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The Impact of Brand Image & Brand Trust on Consumer Purchase Intention Brand Study BYD Electrical Vehicle in JABODETABEK, Indonesia

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ABSTRACT

Rising urban air pollution driven largely by transportation emissions has intensified the urgency of accelerating electric vehicle adoption in Indonesia, yet public interest and understanding of EVs remain strikingly low despite BYD's rapid sales growth. This gap underscores the need to examine the psychological and perceptual factors that drive consumer purchase intention toward BYD. This study aims to examine the influence of brand image and brand trust on the purchase intention of BYD electric vehicle consumers in the Greater Jakarta (Jabodetabek) area. A quantitative research approach was employed using a purposive sampling technique, involving 154 respondents. Data were collected through a four-point Likert-scale questionnaire and analyzed using validity and reliability tests, classical assumption tests, and multiple linear regression with SPSS. The results indicate that both brand image ($t = 4.783$; $p = 0.001$) and brand trust ($t = 5.123$; $p = 0.001$) have a positive and statistically significant effect on purchase intention. These findings suggest that strengthening brand image and enhancing consumer trust are critical factors in increasing consumers' purchase intention toward BYD electric vehicles in Indonesia.

Keywords: Brand Image, Brand Trust, Electrical Vehicle, Indonesia, JABODETABEK, Purchase Intention.

JEL Code: E44, F31, F37, G15

I. Introduction

The problem of air quality in Indonesia's urban areas, particularly across the Greater Jakarta (Jabodetabek) metropolitan region, has become an increasingly urgent environmental issue. As Indonesia's largest urban agglomeration, Jabodetabek experiences intensive daily commuting and a high concentration of private motor vehicles, contributing to severe air pollution throughout the region. According to the IQAir World Air Quality Report 2025, several cities within Jabodetabek recorded annual PM2.5 concentrations far exceeding the World Health Organization (WHO) guideline of $5 \mu\text{g}/\text{m}^3$, including South Tangerang ($51.5 \mu\text{g}/\text{m}^3$), Cikarang ($44.6 \mu\text{g}/\text{m}^3$), Depok ($42.6 \mu\text{g}/\text{m}^3$), and Jakarta ($34.1 \mu\text{g}/\text{m}^3$), highlighting that poor air quality is a metropolitan-wide challenge rather than a problem confined to Jakarta alone (IQAir, 2025; Prihatini, 2026). This condition cannot be separated from the contribution of the transportation sector, which is recorded as the largest contributor of carbon monoxide emissions in Jakarta, reaching 96.36% or the equivalent of 28,317 tons per year (CNBC Indonesia, 2023), in line with the continuously increasing population of private motor vehicles in the region. Exhaust emissions from these fossil-fuel-powered vehicles ultimately impact public health, ranging from respiratory disorders to cardiovascular disease.

In response to this issue, the Indonesian government has pursued a policy of accelerating the energy transition through fiscal incentives for battery-based electric vehicles since 2023, in the form of Government-Borne VAT (PPN DTP), which subjects consumers to a rate of only 1–2% of the normal rate. This policy

continues to be updated, and in 2026 the government once again prepared a PPN DTP scheme of up to 100% for certain EV categories as part of its low-carbon economic acceleration strategy, targeting distribution to 200,000 electric vehicle units (Pajakku, 2026). In addition to policy support, the success of the transition to electric vehicles also depends on the involvement of various stakeholders in building a sustainable ecosystem. Sujatmiko et al. (2025), through a Systematic Literature Review approach, explain that electric vehicles not only reduce carbon emissions but also represent a long-term investment that creates economic, social, and environmental value. The study emphasizes that the acceleration of EV adoption is not determined solely by technology and incentives, but also by the process of value co-creation among manufacturers, the government, infrastructure providers, and consumers in building trust and positive perceptions toward electric vehicles (Sujatmiko et al., 2025).

In this context, BYD, a brand originating from China, has shown rapid sales growth since officially operating in Indonesia. Based on data from the Association of Indonesian Automotive Industries (GAIKINDO), throughout January–November 2025 BYD recorded sales of more than 47,300 units, capturing around 57% of the national electric vehicle (EV) market share, thereby solidifying its position as the leading EV brand in Indonesia (GAIKINDO, 2025). However, compared to the overall national automotive market, BYD's position is still far below conventional Japanese brands. Based on retail sales data throughout 2025, out of total national retail sales of 833,692 units, Toyota led with 258,923 units ($\pm 31\%$), while BYD ranked only sixth with 44,342 units ($\pm 5.3\%$) — trailing Toyota by around 5.8 times (Adhy Satrio, 2026; Ridwan Arifin, 2026).

Table 1. National Car Sales Ranking Data

Rank	Brand	2025 Retail Sales	Market Share
1	Toyota	258,923 units	$\pm 31\%$
2	Daihatsu	137,835 units	$\pm 16.5\%$
3	Honda	71,233 units	$\pm 8.5\%$
4	Mitsubishi	70,338 units	$\pm 8.4\%$
5	Suzuki	64,838 units	$\pm 7.8\%$
6	BYD	44,342 units	$\pm 5.3\%$

Although BYD's sales trend shows significant acceleration, this achievement is actually inversely proportional to the general level of understanding and interest among the Indonesian public regarding electric vehicles. A survey by Litbang Kompas of 1,200 respondents across 38 provinces showed that 53.9% of respondents were not interested in purchasing an electric vehicle, and only 36% were aware of the existence of the government subsidy program (Nabilah, 2024). Consumer concerns also remain high, particularly regarding battery replacement costs, which were a concern for 87% of respondents (INews.id, 2023). The gap between BYD's high sales achievement and the general public's low understanding of and interest in electric vehicles raises a problem relevant for further study. This condition indicates that consumers' purchasing decisions regarding BYD are most likely not driven solely by technical understanding of electric vehicles in general, but rather by psychological and perceptual factors toward the brand itself. From a marketing science perspective, brand image and brand trust are believed to play an important role in shaping consumer perceptions and beliefs, thereby driving the formation of purchase intention even though public literacy regarding the product category remains low. As a new entrant brand that has successfully penetrated the dominance of Japanese brands in the Indonesian market, BYD becomes a relevant object of study to examine the extent to which brand image and brand trust contribute to the formation of consumer purchase intention in the Jabodetabek region. Based on this research background, this study focuses on the influence of brand image and brand trust on the purchase intention of BYD electric vehicle consumers in the Jabodetabek region. This study aims to answer whether brand image influences purchase intention, whether brand trust influences purchase intention, and which variable has the most dominant influence on the purchase intention of BYD electric vehicle consumers.

II. Literature Review and Hypothesis Development

2.1. Brand image

Brand image refers to consumers' overall perceptions and beliefs about a brand, shaped by their experiences and interactions with it. More than just a name, logo, or symbol, a brand serves as a key element in building emotional connections between a company and its customers. As a result, brand image reflects the combined influence of all brand-related cues and plays an important role in consumers' decision-making processes (Wardhana, 2024). This study uses the Biel model as the basis for measuring brand image because it is considered capable of explaining consumer perception comprehensively and has been used in Xu's (2024) research in the context of BYD electric vehicles (Jingyao Xu, 2024). This model consists of three dimensions:

a. Corporate Image

Corporate image can be defined as the collective perception stakeholders hold of a company, formed through their evaluations of its corporate identity, reputation, communication activities, and organizational behavior. These perceptions are shaped by both internal organizational attributes and external environmental factors, making corporate image a dynamic construct that continuously evolves over time. As a result, corporate image plays a critical role in influencing stakeholders' trust, attitudes, and behavioral intentions toward the organization (Lopez et al., 2011).

b. Product and service image

Product/service image represents a core element of brand image because it reflects consumers' evaluations of a brand's products and services. These evaluations contribute significantly to the formation of overall brand perceptions and help establish emotional bonds between consumers and the brand through their experiences and interactions with the products (Jingyao Xu, 2024)

c. User Image

Brand user imagery refers to consumers' perceptions of the typical individuals who use a particular brand. These perceptions are based on the stereotypical human characteristics that consumers associate with the brand's users rather than with the brand itself (Parker, 2009).

2.2. Brand Trust

Brand trust is built upon the foundation of trust theory in relational relationships. Delgado et al. (2003) define brand trust as consumers' confident expectation regarding the reliability and goodwill of a brand, particularly in situations that contain risk for the consumer (Munuera-Aleman et al., 2003). In line with this, Morgan et al. (1994), in the article "The Commitment-Trust Theory of Relationship Marketing" published in the *Journal of Marketing*, assert that trust is a key variable in relationship marketing, where trust arises when one party has confidence in the reliability and integrity of an exchange partner. In the context of a brand, this means that consumers believe the brand will consistently deliver the value it has promised (Morgan & Hunt, 1994).

2.3. Purchase intention

Purchase intention refers to a consumer's willingness or likelihood to engage in a future purchasing behavior. It reflects the probability that consumers will choose to buy a product or service after evaluating the available information and forming a favorable attitude toward the offering (Wang et al., 2023). According to Zeithaml (1988), purchase intention is influenced by perceived quality and perceived value, where consumers tend to have a higher purchase intention when the benefits obtained are considered comparable to or exceeding the sacrifices incurred (Zeithaml et al., 1996). This study refers to the Theory of Planned Behavior (TPB) proposed by Ajzen (1991), which explains that purchase intention is influenced by three main factors, namely attitude toward the behavior, subjective norms (social influence or pressure), and perceived behavioral control (perceived ease or ability in making a purchase) (Ajzen, 1991).

Previous research reveals that brand image plays a significant role in shaping purchase intention. Lorents et al. (2024), in their study of 120 Xiaomi smartphone users in Jakarta using PLS-SEM (SmartPLS 4), found that brand image and brand experience can influence brand trust, which subsequently affects purchase

intention. Brand image was also proven to influence purchase intention both directly and through the mediation of brand trust (Lorents, 2024). Sanny et al. (2020), in their study on men's skincare in Indonesia with 203 respondents using the PLS-SEM method, proved that brand image has a positive and significant effect on purchase intention (Sanny et al., 2020). Irawan & Suprapti (2020), in their study on Vivo smartphones in the city of Denpasar with 110 respondents using the path analysis method, proved that brand image has a positive and significant effect on purchase intention (Irawan et al., 2020).

H1: Brand image has a positive effect on purchase intention

Previous research reveals that brand trust plays a significant role in shaping purchase intention. Dam Tri Cuong (2020), in his study on laptops in Ho Chi Minh City, Vietnam with 255 respondents using the PLS-SEM method, proved that brand trust has a positive and significant effect on purchase intention (Dam Tri Cuong, 2020). Husain et al. (2022), in their study on luxury brands in India with 453 respondents using the SEM-AMOS method, proved that brand trust has a positive and significant effect on purchase intention (Husain et al., 2022). Kumaresan & Chandramohan (2024), in their study on FMCG products in the city of Madurai, India with 167 respondents using Spearman's rank correlation, proved that brand trust has a positive and significant effect on purchase intention (Kumaresan, R. C., & Chandramohan, 2024).

H2: Brand Trust has a positive effect on purchase intention

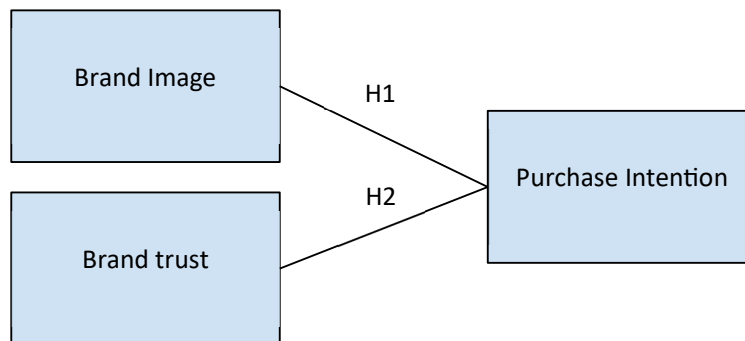


Figure 1. Conceptual Framework

III. Research Method

This study uses a quantitative approach to examine the influence of brand image and brand trust on purchase intention through statistical analysis. Quantitative research involves a systematic process of gathering, analyzing, interpreting, and reporting data to address research questions or test hypotheses (John W. Creswell, 2014). The research population consists of Indonesian people who have an interest in BYD electric vehicles and reside in the Jabodetabek region. The sampling technique used is non-probability sampling with the purposive sampling method, namely respondents aged 17–55 years, holding Indonesian citizenship (WNI), having an interest in BYD electric vehicles, and residing in Jabodetabek. The determination of the sample size refers to Hair et al. (2010), namely a minimum of five to ten times the number of research indicators (Widiawati et al., 2021). Based on this theory, I used five times the number of indicators, with a sample of 110. Although the minimum sample size of 110 respondents was met, the researcher increased the number of respondents to 154 respondents to improve the representativeness and reliability of the research results.

The data used are primary data collected through an online questionnaire using Google Forms. The research instrument used a four-point Likert scale, namely 1 (strongly disagree), 2 (disagree), 3 (agree), up to 4 (strongly agree). The use of the four-point Likert scale aims to reduce respondents' tendency to choose a neutral answer, thereby encouraging them to provide a more decisive assessment of each statement. According to Garland (1991), removing the mid-point option can minimize social desirability bias, namely the tendency of respondents to provide answers considered more favorable or socially acceptable compared to their actual condition (Garland, 1991). Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS), which includes validity and reliability testing, descriptive statistical analysis, classical assumption testing (normality, multicollinearity, and heteroscedasticity), multiple linear regression analysis,

the t-test, and the coefficient of determination (R^2) to test the hypotheses and explain the model's ability to account for variation in purchase intention.

Table 2. Research Constructs

Variable	Measurement Indicators	Source
Brand Image (corporate image)	BI1: The BYD brand is already widely known by the public. BI2: BYD is one of the leaders in the automotive industry. BI3: BYD cares about the environment. BI4: BYD is a company with strong capability and a good reputation.	(Jingyao Xu, 2024)
Brand Image (product & service image)	BI5: The quality of BYD's new energy vehicles is reliable. BI6: BYD electric vehicles are priced in a way that is cost-effective relative to the quality offered. BI7: BYD's new energy vehicles are available in a variety of model options. BI8: BYD electric vehicles are superior compared to other brands. BI9: The design of BYD electric vehicles matches modern aesthetics.	(Jingyao Xu, 2024)
Brand Image (user image)	BI10: Most consumers of BYD electric vehicles have concern for the environment. BI11: Most consumers of BYD electric vehicles are oriented toward a high quality of life. BI12: Most consumers of BYD electric vehicles come from younger age groups. BI13: Most consumers of BYD electric vehicles have a higher level of education.	(Jingyao Xu, 2024)
Brand Trust (BT)	BT1: I know that BYD keeps its promises. BT2: I am confident in BYD's ability to perform well. BT3: I know that BYD cares about my needs. BT4: I feel protected with BYD. BT5: I trust BYD.	(Li et al., 2008)
Purchase Intention (PI)	PI1: I intend to purchase the BYD brand in the future. PI2: I will try to purchase BYD. PI3: I am likely to purchase BYD. PI4: I plan to make a purchase of a BYD vehicle within the next few years.	(Becerra & Korgaonkar, 2011)

IV. Result and Discussion

4.1. Respondent Characteristics

Table 3. Respondent Profile

Category	Items	Frequency	Valid Percent
Gender	Male	78	50.6
	Female	76	49.4
	Total	154	100
Age	17–24	101	65.6
	25–34	22	14.3
	35–44	15	9.7
	45–55	16	10.4
	Total	154	100
Domicile	Jakarta	84	54.5

	Bogor	14	9.1
	Depok	12	7.8
	Tangerang	21	13.6
	Bekasi	23	14.9
	Total	154	100
Income	Rp500 thousand – Rp1 million	44	28.6
	Rp1 million – Rp5 million	51	33.1
	Rp5 million – Rp25 million	31	20.1
	Rp25 million – Rp50 million	4	2.6
	Rp50 million – Rp100 million	8	5.2
	None or Not Yet Employed	16	10.4
	Total	154	100

Based on gender, the respondents consisted of 78 males (50.6%) and 76 females (49.4%), indicating a relatively balanced distribution. Based on age, the majority of respondents were in the 17–24 age range (65.6%), showing that the study was dominated by the younger age group as a potential segment of the electric vehicle market. Based on domicile, most respondents came from Jakarta (54.5%), followed by Bekasi, Tangerang, Bogor, and Depok, so that the respondents represented the entire Jabodetabek region. In terms of income level, the majority of respondents had an income of Rp1 million–Rp5 million per month (33.1%), indicating that interest in BYD electric vehicles came from various income groups, with a dominance of the lower-middle group. Given that BYD's price falls within the premium segment, this finding indicates that the measured purchase intention tends to reflect a long-term intention.

4.2. Reliability Test

The reliability test was conducted to assess the level of consistency of the research instrument for each variable. Reliability was measured using the Cronbach's Alpha coefficient, where a value below 0.5 is categorized as unacceptable, below 0.6 as low, 0.6–0.7 as questionable, 0.7–0.8 as acceptable, 0.8–0.9 as indicating good reliability, and a value above 0.9 as indicating excellent reliability (Jingyao Xu, 2024).

Table 4. Reliability Test Results

Variable	Cronbach's Alpha	Indicators	Description
Brand Image	0.847	13	Reliable
Brand Trust	0.748	5	Reliable
Purchase Intention	0.802	4	Reliable

The reliability test results show that all variables in this study have a good level of reliability. The Brand Image variable obtained a Cronbach's Alpha value of 0.847, indicating good reliability, while the Brand Trust variable obtained 0.748 and Purchase Intention obtained 0.802, indicating acceptable to good reliability. Based on the classification proposed by Xu (2024), a Cronbach's Alpha value in the range of 0.7–0.8 falls into the acceptable category, while a value in the range of 0.8–0.9 falls into the good category.

4.3. Validity Test

The validity test is a procedure used to assess the level of accuracy of a research instrument in measuring the construct under study. A questionnaire is declared valid if each question item is able to represent and accurately measure the variable that is the research objective (Maulana, 2022). In this study, the number of respondents (n) was 154 people, yielding a degree of freedom (df) = $n - 2 = 152$. At a significance level of 5%, the r-table value obtained was 0.1330. An instrument is declared valid if the calculated r-value is greater than or equal to the r-table value ($r\text{-calculated} \geq 0.1330$). Conversely, if the calculated r-value is smaller than the r-table value ($r\text{-calculated} < 0.1330$), the instrument is declared invalid.

Table 5. Validity Test Results

Variable	Item	r-calculated	r-table	Description
Brand Image (X1)	BI1	0.515	0.1330	Valid
Brand Image (X1)	BI2	0.548	0.1330	Valid

Brand Image (X1)	BI3	0.549	0.1330	Valid
Brand Image (X1)	BI4	0.640	0.1330	Valid
Brand Image (X1)	BI5	0.623	0.1330	Valid
Brand Image (X1)	BI6	0.620	0.1330	Valid
Brand Image (X1)	BI7	0.579	0.1330	Valid
Brand Image (X1)	BI8	0.623	0.1330	Valid
Brand Image (X1)	BI9	0.612	0.1330	Valid
Brand Image (X1)	BI10	0.667	0.1330	Valid
Brand Image (X1)	BI11	0.559	0.1330	Valid
Brand Image (X1)	BI12	0.572	0.1330	Valid
Brand Image (X1)	BI13	0.623	0.1330	Valid
Brand Trust (X2)	BT1	0.355	0.1330	Valid
Brand Trust (X2)	BT2	0.344	0.1330	Valid
Brand Trust (X2)	BT3	0.414	0.1330	Valid
Brand Trust (X2)	BT4	0.522	0.1330	Valid
Brand Trust (X2)	BT5	1	0.1330	Valid
Purchase Intention (y)	PI1	0.776	0.1330	Valid
Purchase Intention (y)	PI2	0.782	0.1330	Valid
Purchase Intention (y)	PI3	0.817	0.1330	Valid
Purchase Intention (y)	PI4	0.793	0.1330	Valid

All statement items across the three research variables had calculated r-values greater than the r-table value of 0.1348, so all items were declared valid. For the Brand Image variable (X1), the calculated r-values of the 13 items ranged from 0.515 – 0.623. For the Brand Trust variable (X2), the calculated r-values of the 5 items ranged from 0.355 – 1. Meanwhile, for the Purchase Intention variable (Y), the calculated r-values of the 4 items ranged from 0.776–0.793, showing the highest level of validity among the three variables. Thus, all research instruments were declared valid and suitable for use in further data analysis.

4.4. Normality Test

The normality test is an important step in statistical analysis to assess whether the data used in the study are normally distributed, since violating this assumption risks producing biased or less valid results when using parametric statistical methods (Isnaini et al., 2025).

Table 6. Normality Test Results

N	Skewness Statistic	Skewness Std. Error	Kurtosis Statistic	Kurtosis Std. Error
154	-0.083	0.195	1.243	0.389

In the normality test, the researcher used the skewness and kurtosis method. A normality test using the skewness and kurtosis method can categorize data as normally distributed if all variables fall between < 3 and < 10 (Aminu et al., 2014). The skewness ratio and kurtosis ratio in this study were calculated using the following formulas (Dodiy Fahmeyzan et al., 2018):

$$\text{Skewness ratio} = \frac{\text{Skewness Statistic}}{\text{Std. Error}}$$

$$\text{Kurtosis Ratio} = \frac{\text{Kurtosis Statistic}}{\text{Std. Error}}$$

The calculation results show that a skewness value of -0.083 with a standard error of 0.195 yields a skewness ratio of -0.426. Furthermore, a kurtosis value of 1.243 with a standard error of 0.389 yields a kurtosis ratio of 3.195. These skewness and kurtosis ratio values indicate that the residual distribution does not deviate and that the data are normally distributed. Therefore, the residuals in the research model can be declared normally distributed, so the normality assumption has been met.

4.5. Heteroscedasticity Test

The heteroscedasticity test is used to determine whether there is inequality in the variance of residuals in the regression model. A model is said to experience heteroscedasticity if the residual variance differs across observations, whereas a constant residual variance indicates a condition of homoscedasticity. A good regression model is one that meets the assumption of homoscedasticity, such that it does not experience heteroscedasticity problems (Raditya Rachman, Sri Rahayu, 2022).

Table 7. Heteroscedasticity Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.772a	0.596	0.576	2.47148

The heteroscedasticity test in this study was conducted using the White Test to determine whether there is inequality in the variance of residuals in the regression model (White, 1980). The White Test calculates the χ^2 (Chi-Square) statistic based on the formula $\chi^2 = n \times R^2$, then compares it with the χ^2 table value. A regression model is declared free of heteroscedasticity if the calculated $\chi^2 < \text{the table } \chi^2$, whereas if the calculated $\chi^2 > \text{the table } \chi^2$, the model experiences heteroscedasticity (Desvalda, 2024). Based on Table X, an R Square value of 0.576 was obtained with a sample size (n) of 154, yielding a calculated χ^2 value of 88.704. This value is smaller than the χ^2 table value of 178.485 ($88.704 < 178.485$). Thus, it can be concluded that the regression model does not exhibit symptoms of heteroscedasticity, having met one of the classical assumptions, and is therefore suitable for further regression analysis.

4.6. Multicollinearity Test

The multicollinearity test is used to identify the presence or absence of a strong linear relationship among the independent variables in a multiple regression model. This test aims to ensure that each independent variable makes a distinct contribution in explaining the dependent variable. A good regression model is characterized by the absence of high correlation among the independent variables, so that the estimated regression coefficients become more stable, accurate, and easier to interpret (Effiyaldi et al., 2022).

Table 8. Multicollinearity Test Results

Model	Tolerance	VIF
BI.X1	0.51	1.96
BT.X2	0.51	1.96

The multicollinearity test was conducted to determine the presence or absence of high correlation among the independent variables in the regression model. A model is declared free of multicollinearity if the tolerance value is > 0.10 and the Variance Inflation Factor (VIF) is < 10 (Effiyaldi et al., 2022). Based on the test results, the brand image (BI.X1) and brand trust (BT.X2) variables each had a tolerance value of 0.51 and a VIF of 1.96. These values meet the criteria, so it can be concluded that the regression model does not exhibit symptoms of multicollinearity and is suitable for further regression analysis.

4.7. Coefficient of Determination Test

The coefficient of determination (R^2) serves to measure the extent to which the regression model is able to explain the relationship and influence of the independent variables on the dependent variable (Nusantara et al, 2023).

Table 9. Coefficient of Determination Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.721a	0.52	0.514	1.473

Based on the table above, the coefficient of determination, indicated by R Square, is 0.520. This result shows that the independent variables, namely Brand Image and Brand Trust, are able to explain the dependent variable, namely Purchase Intention, by 52%. Meanwhile, the remaining 48% is explained by other variables outside the research model that were not examined in this study.

4.7. Multiple Linear Regression Test

Multiple regression analysis is a method used to analyze the influence of several independent variables on a single dependent variable, as well as to understand and predict the relationship between variables (Jingyao Xu, 2024).

Table 10. Multiple Linear Regression Test Results

Model	B	Std. Error	Beta	t	Sig.
(Constant)	-0.537	1.064	-0.505		0.614
BI.X1	0.165	0.034	0.378	4.783	<.001
BT.X2	0.403	0.079	0.404	5.123	<.001

The model form used in this study is as follows:

$$Y = -0.537 + 0.165 X_1 + 0.403 X_2$$

Based on the results of the multiple linear regression analysis, a constant value of -0.537 was obtained. This shows that if the brand image (X1) and brand trust (X2) variables are assumed to be 0, the purchase intention (Y) value is -0.537. Meanwhile, the brand image variable has a positive regression coefficient of 0.165, meaning that every one-unit increase in brand image will increase purchase intention by 0.165, assuming other variables remain constant. In addition, the brand trust variable has a positive regression coefficient of 0.403, so that every one-unit increase in brand trust will increase purchase intention by 0.403, assuming other variables remain constant. These findings indicate that brand image and brand trust have a positive relationship with purchase intention, with the influence of brand trust being greater than that of brand image based on their regression coefficient values.

4.8. t-Test (Partial)

The t-test is used to test hypotheses partially, with the aim of determining the influence of each independent variable on the dependent variable individually. Through this test, it can be determined whether each independent variable has a significant influence in explaining the variation in the dependent variable (Shabrina et al., 2020)

Table 11. t-Test Results

Model	B	Std. Error	Beta	t	Sig.
(Constant)	-0.537	1.064	-0.505		0.614
BI.X1	0.165	0.034	0.378	4.783	<.001
BT.X2	0.403	0.079	0.404	5.123	<.001

Based on the analysis results in the table above, the calculated t-value (4.783) > t-table value (1.975) and sig. (0.001) < (0.05), so it is concluded that brand image has a positive effect on purchase intention, whereby H1 is accepted and H0 is rejected. Furthermore, based on the analysis results in the table above, the calculated t-value (5.123) > t-table value (1.975) and sig. (0.001) < (0.05), so it is concluded that brand image has a significant positive effect on purchase intention, whereby H2 is accepted and H0 is rejected.

4.9. Discussion

The results of the first hypothesis test indicate that brand image has a positive and significant effect on purchase intention, with a calculated t-value of 4.783, exceeding the t-table value of 1.975, and a significance value of 0.001 < 0.05; therefore, H1 is supported. The regression coefficient of 0.165 indicates that a one-unit increase in brand image is associated with a 0.165-unit increase in purchase intention. This finding is consistent with Lorents (2024), who studied Xiaomi smartphone users in Jakarta, Sanny et al. (2020), who examined men's skincare products in Indonesia, and Irawan & Suprpti (2020), who investigated Vivo smartphone users in Denpasar, all of whom found that brand image positively drives purchase intention across different product categories. A strong brand image—reflected through corporate image, product and service image, and user image—allows consumers to form a favorable perception of BYD even when their

general understanding of electric vehicle technology remains limited, suggesting that consumers evaluate BYD not only on functional attributes but also on the brand's overall reputation.

The results of the second hypothesis test indicate that brand trust has a positive and significant effect on purchase intention, with a calculated t-value of 5.123, exceeding the t-table value of 1.975, and a significance value of $0.001 < 0.05$; therefore, H2 is supported. The regression coefficient of 0.403 indicates that a one-unit increase in brand trust is associated with a 0.403-unit increase in purchase intention. This finding aligns with Dam Tri Cuong (2020) on laptop consumers in Ho Chi Minh City, Husain et al. (2022) on luxury brand consumers in India, and Kumaresan & Chandramohan (2024) on FMCG products in Madurai, all of whom confirmed that brand trust positively affects purchase intention. This supports Morgan and Hunt (1994), who argue that trust is a central variable in relationship marketing, whereby consumers develop stronger purchase intentions when they believe a brand will consistently deliver on its promised value. In the context of BYD as a relatively new entrant from China competing against long-established Japanese brands in Indonesia, consumer confidence in BYD's ability to honor its commitments regarding quality and service emerges as a critical determinant of purchase intention.

A comparison of the standardized beta coefficients in Table 10 shows that brand trust ($\beta = 0.404$) is a more dominant predictor of purchase intention than brand image ($\beta = 0.378$) among BYD consumers in the Jabodetabek region. This can be linked to conditions outlined in the introduction, particularly the high level of consumer concern regarding battery replacement costs reported by 87% of respondents in a survey by INews.id (2023), as well as the generally low public understanding of electric vehicles (Nabilah, 2024). Under such conditions of uncertainty, consumers appear to rely more heavily on brand trust as a basis for forming purchase intentions, consistent with Delgado et al. (2003), as cited in Munuera-Alemán et al. (2003), who assert that brand trust plays a particularly important role in situations involving consumer risk; the higher the perceived risk associated with a product category, the greater the role of brand trust in shaping purchase intention. These findings also help explain the gap identified in the background of this study, namely the disconnect between BYD's strong sales performance and the public's generally low interest in and understanding of electric vehicles. The coefficient of determination ($R^2 = 0.520$) indicates that brand image and brand trust jointly explain 52% of the variance in purchase intention, suggesting that consumer purchase intention toward BYD is driven more by brand perception and trust than by technical literacy regarding the electric vehicle category itself, a finding that further supports Sujatmiko et al. (2025), who argue that accelerating EV adoption depends not only on technology and incentives but also on building consumer trust and positive brand perceptions. Based on these results, BYD is advised to prioritize strengthening brand trust, particularly with respect to battery quality guarantees, after-sales service, and spare-parts availability, as these remain the primary sources of consumer concern, while also continuing to reinforce brand image through consistent marketing communication that highlights corporate reputation, product quality, and a positive user image, in order to sustain and increase purchase intention despite the public's limited literacy regarding electric vehicles in general.

V. Conclusion

Based on the analysis and discussion presented above, this study concludes that brand image has a positive and significant effect on purchase intention among BYD electric vehicle consumers in the Jabodetabek region, with a calculated t-value of 4.783 ($> t$ -table 1.975) and a significance value of $0.001 (< 0.05)$, leading to the acceptance of H1. Brand trust was also found to have a positive and significant effect on purchase intention, with a calculated t-value of 5.123 ($> t$ -table 1.975) and a significance value of $0.001 (< 0.05)$, leading to the acceptance of H2. These findings indicate that stronger brand image and higher consumer trust in BYD are both associated with greater purchase intention toward BYD electric vehicles. The comparison of standardized beta coefficients shows that brand trust ($\beta = 0.404$) exerts a stronger influence on purchase intention than brand image ($\beta = 0.378$). This suggests that within a relatively new and uncertainty-laden product category such as electric vehicles, consumer trust in the brand plays a more decisive role than brand image alone in shaping purchase intention. Collectively, the two variables account for 52% of the variance in purchase intention ($R^2 = 0.520$), while the remaining 48% is explained by factors outside the scope of this research model. These results further clarify the apparent paradox between BYD's strong sales performance and the Indonesian public's limited understanding of electric vehicles—namely, that consumer purchase intention is driven more by brand perception and trust than by technical familiarity with the product category.

This study surveyed respondents aged 17–55 years, in accordance with the purposive sampling criteria established for this research; however, the sample was still predominantly composed of respondents aged 17–24 years (65.6%). Future research should aim for a more proportionate distribution across older age

groups to provide a more balanced picture of purchase intention among consumer segments with greater purchasing power. For practitioners, BYD is encouraged to prioritize the strengthening of brand trust through battery quality assurance and reliable after-sales service, while maintaining consistency in brand image through positive marketing communication. Future studies are also encouraged to incorporate additional variables, such as perceived value or brand experience, to provide a more comprehensive understanding of the factors shaping purchase intention among electric vehicle consumers.

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