primary data comprising responses from 180 participants were analyzed using the structural equation modeling (SEM) method to evaluate both the outer and inner models. The outer model assessment involved examining the loading factor, outer loading, average variance extracted (AVE), composite reliability (CR), and Cronbach's alpha. Meanwhile, the inner model assessment encompassed the VIF criteria, R-squared (R^2), f-squared (f^2), and Path Coefficients. Convergent validity was determined by examining the loading factor values in the outer loading table and the average variance extracted (AVE) values. According to Hair et al. (2022), the thresholds for establishing convergent validity are > 0.7 for loading factors and > 0.5 for AVE values. Additionally, indicators were deemed reliable if their CR and Cronbach's alpha values exceeded 0.70.

Next, the evaluation of the structural model (inner model) aims to measure the strength of the relationships between latent variables. First, VIF is used to detect multicollinearity; a value below 5.0 indicates that the model is free from excessive correlation among independent variables. Second, R^2 measures the model's ability to explain data variance, with values of 0.25, 0.50, and 0.75 representing weak, moderate, and strong levels of influence, respectively. Additionally, f^2 serves to determine the substantive impact of a variable on the dependent variable; values of 0.02, 0.15, and 0.35 are categorized as small, medium, and large effects, respectively. Finally, the path coefficient is assessed using a two-tailed test; according to Hair et al. (2022), if the T-statistic exceeds the critical T-value (1.960) and the p-value is less than 0.05, a significant positive influence is indicated, while the direction of the relationship can be determined by examining the original sample value.

RESULTS AND DISCUSSION

Based on the pre-test instrument results involving 30 respondents, all research variables met the criteria for convergent validity and reliability. The Average Variance Extracted (AVE) values for the six variables ranged from 0.770 to 0.903, thereby exceeding the minimum threshold of 0.50. These results indicate that each construct explains more than 50% of the variance in its respective indicators. Furthermore, Composite Reliability (CR) values ranged from 0.902 to 0.964, while Cronbach's Alpha values ranged from

0.784 to 0.953. Additionally, rho_A values showed favorable results, ranging from 0.796 to 0.988. All these values met the recommended criterion of exceeding 0.70, demonstrating a high level of internal consistency for each construct. Consequently, all research variables comprising Environmental Awareness, Green Place, Green Price, Green Product, Green Promotion, and Purchase Intention were deemed valid and reliable. Therefore, the research instrument is suitable for use in the main survey with a larger sample size.

Based on the online questionnaire distributed via Google Forms, 180 respondents met the research criteria. In terms of gender, the respondents consisted of 114 females (57.2%) and 86 males (42.8%). Regarding primary occupation, the majority of respondents were entrepreneurs or freelancers (32.2%). In terms of education, most respondents held a bachelor's degree (65.6%), while regarding monthly expenditure, the majority fell within the IDR 4,000,001–IDR 6,000,000 range (35.6%).

Outer Model Test Results

Table 1. Results of Respondent Data Validity Test

<i>Variable</i>	<i>Indicator</i>	<i>Outer Loading</i>	<i>Cronbach's Alpha</i>	<i>Composite Reliability</i>	<i>AVE</i>
<i>Environmental Awareness</i>	EA1	0.940	0.964	0.972	0.875
	EA2	0.925			
	EA3	0.930			
	EA4	0.919			
	EA5	0.926			
<i>Green Product</i>	GPT1	0.941	0.945	0.965	0.901
	GPT2	0.914			
<i>Green Price</i>	GPC1	0.941	0.809	0.912	0.839
	GPC2	0.946			
<i>Green Place</i>	GPL1	0.939	0.925	0.964	0.930
	GPL2	0.938			
	GPL3	0.949			
<i>Green Promotion</i>	GPM1	0.939	0.914	0.946	0.853
	GPM2	0.938			
	GPM3	0.949			
<i>Purchase Intention</i>	PI1	0.939	0.965	0.973	0.876
	PI2	0.938			
	PI3	0.949			
	PI4	0.933			
	PI5	0.880			

Source: Researcher-processed data findings, 2026

Convergent validity was evaluated using outer loading values and the Average Variance Extracted (AVE). Hair et al. (2021) state that an indicator meets convergent validity if it has an outer loading > 0.70 , and a construct meets the requirement if it has an AVE > 0.50 . Based on Table 1, all indicators for Environmental Awareness, Green Product, Green Price, Green Place, Green Promotion, and Purchase Intention exhibited outer loadings ranging from 0.893 to 0.966 and AVE values ranging from 0.839 to 0.930. All these values met the established criteria; therefore, all constructs were deemed to satisfy convergent validity. Construct reliability was tested using Cronbach's Alpha and Composite Reliability. Hair et al. (2021) recommend values > 0.70 . The test results showed Cronbach's Alpha values ranging from 0.809 to 0.965 and Composite Reliability values ranging from 0.912 to 0.973. All values met the criteria, indicating that the constructs in this study were valid and reliable, and thus suitable for further analysis.

Discriminant validity indicates that a construct is clearly distinct from other constructs (Hair et al., 2021). Testing was conducted using the HTMT ratio, Fornell-Larcker criterion, and cross-loading analysis. The HTMT values for all constructs were below 0.90, thereby satisfying the discriminant validity criteria (Hair et al., 2021). Furthermore, the Fornell-Larcker criterion results showed diagonal values ($\sqrt{\text{AVE}}$) ranging from 0.916 to 0.964, which were higher than the inter-construct correlations (0.670–0.910). Cross-loading results also demonstrated that each indicator correlated more strongly with its intended construct than with other constructs. Thus, all constructs in this study satisfied the discriminant validity requirements and were capable of clearly measuring distinct concepts.

Table 2. Model Fit

	<i>Saturated Model</i>
SRMR	0.036

	<i>Saturated Model</i>
d_ ULS	0.275
d_ G	0.685
Chi-Square	399.395
NFI	0.857

Source: Researcher-processed data findings, 2026

Model fit is a value that shows the level of suitability of a model as a whole, which is calculated based on the residual value between the predicted model and the actual data. Based on the analysis results in Table 2, the Standardized Root Mean Square Residual (SRMR) value is 0.036, so it can be stated that the model has met the model fit criteria. Furthermore, the Normed Fit Index (NFI) value is 0.857 or 85.7%, which shows that the structural model built has a good level of suitability (goodness of fit); therefore, it is suitable for use for further analysis.

Table 3. R Square Adjusted

	<i>R Square</i>	<i>R Square Adjusted</i>	<i>Conclusion</i>
<i>Purchase Intention</i>	0.773	0.761	Strong

Source: Researcher-processed data findings, 2026

The next step involves examining the R-squared value; values of 0.75, 0.50, and 0.25 indicate strong, moderate, and weak outer models, respectively. The coefficient of determination indicates the extent to which the independent variables explain the dependent variable (Hair et al., 2021). Calculations reveal that the variables Environmental Awareness, Green Product, Green Price, Green Place, and Green Promotion collectively explain 76.1% of the variance in Purchase Intention, as indicated by an Adjusted R-squared value of 0.761. Meanwhile, the remaining 23.9% is explained by factors outside the research model that were not analyzed in this study, such as Green Brand Image, Green Trust, Green Perceived Value, Environmental Concern, Green Advertising, Eco-labels, Green Packaging, and other consumer characteristic factors. Thus, the Adjusted R-squared value of 0.761 demonstrates that the research model possesses a strong capacity to explain the variation in the Purchase Intention variable.

Table 4. F-Square (f^2)

	<i>F Square</i>
<i>Environmental Awareness → Purchase Intention</i>	0.117
<i>Green Place → Purchase Intention</i>	0.065
<i>Green Price → Purchase Intention</i>	0.046
<i>Green Product → Purchase Intention</i>	0.105
<i>Green Promotion → Purchase Intention</i>	0.092

Source: Researcher-processed data findings, 2026

An effect size (f^2) analysis was conducted to determine the magnitude of the contribution of each exogenous variable to the endogenous variable. According to Hair et al. (2021), f^2 values of 0.02, 0.15, and 0.35 indicate small, medium, and large effects, respectively. Based on the test results in Table 3, the f^2 values regarding Purchase Intention were 0.117 for Environmental Awareness, 0.065 for Green Place, 0.046 for Green Price, 0.105 for Green Product, and 0.092 for Green Promotion. All these values fall within the range of 0.02 to < 0.15, indicating that each variable has a small effect on Purchase Intention. Nevertheless, all variables contribute to explaining the variation in Purchase Intention, although the magnitude of each variable's individual effect remains relatively low.

Inner Model Results (Hypothesis Testing)

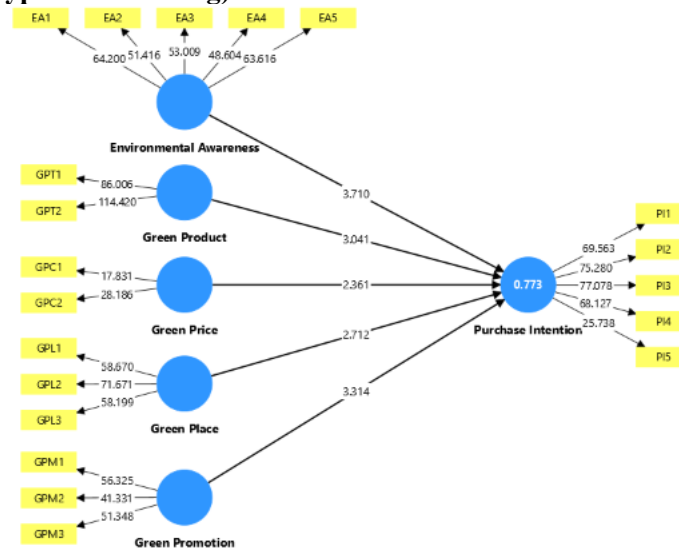


Figure 2. Hypothesis Test Results

The inner model (hypothesis test) of the study was conducted by examining the significance of the path coefficients. According to Hair et al. (2021), if the statistical T value is greater than the T table (1.960) at the 5% level, with a p-value < 0.050, a significant effect can be considered. The direction of the relationship can be determined by examining the original sample values. Based on the results of calculations using the bootstrapping method, the results are obtained in the table below:

Table 5. Direct Influence Test Results

	<i>Hypothesis</i>	<i>Original Sample (O)</i>	<i>T Statistics (O/STDEV)</i>	<i>P Values</i>	<i>Information</i>
EA → PI	H ₁	0.332	3.710	0.000	The data support the hypothesis
GPT → PI	H ₂	0.379	3.041	0.002	The data support the hypothesis
GPC → PI	H ₃	-0.271	2.361	0.018	The data support the hypothesis
GPL → PI	H ₄	0.223	2.712	0.007	The data support the hypothesis
GPM → PI	H ₅	0.285	3.314	0.001	The data support the hypothesis

Source: Researcher-processed data findings, 2026

Inner model testing (hypothesis testing) was conducted by examining the significance of the path coefficients. A positive effect is indicated if the T-statistic value exceeds the T-table value (1.960) at the 5% significance level and the p-value is less than 0.050. Testing of Hypothesis 1 (H₁) regarding the effect of Environmental Awareness on Purchase Intention yielded an Original Sample value of 0.332, a T-statistic of 3.710, and a P-value of 0.000. Since the T-statistic exceeds 1.96 and the P-value is less than 0.05, it can be concluded that Environmental Awareness has a positive and significant effect on Purchase Intention. Thus, H₁ is accepted, meaning that the data support the hypothesis.

Hypothesis 2 (H₂) testing regarding the effect of green products on purchase intention yielded an original sample value of 0.379, a t-statistic of 3.041, and a p-value of 0.002. These values meet the hypothesis testing criteria; therefore, it can be concluded that green products have a positive and significant effect on purchase intention. Thus, H₂ is accepted, or the data support the hypothesis.

Testing of the third hypothesis (H₃) regarding the effect of green price on purchase intention yielded an original sample value of -0.271, a T-statistic of 2.361, and a P-value of 0.018. Since the T-statistic exceeds 1.96 and the P-value is below 0.05, it can be concluded that green price has a significant negative effect on purchase intention. Thus, H₃ is accepted, meaning that the data support the hypothesis. This indicates that the lower the offered price of electric cars, the higher the respondents' purchase intention, particularly among millennials in Jakarta who are interested in electric vehicles.

Hypothesis 4 (H₄) testing regarding the effect of green place on purchase intention yielded an original sample value of 0.223, a t-statistic of 2.712, and a p-value of 0.007. These values meet the hypothesis testing criteria; therefore, it can be concluded that green place has a positive and significant effect on purchase intention. Thus, H₄ is accepted, meaning that the data support the hypothesis.

Hypothesis 5 (H_5) testing regarding the effect of green promotion on purchase intention yielded an original sample value of 0.285, a t-statistic of 3.314, and a p-value of 0.001. Since the t-statistic exceeds 1.96 and the p-value is less than 0.05, it can be concluded that green promotion has a positive and significant effect on purchase intention. Thus, H_5 is accepted, meaning that the data support the hypothesis.

Based on the T-statistic values, the strongest influence is observed in the relationship between environmental awareness and purchase intention (3.710), making environmental awareness the most dominant factor in boosting electric vehicle purchase intentions among millennials in Jakarta. Conversely, the weakest influence is found in the relationship between green price and purchase intention (2.361). Although still significant, the impact of price is relatively smaller compared to other variables; consequently, respondents tend to prioritize long-term benefits, technological innovation, and environmental impact over the vehicle's initial price.

The initial findings indicate that environmental awareness shapes the purchase intention of millennials in Jakarta regarding electric vehicles. Respondents demonstrated concern for environmental impacts, understood that emissions from fossil-fuel vehicles contribute to air pollution, and believed that electric vehicles could help reduce their carbon footprint. This awareness drives the intention to consider electric vehicles as a future mode of transportation. These results demonstrate that higher environmental awareness correlates with a greater tendency among individuals to choose products that support sustainability. In this study, electric vehicles are viewed as a more environmentally friendly transportation alternative. The respondents' characteristics predominantly female, holding bachelor's degrees, earning between IDR 4,000,001 and IDR 6,000,000, and working as entrepreneurs or freelancers support these findings, as such individuals tend to be more open to environmental issues and technological innovations. Beyond having a significant impact, environmental awareness emerged as the most dominant variable in the research model. This indicates that awareness of environmental issues is a primary consideration for millennials when forming an intention to purchase electric vehicles. These findings align with research by Yuniarti et al. (2024) and Tripopsakul (2024), which state that environmental awareness influences consumer purchase intention.

The second finding indicates that "green product" attributes influence the purchase intention of millennials in Jakarta regarding electric vehicles. Respondents view electric vehicles as products designed to mitigate environmental impact, specifically air pollution, and thus consider the ecological benefits to be commensurate with the cost. This perception fosters an intention to consider electric vehicles as a future transportation option, even though their use requires adjustments to driving habits. These results demonstrate that eco-friendly characteristics are a crucial factor in shaping purchase intention. Electric vehicles are evaluated not merely for their transportation function but also for their contribution to environmental sustainability. The respondent profile dominated by individuals holding bachelor's to master's or doctoral degrees and earning a monthly income of IDR 4,000,001–IDR 6,000,000 also supports the acceptance of products requiring a higher investment, provided the perceived benefits justify the cost. These findings align with those of Fianda et al. (2021) and Hartanto et al. (2023), who established that green product attributes influence purchase intention.

The third finding indicates that "green price" plays a role in shaping the purchase intention of millennials in Jakarta regarding electric vehicles. The relationship shows that the more affordable the price of an electric vehicle, the higher the respondents' inclination to purchase one. This suggests that price affordability, including the role of government incentives, is a crucial factor in enhancing the appeal of electric vehicles. These results confirm that "green price" reflects not only the monetary cost but also consumers' perceptions of their financial ability to acquire an electric vehicle. The fact that the respondent pool was dominated by individuals with relatively stable incomes further supports this trend. These findings align with the work of Nabilah and Iriantini (2022) and Tan et al. (2025), who state that "green price" influences consumer purchase intention.

The fourth finding indicates that "green place" influences millennials' purchase intention regarding electric vehicles in Jakarta. The availability of easily accessible charging stations, dealerships, and service centers enhances the perception of accessibility and alleviates consumer concerns regarding the use and maintenance of electric vehicles. This suggests that improved access to the electric vehicle ecosystem increases the likelihood of consumers considering them as a transportation alternative. This finding is supported by the respondents' characteristics, specifically their relatively high mobility, and aligns with the work of Bastian et al. (2021) and Sabrina et al. (2026), which demonstrates a relationship between "green place" and purchase intention.

The fifth finding indicates that green promotion influences the purchase intention of millennials regarding electric vehicles in Jakarta. Promotional information that is clear, credible, and emphasizes

environmental benefits enhances consumer understanding and confidence when considering electric vehicles as a mode of transport. This underscores that green promotion serves not only as a marketing communication tool but also as an educational medium that shapes positive perceptions regarding the sustainability benefits of electric vehicles. The respondent profile dominated by individuals with bachelor's and master's or doctoral degrees supports the ability to evaluate green marketing information, while consumers with higher spending levels tend to be more prepared to consider such products. These findings align with Ramli et al. (2020) and Putra et al. (2024), who demonstrate a relationship between green promotion and purchase intention.

CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

The research findings indicate that all the variables studied—environmental awareness, green product, green price, green place, and green promotion—shape the purchase intention of millennials in Jakarta regarding electric vehicles. These results demonstrate that the intention to purchase an electric vehicle is influenced not only by environmental concern but also by consumer perceptions of product characteristics, the alignment of price with benefits, ease of access to infrastructure and support services, and the effectiveness of marketing communications emphasizing sustainability. Among the variables examined, environmental awareness emerged as the most dominant factor in shaping purchase intention, highlighting that awareness of environmental issues is a primary consideration for millennials when evaluating electric vehicles as a more eco-friendly transportation alternative. Conversely, green price was the variable with the lowest contribution. This suggests that while price remains a factor, millennials tend to prioritize environmental benefits, product characteristics, accessibility, and the quality of promotions when forming an intention to own an electric vehicle. Overall, the study underscores that fostering millennial interest in electric vehicles requires an integrated approach involving the strengthening of environmental awareness, the development of sustainability-oriented products, the provision of accessible infrastructure, value-driven pricing, and the implementation of green promotions that are informative, credible, and aligned with public needs.

The research findings imply that electric vehicle manufacturers, dealers, and stakeholders need to implement sustainability-oriented marketing strategies. Given that environmental awareness is the most dominant factor, companies must enhance education regarding the benefits of electric vehicles through digital campaigns, exhibitions, and collaborations with communities and educational institutions. Companies also need to maintain the quality of their "green products" by developing efficient, reliable, and safe technologies, accompanied by "green promotion" that is informative, transparent, and credible. Accessibility should be improved by expanding dealer networks, after-sales services, and charging station infrastructure. Although "green price" has the least impact, affordability must still be maintained through flexible financing schemes, sales promotions, and the utilization of government incentives. Such an integrated strategy can strengthen purchase intentions while simultaneously driving the sustainable adoption of electric vehicles.

This study has several limitations. First, the scope of respondents was limited to millennials in Jakarta; consequently, the findings cannot be generalized to regions with different demographic characteristics, infrastructure, and levels of environmental awareness. Second, the study examined only environmental awareness, green products, green price, green place, and green promotion, leaving out other factors such as government support, charging infrastructure, perceived value, green trust, social influence, and brand image. Third, the use of quantitative questionnaires and a cross-sectional design limited the in-depth exploration of consumer reasons and experiences and failed to capture changes in purchase intention resulting from developments in technology, policy, and the electric vehicle market.

This research could be expanded by incorporating other variables that potentially shape purchase intention regarding electric vehicles, such as brand image, perceived value, perceived risk, government support, charging infrastructure, social influence, and green trust, thereby providing a more comprehensive picture of the factors driving public interest in adopting electric vehicles.

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