The Influence of Price, Design, and Brand Image on Purchase Decisions of BYD Electric Vehicles in Indonesia

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Abstract

The global shift toward electric vehicles (EVs) has created new challenges and opportunities for automotive manufacturers, particularly in emerging markets like Indonesia. This study aims to examine the influence of price, product design, and brand image on consumer purchase decisions for BYD electric vehicles in the Greater Jakarta area (Jabodetabek). Using a quantitative approach with 200 respondents and the Structural Equation Modeling–Partial Least Squares (SEM-PLS) method, the study finds that all three variables—price, design, and brand image—have a positive and significant effect on purchase decisions. Among the key findings, price perception strongly influences perceived value, design contributes to consumer interest and differentiation, while brand image builds trust and loyalty. The combined effect of these factors highlights the need for an integrated marketing strategy to accelerate EV adoption. The results provide both managerial and academic insights by reinforcing theories of value-based purchasing and brand equity and can serve as a basis for future studies in consumer behavior within the EV market.

Keywords: Electric vehicles, purchase decision, price, design, brand image, SEM-PLS, consumer behavior, BYD, Indonesia.

INTRODUCTION

The global automotive industry is undergoing significant changes with the increasing demand for electric vehicles (EVs) in response to environmental issues and energy efficiency (Fishkin & Høgenhaven, 2013). Indonesia, as one of the countries with a high number of motorized vehicles, has begun to adopt electric vehicles as an environmentally friendly alternative (Adonis & Silintowe, 2021). However, EV adoption in Indonesia still faces various challenges, including inadequate charging infrastructure, relatively high prices, and low consumer awareness and trust in EV technology (Adnan et al., 2019).

High EV prices, limited charging facilities, and minimal government incentives are the three main barriers hindering the adoption rate of electric cars in Indonesia (Farisi, 2018). Although the government has implemented a 0% tax policy for electric vehicles, EV selling prices remain relatively high, making them unaffordable for most people (Amilia & Asmara, 2017). The limited availability of affordable Battery Electric Vehicles (BEVs) with short ranges is likely due to the inadequate charging infrastructure. The shortage of public charging stations also poses a challenge for EV industry players to invest in the battery-based EV segment (Hartono, 2012).

Recognizing the population's relatively low purchasing power and the lack of supporting infrastructure, the government continues to build charging facilities on a large scale to support EV development in the country (Hawkins et al., 2010). Through this incentive policy, the government

targets various social segments—from the upper class to the lower-middle class—so that the transition to electric vehicles can be achieved inclusively and evenly (Aziz et al., 2020).

Currently, BYD leads the electric car market in Indonesia, surpassing Wuling and Hyundai in battery electric vehicle (BEV) sales. Although BYD only began wholesale sales in June 2024, the company recorded 1,925 units sold in July 2024, placing it 9th among the best-selling car brands in Indonesia and pushing Hyundai to 10th place with 1,701 units (Belch & Belch, 2018).

BYD's success is driven by the sales of its three main models: the Seal (1,290 units), Atto 3 (388 units), and Dolphin (207 units). Total sales of these three models reached 1,885 units in July 2024, making BYD the BEV market leader in Indonesia. Meanwhile, Wuling recorded 550 Cloud EV units and 205 Air EV units sold in the same month, while Hyundai sold 248 Kona Electric units and 123 Ioniq 5 units (Jatmiko et al., 2018). BYD's rise in the Indonesian EV market is supported by its aggressive expansion strategy and its $1 billion factory construction plan in Subang, West Java, scheduled to be completed by the end of 2025 (Khairi et al., 2023). This move reflects BYD's commitment to strengthening its position in the Indonesian market and increasing local EV production (Kaplan & Haenlein, 2010). With significant sales growth and ambitious expansion plans, BYD is expected to continue solidifying its dominance in Indonesia's electric car market in the near future (Chen & Lin, 2021).

However, despite substantial government support, the level of EV adoption in Indonesia remains relatively low compared to other Asian countries such as China and South Korea. Several factors hindering EV market growth in Indonesia include the relatively high price of EVs for most people, limited charging infrastructure, and low consumer awareness and trust in EV technology (Lamb et al., 2013). According to a recent survey, about 54.9% of respondents said they were still hesitant to switch to electric vehicles due to concerns about battery durability, the availability of specialized workshops, unstable resale value, and brand image (Fianto et al., 2014).

A key phenomenon affecting EV sales is the high price compared to conventional cars. Despite the global decline in battery prices, EVs are still considered expensive in developing markets. This phenomenon is influenced by high technology and battery costs, as well as limited economies of scale in local production. The International Energy Agency (IEA, 2023) reports that in developing countries, the price difference can reach 25–40%.

Beyond price, another factor influencing purchasing decisions is product design. Design plays an important role in consumer decision-making, especially for durable goods. Product design includes elements that affect visual appearance, user comfort, and functionality tailored to consumer preferences and needs. It reflects the overall characteristics that determine how a product looks and performs in meeting user demands (Supriyatno, 2020). Therefore, design aspects must receive special attention, as more consumers consider design one of the key factors before purchasing. In this context, the design of electric vehicles such as BYD cars continues to be refined to match market expectations (Supriyatno, 2020).

As EV penetration increases globally and nationally, a growing reliance on brand image as a primary trust indicator has emerged among consumers. Amid the adoption of new technology that is not yet fully understood by the public, consumers tend to rely on a brand's reputation and

credibility to assess product quality, safety, and reliability (Kotler & Keller, 2016). This trend is reinforced by rising awareness of sustainability issues, encouraging consumers to choose brands perceived as committed to clean energy and social responsibility.

One notable phenomenon in Indonesia is the rising launch of affordable electric cars by various brands, albeit with limited features and technology. The Indonesian public, most of whom are still in the early adoption stage, is showing increasing interest in electric vehicles but still seeks a balance between affordable prices and sufficient technological features. This trend creates a dual expectation, where consumers seek "low prices with the best quality and technology," reflecting a dilemma between value and cost. This demands a marketing strategy that is not only competitive in price but also persuasive in assuring consumers that electric vehicles are a safe, valuable, and viable long-term choice.

In light of this, marketing approaches for electric vehicles must highlight issues such as pricing, design, and a strong brand image that clearly communicates the health and environmental benefits of EVs. To assess the effectiveness of current techniques and determine whether modifications or innovations are needed in EV marketing in Indonesia, this study compares the marketing strategies of conventional cars and electric cars in the Indonesian market.

Therefore, this study aims to analyze and compare the marketing strategies of conventional and electric vehicles in Indonesia, focusing on factors such as pricing, product design, and brand image that influence consumer purchasing decisions. By evaluating these strategies, the research seeks to identify effective approaches to enhance consumer trust and adoption of electric vehicles, particularly in addressing barriers such as high prices, limited infrastructure, and low awareness.

The findings of this study are expected to assist car manufacturers and other industry players in creating more effective purchasing decisions to increase the acceptance and recognition of electric vehicles in the Indonesian market. Additionally, this study contributes to the academic literature on consumer behavior and green marketing in emerging markets, offering a framework for future research on strategies to accelerate the transition to electric mobility in Indonesia and similar developing countries.

METHOD

The object of this study was consumers who were users or potential users of BYD electric vehicles in Indonesia, specifically individuals who had purchased or were considering purchasing BYD electric car models such as the Atto 3, Dolphin, and Seal. This research focused on consumers residing in the Greater Jakarta area (Jabodetabek), as this region represented a potential market and had become the primary target of BYD's expansion in Indonesia.

This study employed a quantitative research design as its methodology. Since it adhered to scientific principles being factual, objective, measurable, logical, and methodical the quantitative method was considered a scientific procedure. The sample size for this study was 200 respondents, based on the assumption that 200 respondents could represent BYD electric vehicle consumers in the Jabodetabek area.

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The study used data analysis to assess the relationship between independent variables—price, design, and brand image—and the dependent variable, namely purchase decision. Given that the variables studied were latent or could not be directly measured, and that the research model involved several simultaneous causal paths, Structural Equation Modeling using Partial Least Squares (SEM-PLS) was employed as the analytical method.

RESULT AND DISCUSSION

Respondents' Characteristics

Table 1. Respondents' Characteristics

No	Characteristics	Category	Frequency (%)
1	Gender	Male	48.8%
		Female	51.2%
2	Age	36–40 years	50.2%
		30–35 years	34.3%
		41–45 years	10.0%
		46–50 years and >50 years (combined)	5.5%
3	Occupation	Private Employees	26.9%
		Teachers/Lecturers	23.9%
		Entrepreneurs	19.4%
		Government Employees (PNS/ASN)	16.4%
		Professionals	11.4%
		Part-timers/Influencers/Others	2.0%

Source: Data processed

The respondents in this study exhibit a fairly balanced gender distribution, with 48.8% male and 51.2% female participants, indicating that the perspectives gathered are well-represented across genders. In terms of age, the majority of respondents fall within the 36–40 age range (50.2%), followed by 34.3% in the 30–35 range. This suggests that most respondents are in their early to mid-career stage, potentially possessing stable income and life experiences relevant to the study. A smaller percentage of respondents are aged 41–45 (10.0%), while only 5.5% are in the older age groups (46–50 and above 50), indicating limited representation from late-career individuals.

Regarding occupational background, the largest portion of respondents are private sector employees (26.9%), followed closely by educators such as teachers, lecturers, or professors (23.9%). Entrepreneurs make up 19.4% of the sample, reflecting a segment of self-driven, independent individuals. Government employees (PNS/ASN) account for 16.4%, while professionals such as consultants, doctors, or specialists represent 11.4%. The remaining 2% consist of part-time workers, influencers, or others, showing a minimal presence of non-conventional occupations. This diverse occupational spread indicates that the study encompasses a wide range of perspectives from various professional backgrounds.

Coefficient of Determination (R²)

The extent to which independent variables influence the dependent variable can be measured using the coefficient of determination (R-Square). The R-Square value obtained from data analysis using SmartPLS version 3.0 is presented below:

Table 2. Coefficient of Determination

Dependent Variable	R Square	R Square Adjusted
Purchase Decision	0.742	0.738

Source: Data processed

With a value of 0.742, the purchase decision variable demonstrates a significant influence, indicating that 74.2% of the variance can be explained by the independent variables. This implies that purchase decisions are influenced by other variables in the model by 74.2%.

SEM-PLS Analysis

This study involves five latent variables, each represented by specific manifest indicators according to the previously defined operational variables. Structural Equation Modeling using Partial Least Squares (SEM-PLS) is employed to test the relationships between these variables by evaluating both the outer model (measurement model) and the inner model (structural model).

Measurement Model Evaluation (Outer Model)

According to Ghozali (2015), the outer model functions as the measurement model, used to assess the validity and reliability of a model. Meanwhile, the inner model serves to predict the relationships among latent variables.

Convergent reliability is evaluated by examining parameters within the measurement model, such as loading factor values and Average Variance Extracted (AVE), which serve as indicators of convergent validity. In addition, discriminant validity is assessed through cross-loading values, while the reliability of the measurement model is evaluated using Composite Reliability.

With the assistance of SmartPLS software, the validity and reliability of each latent variable can be evaluated during the outer model analysis. The results of this analysis, derived from the SmartPLS data processing, are summarized in the outer model diagram, which is presented in Figure 1.

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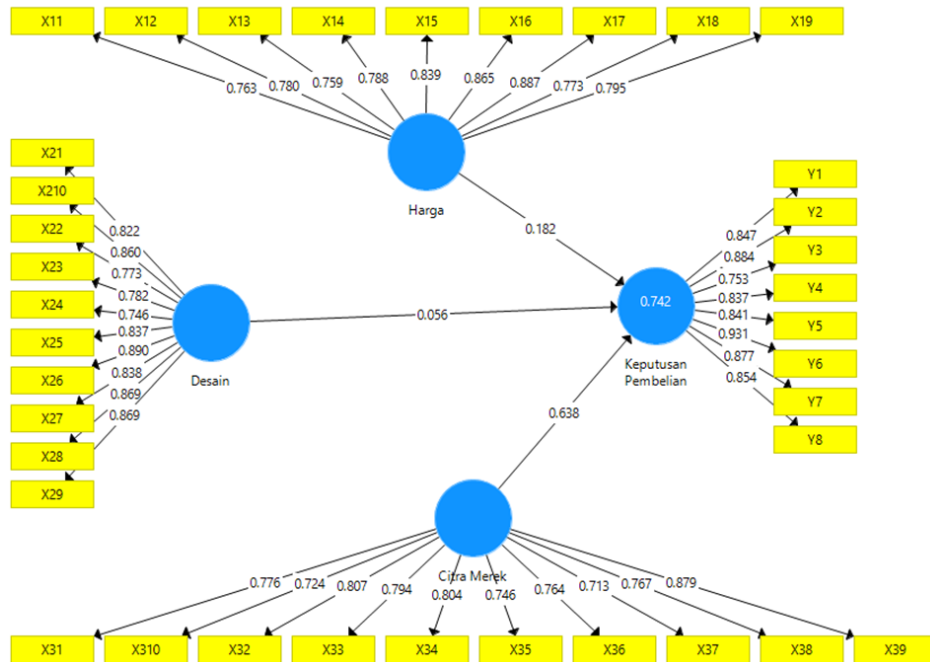

Figure 1. Model Outer

The initial analysis of the outer model shows that all coefficient values between the constructs and their respective indicators meet the established outer model criteria. This indicates that the model demonstrates good validity and reliability and is consistent.

Evaluation of the Outer Model Assessment

The outer model analysis is the process of evaluating the relationship between observed variables or indicators that represent the latent variables being tested. In this study, four types of testing are conducted: Convergent Validity, Composite Reliability, Average Variance Extracted (AVE), and Cronbach's Alpha.

A test is considered valid if it shows consistency and accuracy in measurement. Validity serves as a measure of the instrument's precision, which can be evaluated by looking at the AVE values. Table 4.9 shows the average variance for the four variables, with the standard AVE threshold being > 0.5. All variables in this study meet this criterion, indicating that the instruments used demonstrate a high degree of consistency and precision.

Table 3. Construct Reliability and Validity

Variable	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Brand Image	0.927	0.939	0.606
Design	0.949	0.957	0.689
Price	0.933	0.944	0.651
Purchase Decision	0.947	0.956	0.730

Source: Data processed

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Evaluation of the Structural Model Assessment (Inner Model)

The inner model assessment is used to evaluate the relationships between the three latent variables that make up the structural model. In SmartPLS, path coefficients and T-statistics are generated through the bootstrapping technique. A path is considered statistically significant if the T-statistic exceeds 1.66 and the p-value is less than 0.05, indicating a significant positive influence. The bootstrapping results from SmartPLS are presented in Table 4.

Table 4. Bootstrapping Results

	T Statistics (|O/STDEV|)	P Values
Price → Purchase Decision	4,086	0,000
Design → Purchase Decision	4,522	0,000
Brand Image → Purchase Decision	4,165	0,000

Source: Data processed

Price, Design, and Brand Image Positively Influence Purchase Decision

Simultaneously, the variables price, design, and brand image show a significant positive effect on purchase decision, as indicated by the t-statistics and p-values less than 0.05. This confirms the hypothesis that these three factors contribute to shaping consumer purchase decisions. This implies that a marketing strategy that considers appropriate pricing, attractive product design, and a positive brand image can be an effective combination in encouraging consumer purchases.

Thus, companies must integrate these three elements synergistically in product development and marketing communication. This finding provides important implications for companies in designing holistic marketing strategies.

a) Pricing should not only reflect production costs but also take into account consumer value perception.
b) Design must be updated regularly to match market trends and consumer needs.
c) Brand image should be built through strong branding strategies focusing on quality, customer satisfaction, and consistent communication.

This integration will form a sustainable competitive advantage and increase customer loyalty.

Price Has a Positive and Significant Effect on Purchase Decision

The analysis shows that price has a positive and significant effect on purchase decision, with a t-statistic of 4.086 and a p-value of 0.000. Since the p-value is less than 0.05, this indicates a statistically significant relationship. This means that consumers' perception of price strongly influences their purchase decision. This supports Kotler and Armstrong's (2018) theory that price is the only element of the marketing mix that generates revenue, while others generate costs. A price perceived as fair increases the perceived value of the product. When consumers feel that the price is proportional to the benefits received, they are more likely to buy.

Most respondents believe the product price is appropriate for the quality and benefits offered, reflecting effective pricing strategies by the company. Consumers are not just seeking cheap prices,

but fair, transparent pricing that delivers satisfaction. As Monroe notes, price is a key determinant in purchase decisions. It also reflects product positioning—too low may imply poor quality; too high without clear value may deter buyers (Nagle & Müller, 2017). A t-statistic of 4.086 further demonstrates the strong relationship between price and purchase decision. Therefore, companies must continuously evaluate their pricing strategies, benchmark against competitors, and maintain high perceived value in the eyes of consumers.

Ultimately, price is a critical factor in marketing strategy. Proper pricing not only boosts short-term sales but also enhances long-term customer loyalty (Pulizzi, 2012; Raksodewanto, 2020; Schilling, 2013; Shimp, 2014; Tjiptono, 2019; Zhang et al., 2020).

Design Has a Positive and Significant Effect on Purchase Decision

Based on the analysis, design also has a positive and significant effect on purchase decision, with a t-statistic of 4.522 and p-value of 0.000. This confirms that design is a significant factor in influencing consumers' decision to purchase. This is in line with Lamb, Hair, and McDaniel (2013), who assert that design is a key element in product differentiation. Good design enhances not only aesthetics but also creates emotional and functional experiences. Consumers tend to choose products that are both technically sound and visually pleasing. Most respondents rated the product's design positively—appearance, shape, color, and ergonomics all contributed to a professional and modern image. Design also serves as a brand identity, influencing first impressions, which are crucial in consumer decision-making (Kotler & Keller, 2016).

The high t-statistic (4.522) indicates that the influence of design is not only statistically significant but also practically strong. The better the perception of a product's design, the greater the likelihood of purchase. Design is no longer an accessory—it's a strategic necessity (Nagle & Müller, 2017; Nisa & Susanti, 2023; Nugraha, 2011; Patriawan et al., 2021).

It also correlates with quality perception. Innovative, modern design is often associated with advanced technology and reliability (Ulrich & Eppinger, 2012). Companies must create designs that reflect brand values and resonate with consumer preferences, ensuring competitive edge and customer loyalty. Investing in design innovation can result in long-term competitive advantage and improved sales performance.

Brand Image Has a Positive and Significant Effect on Purchase Decision

The test results show that brand image has a positive and significant effect on purchase decision, as indicated by a t-statistic of 4.165 and p-value of 0.000. Since the p-value is far below the 0.05 threshold, the influence of brand image is statistically significant. Brand image refers to consumer perceptions of a brand's identity and reputation, shaped through consistent experiences, communication, and emotional associations. Most respondents prefer to buy products from well-known brands with positive reputations, supporting Aaker's view that strong brands build trust, loyalty, and reduce perceived risk. The t-statistic of 4.165 confirms a strong effect. Consumers feel safer, prouder, and more satisfied buying from brands with a good image. Brand image is especially crucial in symbolic products that express personal identity. It also helps differentiate

products in competitive markets. When specs and prices are similar, consumers rely on brand trust to choose. Schiffman and Kanuk (2010) explain that purchase decisions are influenced by positive brand perception—quality, innovation, social responsibility, and authenticity. From a marketing perspective, building a strong brand image requires more than promotion—it needs consistent product quality, good customer service, social media presence, and social involvement. A positive brand image strengthens brand equity, contributing to market share and long-term profitability (Kotler & Keller, 2016).

In conclusion, brand image is crucial in influencing consumer purchase decisions. Companies must continuously manage and communicate their brand image strategically to create added value and differentiation. In the long run, a strong brand image not only drives repeat purchases but also turns customers into brand advocates.

CONCLUSION

In conclusion, this study confirms that price, product design, and brand image significantly influence consumer purchase decisions, with price affecting perceived value, design driving interest and usability, and brand image fostering trust and loyalty. By achieving the research objectives, it demonstrates that these three factors act synergistically, providing a strategic foundation for companies to optimize marketing strategies and enhance consumer adoption of products, particularly in the electric vehicle market. The study contributes to marketing theory by empirically supporting the integration of Value-Based Buying Behavior, Brand Equity, and Perceived Value concepts, highlighting the importance of a comprehensive approach rather than relying on a single factor. For future research, the findings suggest expanding the scope to include additional variables such as promotional strategies, after-sales service, online reviews, and social trends, as well as exploring diverse product categories and demographic segments to develop broader and more generalizable models of consumer behavior, thereby providing deeper insights into effective marketing strategies in emerging markets.

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