

Do Monetary Incentives Policy Drive EV Adoption? Evidence from Jakarta and Bangkok

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This study investigates the factors influencing consumers' intention to buy electric vehicles in Jakarta and Bangkok. It examines the impact of price value, driving range, charging station availability, and monetary incentive policies on purchase intention. The research employs a quantitative technique, which data was collected through an online survey using convenience sampling, targeting individuals aged 17 and above with knowledge and experience related to electric vehicles. The sample consists of 302 respondents, with 167 from Jakarta and 135 from Bangkok. Structural Equation Modeling (SEM) with Partial Least Square (PLS) is used for hypothesis testing. The results reveal that price value, driving range, and charging station availability significantly affect the intention to purchase electric vehicles, while monetary incentive policies do not show a significant impact in both cities. The moderating role of monetary incentive policy on the relationship between price value and purchase intention is also not supported in both cities. The findings provide valuable insights for manufacturers and policymakers in promoting electric vehicle adoption.

Keywords: Price Value; Driving Range; Charging Station Availability; Monetary Incentive Policy; Intention to Buy Electric Vehicles

INTRODUCTION

The worsening air pollution problem has become a major concern worldwide, including in Indonesia. Recent reports indicate that air quality in several major cities in Indonesia remains unhealthy and poses significant public health risks (World Health Organization [WHO], 2023; IQAir, 2024). The transportation sector, particularly fossil-fueled vehicles, is a major contributor to carbon emissions in urban areas (International Energy Agency [IEA], 2023). Therefore, the transition to clean energy through the adoption of green technologies is an urgent necessity for achieving sustainable development.

Green products are defined as products designed to minimize environmental impacts throughout their life cycle, from production to consumption (Testa et al., 2023). In this context, electric vehicles (EVs) are a strategic solution because they can reduce greenhouse gas emissions and dependence on fossil fuels (IEA, 2024). Electric vehicles use energy stored in batteries and are more energy-efficient than conventional vehicles. In recent years, the development of electric vehicles in Indonesia has shown a significant upward trend. Recent data shows that electric vehicle sales in Indonesia have increased rapidly since 2021, driven by government policy support and increasing public environmental awareness (Ministry of Energy and Mineral Resources, 2024). However, the adoption rate of electric vehicles in Indonesia remains relatively low compared to other ASEAN countries, such as Thailand (ASEAN Centre for Energy, 2023). Electric vehicle adoption in Indonesia is only around 0.1%, compared to neighboring Thailand, which ranks highest at 0.7% (Zahira, 2023). Therefore, it is interesting to understand the factors that could explain why the two countries, Indonesia and Thailand, have such significant differences in electric vehicle adoption.

The Indonesian government has demonstrated a strong commitment to encouraging the use of electric vehicles through various policies, including Presidential Regulation No. 55 of 2019 concerning Battery-Based Electric Motor Vehicles. Furthermore, the government has provided various fiscal incentives such as purchase subsidies, tax reductions, and the development of charging infrastructure (Ministry of Industry, 2023). Recent studies have shown that incentive policies play a significant role in increasing interest in electric vehicle adoption. However, their effectiveness still depends on other factors such as price and infrastructure (Sovacool et al., 2022).

From the consumer perspective, various barriers remain key factors contributing to the low adoption of electric vehicles. Recent research indicates that the relatively high price of electric vehicles, limited range, and lack of charging infrastructure are key factors influencing purchasing decisions (Rezvani et al., 2023; Nguyen et al., 2024). Furthermore, perceived risk and a lack of information also hinder the adoption of this technology (Wang et al., 2022). Various theoretical models have been used to explain technology adoption behavior, including the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT). Recent research indicates that perceived usefulness and perceived ease of use remain key determinants of electric vehicle adoption intention (Huang & Ge, 2023). Perceived usefulness in the context of electric vehicles encompasses economic benefits, energy efficiency, and contributions to environmental sustainability.

Furthermore, the Theory of Planned Behavior (TPB) is widely used to explain consumer adoption of electric vehicles. Recent studies have shown that attitudes, subjective norms, and perceived behavioral control significantly influence electric vehicle purchase intention (Li et al., 2023). Additional factors, such as environmental concerns and moral values, have also been shown to strengthen adoption intention (Zhang et al., 2024). Recent research emphasizes the importance of contextual factors, such as government

policy, prices, and infrastructure, in influencing electric vehicle adoption. Adequate charging infrastructure is a crucial factor in increasing consumer confidence in electric vehicles (Funke et al., 2022). Furthermore, perceived price-value also plays a significant role in determining purchasing decisions (Jin et al., 2023).

Although various studies have identified factors influencing electric vehicle adoption, a research gap remains, particularly in developing countries such as Indonesia. Cross-country comparative studies, particularly between Indonesia and Thailand, are limited, despite the two countries' distinct market characteristics and policies (ASEAN Centre for Energy, 2023). Therefore, this study is crucial for a deeper examination of the factors influencing electric vehicle purchase intentions, considering monetary incentive policies, price-to-value ratio, range, and charging infrastructure availability.

Based on this description, this study aims to answer the following questions: 1) Do monetary incentive policy, price value, range, and charging station availability significantly influence electric vehicle purchase intentions? 2) Does monetary incentive policy act as a moderating variable? 3) Are there differences in the influence of these variables between Jakarta and Bangkok?

LITERATURE REVIEW

Previous research has demonstrated that various theoretical approaches and variables have been used to explain consumer intentions to adopt electric vehicles. However, an empirical gap persists regarding which variables consistently and significantly influence electric vehicle purchase intentions, particularly in developing countries.

Factors such as economics, policy, and infrastructure remain key determinants that require further testing (Rezvani et al., 2023; Nguyen et al., 2024). While the variables such as price, monetary incentive policies, vehicle mileage, and charging infrastructure availability remain a focus in recent research due to their direct influence on consumer decisions (Jin et al., 2023; Funke et al., 2022). Other variables such as sustainable lifestyles and environmental commitment are also increasingly relevant in explaining electric vehicle adoption, with consumers with a high level of environmental awareness tending to have a greater intention to switch to environmentally friendly technologies (Sovacool et al., 2022; Zhang et al., 2024). Price value is not only related to a vehicle's initial price but also encompasses operational costs and perceived long-term efficiency (Jin et al., 2023). Furthermore, monetary incentive policies such as subsidies, tax breaks, and fiscal incentives have been shown to increase the appeal of electric vehicles, though their effectiveness depends on consumer awareness and perceptions (Sovacool et al., 2022; Li et al., 2023). Recent studies have shown that concerns about limited driving range (range anxiety) remain a major barrier to electric vehicle adoption (Nguyen et al., 2024). Furthermore, the availability of charging infrastructure also plays a crucial role in increasing consumer confidence and comfort in using electric vehicles (Funke et al., 2022; Wang et al., 2022).

The ability to explain the relationships among these variables is crucial for understanding consumer behavior towards electric vehicle adoption. The most widely used theories include the Theory of Planned Behavior (TPB), which explains that attitudes, subjective norms, and perceived behavioral control influence behavioral intentions (Li et al., 2023). Furthermore, the theory of perceived value (PV) holds that purchasing decisions are influenced by consumers' evaluations of relative benefits versus costs (Jin et al., 2023). Furthermore, the Unified Theory of Acceptance and Use of Technology (UTAUT) is also widely used in recent studies because it integrates technological, social, and facilitating factors to explain electric vehicle adoption (Jain et al., 2022; Huang & Ge, 2023). This

research will focus on how price value, monetary incentive policies, driving range, and charging station availability are key variables that significantly influence electric vehicle purchase intentions. Empirical evidence for the relationship between these variables still requires further testing, especially in cross-country comparisons.

Variables and hypothesis development

Relationship between price value and intention to buy electric vehicles

Studying the influence of price value on electric vehicle purchase intentions has become a significant focus of consumer behavior research in recent years. As the electric vehicle market expands, price remains a key consideration influencing consumer purchasing decisions, particularly in developing countries. Recent literature has shown that electric vehicle prices—both initial price and total cost of ownership—have a significant influence on adoption intentions (Rezvani et al., 2023; Jin et al., 2023).

Research by Ivanova and Moreira (2023) found, through a systematic review of empirical studies, that electric vehicle prices consistently play a key role in shaping consumer purchase intentions. These results align with the findings of Chen et al. (2023), who demonstrated that consumer perceptions of price—influenced by benefit evaluations and available information—have a significant impact on electric vehicle purchase decisions. Furthermore, a study by Hu et al. (2023) used a risk-benefit analysis to explain consumer behavior, showing that perceptions of costs, including vehicle price, are closely related to perceptions of benefits, which ultimately influence purchase intentions. Other research also supports these findings by showing that price sensitivity remains a major barrier to electric vehicle adoption, especially among consumers with middle-income purchasing power (Nguyen et al., 2024). Furthermore, price is often associated with perceived risk and uncertainty regarding new technology, which can reduce purchase intentions if not balanced by clear benefits (Wang et al., 2022). Overall, these findings indicate that price value is a critical factor in determining consumer intention to purchase an electric vehicle. The following hypothesis can be formulated:

H1: Price value significantly influences consumer intention to purchase an electric vehicle.

The relationship between monetary incentive policy and interest in buying electric vehicles.

The relationship between monetary incentive policies and electric vehicle purchase intentions has been a key focus of research on the adoption of environmentally friendly technologies in recent years. With increasing attention to the clean energy transition, several recent studies have emphasized that policy interventions, such as financial incentives, play a crucial role in driving electric vehicle adoption, particularly in the early stages of innovation diffusion (Sovacool et al., 2022; Li et al., 2023).

Recent research has shown that incentive policies, such as purchase subsidies, tax breaks, and other fiscal incentives, significantly increase the appeal of electric vehicles to consumers. A study by Xue et al. (2023) analyzing the effectiveness of incentive policies in China found that monetary incentives had a positive and significant effect on electric vehicle purchase intentions, primarily by increasing perceived value and reducing cost barriers. This finding is supported by Li et al. (2023), who demonstrated that government policies act as an important external factor in consumer behavior models and can increase adoption intentions by enhancing perceived behavioral control. Furthermore, a recent literature review by Ivanova and Moreira (2023) identified monetary incentives as one of the most consistent determinants of electric vehicle purchase intentions across various country contexts. The study showed that the effectiveness of incentives depends not only on their magnitude but also on consumers' perceptions of the policy's ease of access and sustainability. Study by Zhang et al. (2024) confirmed that monetary incentives can strengthen the relationship between

environmental awareness and purchase intentions, thus serving not only as an economic stimulus but also as a catalyst in shaping positive attitudes toward electric vehicles. Meanwhile, Nguyen et al. (2024) found that in developing countries, monetary incentives are a key factor in reducing consumers' perceived financial barriers, significantly increasing the likelihood of electric vehicle adoption.

Overall, these findings suggest that monetary incentive policies play a strategic role in shaping consumers' intention to purchase electric vehicles, both directly and through psychological and economic mechanisms. Therefore, the following hypothesis can be formulated:

H2: Monetary incentive policies significantly influence consumers' intention to purchase electric vehicles.

The relationship between driving range and intention to buy electric vehicles

The impact of driving range on electric vehicle purchase intentions has been an interesting research subject. Several studies have also provided a perspective on the relationship between the two. However, it still requires empirical proof. Systematic literature review research shows that the distance traveled by electric vehicles has a significant impact on consumers' purchase intentions (Ivanova & Moreira, 2023). The longer distance traveled by electric vehicles will increase the intention to purchase electric vehicles compared to the short distance journey.

Furthermore, Le et al. (2023), who conducted a study of electric vehicle purchasing behavior among the millennial generation, identified that Driving Range is an important and significant factor influencing purchasing intentions. Based on the arguments above, it can be seen that the driving range of electric vehicles plays a vital role in forming consumers' intentions to buy electric vehicles, so the following hypothesis can be written:

H3: The driving range significantly affects consumers' intention to buy electric vehicles.

The relationship between charging station availability and intention to buy electric vehicles

The impact of charging station availability on electric vehicle purchase intentions has been the object of extensive debate. As an illustration, research conducted by Globisch et al. (2019) found that better charging station availability will increase preference for electric vehicles. Likewise, the availability of slow or fast charging infrastructure will impact consumers' intention to buy electric vehicles among new and used car buyers (Zou et al., 2020).

Furthermore, research conducted by four shows that charger accessibility is an essential factor influencing purchase intention, and conversion of fossil fuel-based vehicles to electric requires a good charging network and a satisfactory level of perceived accessibility (He et al., 2022). The fact of importance of charging station availability factor is also demonstrated by the survey results reported by S&P Global Mobility in November 2024 of electric vehicle owners and buyers worldwide, showing that wide charging station availability is one of the important reasons consumers buy electric vehicles. Around 44% of respondents are concerned about the availability of charging stations. Based on the results of the research and arguments, the following hypothesis was formulated:

H4: The charging station availability significantly affects consumers' intention to buy electric vehicles.

The moderating role of monetary incentive policy

One of the research subjects is the role of monetary incentive policy as a moderating variable between price value and intention to purchase electric vehicles. Although the literature examining this relationship is lacking, several studies have provided relevant

insights. For example, research according to Münzel et al. (2019) and Hardman (2019) has revealed the significant impact of financial and non-financial incentives on the adoption of electric vehicles.

These incentives can positively impact the intention to purchase electric vehicles, especially if the incentives are recurring and adapted to local conditions. Based on a literature review conducted by researchers regarding the impact of monetary incentives on purchasing electric vehicles, there is potential for a moderating role. For example, research conducted by Jenn et al. (2018) highlights the important role of financial incentives in influencing purchase intentions.

Both studies conducted by Jenn et al. (2018) and Ramadani et al. (2024) found that monetary incentive policies contributed to the intention to purchase electric vehicles, indicating a potential moderating role between price value and purchase intention. In line with this research, Xue et al. (2023), researching the influence of incentive policies on intention to purchase electric vehicles, emphasize the importance of financial incentive policies in influencing psychosocial values and intention to buy electric vehicles.

Although these studies do not directly explore the moderating role of monetary incentives between price value and purchase intention, they collectively suggest the importance of monetary incentives in shaping consumers' intention to purchase electric vehicles. In other words, monetary incentives have the potential to be a moderating factor in the relationship between price value and intention to purchase electric vehicles. This research takes the position that examining the moderating role of monetary incentives in the context of the relationship between price value and intention to purchase electric vehicles will provide valuable insights into explaining consumer behavior in adopting electric vehicles, so that the following hypothesis can be formulated:

H5: The monetary incentive policy is a moderate variable between private value and intention to buy electric vehicles.

The research framework related to the relationships between variables in this research can be seen in Figure 1 below:

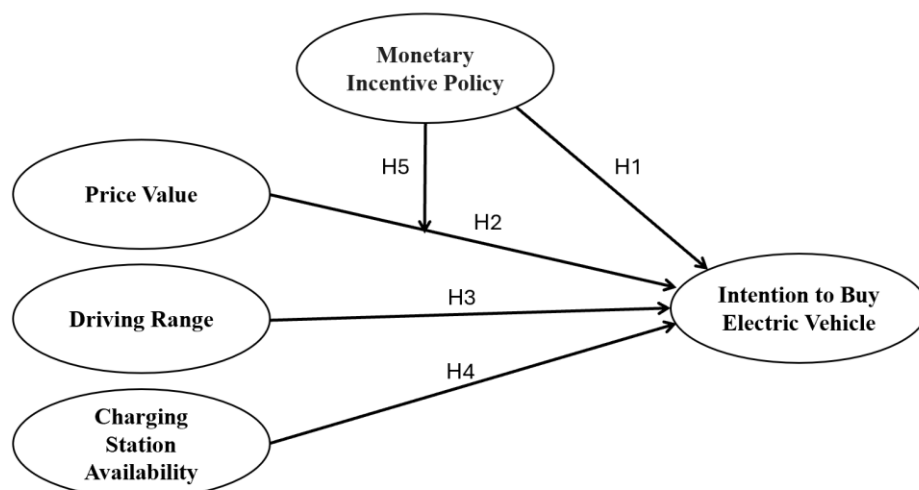


Figure 1 Research Framework

RESEARCH METHOD

The main objectives in this research are: 1) To find out how monetary incentive policy, price value, driving range, and charging station availability influence the intention to buy electric vehicles in two big cities: Jakarta and Bangkok. 2) To find out whether monetary incentive policy moderates the relationship between private value and intention to buy electric vehicles. In this research, the approach was carried out using quantitative techniques, which consists of carrying out through design and data collection using questionnaires and then processed using statistical tools.

The sampling technique applied in this research is convenience sampling, which selects respondents based on their accessibility. Researchers will use the Google Form platform to distribute the questionnaire prepared to the target population, namely those aged 17 years and over who have knowledge and experience related to electric vehicles and are residents of Jakarta and Bangkok. The use of convenience sampling techniques was chosen for ease and flexibility in accessing respondents who could provide relevant information. However, this sample selection must be balanced cautiously, especially in generalizing research findings to a larger population.

The electronic questionnaire distribution process is carried out via Google Forms, allowing online filling. The questionnaire is designed with relevant questions and answer options provided. The measurement instrument in this study adopted a Likert scale with a value range from 1 to 5. A score of 1 to 2 reflects the respondent's disagreement with the statement in the questionnaire, starting from the level of "strongly disagree" (1) to "disagree" (2). On a scale of 3, respondents are considered to have a "neutral" attitude toward the questions in the questionnaire. On the other hand, scales 4 and 5 indicate that the respondent agrees with the statement in the questionnaire, ranging from "agree" (4) to "strongly agree" (5). All questions in the questionnaires were obtained based on adaptation and adoption from previous research.

This research conducts hypothesis testing using the Structural Equation Model (SEM) approach using Partial Least Square (PLS) software. This SEM technique allows multivariate analysis, which combines factor analysis and regression analysis to test the relationship between variables in the model. In this research, the analysis was carried out using the PLS technique in two stages, namely:

1) Measurement Model Stage, which aims to test the construct validity and reliability. Validity Test used to assess the validity of a questionnaire. Validity is said to be fulfilled if the questionnaire questions are able to reflect well what is measured by the questionnaire. Validity testing is carried out on each question item for each variable in several stages, including convergent validity, average variance extracted (AVE) and discriminant validity tests. Furthermore, the reliability test is used in measuring the concept or the consistency of respondents in answering questionnaire items. Reliability testing can be done through composite reliability and considered reliable if it the value ≥ 0.7 .

2) Structural Model Stage aims to evaluate the influence between variables or the correlation between the constructs being measured. This stage also describes the relationship between latent variables based on substantive theory. The structural model was evaluated using R-square for the dependent variable, Stone-Geisser Q-square test for predictive relevance, and t-test and the significance of the structural path parameter coefficients. In assessing the structural model with PLS, the initial step is to look at the R-square for each dependent latent variable, which is interpreted similarly to the interpretation in regression analysis. Changes in the R-square value can be used to evaluate whether a particular independent latent variable substantially influences the dependent latent variable.

RESULTS

The online survey was conducted through Google forms and distributed through various messaging platforms and emails in two major cities, Jakarta and Bangkok. The total number of respondents collected was 302 people. Gender distribution in both cities showed that most respondents were male, namely 215 (71%) compared to 87 (19%) female respondents. Based on age, the 31-40 age group was the most represented, consisting of 151 (50%) individuals, followed by those aged 21-30 with 109 (36%), and finally, the 41 and above age group with 42 (14%) respondents.

Regarding educational background, 37 (12%) respondents have postgraduate degrees, 110 (36%) have completed undergraduate programs, and 119 (40%) have academic qualifications or equivalent. A small proportion, 36 (12%), have a high school diploma or equivalent. In terms of occupation, the majority are entrepreneurs, namely 107 (35%), while 51 (17%) work as employees in the private sector or state-owned companies. Civil servants number 57 (19%), and the remainder is the largest number 87 (29%), included in the "other" category. The distribution of respondents shows Jakarta as the location with the most, namely 167 (55%), while the rest are Bangkok as many as 135 (45%).

Following the analysis of sample demographics, the subsequent phase involves utilizing SmartPLS 3.0 (Ringle, et al., 2023) to evaluate both measurement and structural models. In accordance with (Anderson & Gerbing, 1988), a two-step approach was employed to assess the developed research model. The initial step entailed conducting a measurement model test to evaluate the instrument's validity and reliability, as recommended by (Hair et al., 2019). Subsequently, a structural model test was performed to examine the previously formulated hypotheses.

Measurement Model Assessment

This segment outlines the measurement process, which employs successive evaluations based on predetermined thresholds: factor loadings exceeding 0.7, average variance extracted (AVE) surpassing 0.5, composite reliability above 0.7, and Cronbach's alpha greater than 0.7. In this section, 167 samples from Jakarta will be tested followed by 135 samples from Bangkok. Throughout this assessment, certain questionnaire items were excluded due to their factor loading values falling below 0.7, specifically PV4, DR1, DR6, DR7, MI1, and IN4 for Jakarta sample and PV6, DR2, CS3, IN3 for Bangkok sample. Table 1a and Table 1b subsequently present all criteria that have met the specified requirements, thereby confirming that the construct fulfills the necessary standards for reliability and convergent validity.

Table 1a. Measurement Model (Jakarta)

Construct	Item	Loading	AVE	CR	Alpha
Price value	PV1	0.756	0.601	0.873	0,868
	PV2	0.770			
	PV3	0.810			
	PV5	0.731			
	PV6	0.801			
	Driving range	DR2			
	DR3	0.767			
	DR4	0.702			
	DR5	0.810			
Charging station availability	CS1	0.780	0.759	0.834	0.792
	CS2	0.860			
	CS3	0.821			
	CS4	0.798			

	CS5	0.765			
Monetary Incentive Policy	MI2	0.786	0.767	0.707	0.865
	MI3	0.811			
	MI4	0.765			
	MI5	0.863			
Intention to Buy Electric Vehicles	IN1	0.752	0.656	0.810	0.812
	IN2	0.785			
	IN3	0.851			
	IN5	0.773			

Table 1b. Measurement Model (Bangkok)

Construct	Item	Loading	AVE	CR	Alpha
Price value	PV1	0.701	0.701	0.853	0,778
	PV2	0.760			
	PV3	0.712			
	PV4	0.702			
	PV5	0.891			
Driving range	DR1	0.721	0.772	0.755	0.753
	DR3	0.734			
	DR4	0.792			
	DR5	0.822			
Charging station availability	CS1	0.790	0.764	0.824	0.702
	CS2	0.872			
	CS4	0.799			
	CS5	0.787			
Monetary Incentive Policy	MI2	0.786	0.753	0.707	0.895
	MI3	0.811			
	MI4	0.765			
	MI5	0.863			
Intention to Buy Electric Vehicles	IN1	0.763	0.685	0.821	0.875
	IN2	0.764			
	IN5	0.781			

Following this, the discriminant validity criteria were evaluated using the method proposed by Fornell and Larcker (1981). In the context of SEM-PLS, a model demonstrates adequate discriminant validity when the square root of the AVE for each construct exceeds the correlation value between any two constructs. As shown in Table 2a and Table 2b, the square root of the AVE for each construct is higher than the correlation estimates between factors. This indicates that the measurement items fulfill the requirements for both validity and reliability.

Table 2a. Discriminant Validity (Jakarta)

	1	2	3	4	5
1. Price value (PV)	0.775				
2. Driving range (DR)	0.670	0.843			
3. Charging station availability (CS)	0.567	0.677	0.871		
4. Monetary Incentive Policy (MI)	0.674	0.675	0.711	0.876	
5. Intention to Buy Electric Vehicles (IN)	0.711	0.560	0.665	0.579	0.702

Table 2b. Discriminant Validity (Bangkok)

	1	2	3	4	5
1. Price value (PV)	0.837				
2. Driving range (DR)	0.670	0.879			
3. Charging station availability (CS)	0.567	0.677	0.874		
4. Monetary Incentive Policy (MI)	0.674	0.675	0.711	0.868	
5. Intention to Buy Electric Vehicles (IN)	0.711	0.560	0.665	0.579	0.828

Structural Model Assessment

The structural model elucidates the interrelationships among constructs. This segment presents the findings of the hypothesis test and R² values proposed in the study. The hypothesis testing results indicate three significant relationships: price value ($\beta = 0.139$, $p < 0.05$), driving range ($\beta = 0.855$, $p < 0.05$), and charging station availability ($\beta = 0.211$, $p < 0.05$) demonstrated significant associations with the intention to purchase electric vehicles. Conversely, the monetary incentive policy hypothesis lacked support. The study yielded an R² value of 0.273 for Jakarta and 0.334 for Bangkok, suggesting that the independent variables collectively explained 27.3% and 33.4% of the variance in the intention to buy electric vehicles. A comprehensive summary of the hypothesis testing outcomes is provided in Table 3a and Table 3b.

Table 3a. Hypothesis test results (Jakarta)

Hypothesis	Beta	Std Dev	p Value	Information
1. Monetary Incentive Policy → Intention to Buy Electric Vehicles	- 0,043	0,354	0,437	Not significant
2. Price value → Intention to Buy Electric Vehicles	0,129	0,643	0.001	Significant
3. Driving range → Intention to Buy Electric Vehicles	0,705	0,476	0,000	Significant
4. Charging station availability → Intention to Buy Electric Vehicles	0,231	0,232	0,000	Significant
5. Monetary Incentive Policy * Price value → Intention to Buy Electric Vehicles	- 0,123	0,230	0,537	Not significant

Table 3b. Hypothesis test results (Bangkok)

Hypothesis	Beta	Std Dev	p Value	Information
1. Monetary Incentive Policy → Intention to Buy Electric Vehicles	- 0,063	0,634	0,317	Not significant
2. Price value → Intention to Buy Electric Vehicles	0,739	0,673	0.001	Significant
3. Driving range → Intention to Buy Electric Vehicles	0,155	0,452	0,000	Significant
4. Charging station availability → Intention to Buy Electric Vehicles	0,310	0,244	0,001	Significant
5. Monetary Incentive Policy * Price value → Intention to Buy Electric Vehicles	0,721	0,062	0,370	Not significant

Based on Table 3a and Table 3b above, the results show that Jakarta and Bangkok have similarities. Of the five hypotheses proposed, only three hypotheses show significant results. Two hypotheses, namely Monetary Incentive Policy and the interaction between Monetary Incentive Policy and Price value, do not significantly affect the Intention to Buy Electric Vehicles. The regression equation model of each of the two cities can be written based on the calculation of the path coefficient values above, namely: $INT = 0.129 PV + 0.705 DR + 0.231 CS + \varepsilon$ (Jakarta), and $INT = 0.739 PV + 0.155 DR + 0.310 CS + \varepsilon$ (Bangkok). The difference in each path coefficient value can be used in compiling variables based on the strength of their influence, where the DR variable (Jakarta) has a more decisive influence than other variables. Meanwhile, the PV variable (Bangkok) has the most significant influence compared to other variables. The symbol ε represents other variables that are not considered in this study

DISCUSSION

This study examined the influence of price value, driving range, charging station availability, and monetary incentive policy on consumers' intention to purchase electric vehicles in Jakarta and Bangkok. The findings reveal both similarities and differences between the two cities, providing valuable insights into the determinants of electric vehicle (EV) adoption in Southeast Asian urban contexts.

First, the results indicate that price value significantly influences the intention to purchase electric vehicles in both Jakarta and Bangkok. This finding supports previous studies suggesting that consumers carefully evaluate the economic benefits and costs associated with EV ownership before making purchase decisions. The significantly stronger effect of price value in Bangkok ($\beta = 0.739$) compared to Jakarta ($\beta = 0.129$) suggests that Thai consumers are more sensitive to perceived economic value when considering EV purchases. This may be attributed to Thailand's more mature EV market, where consumers compare various vehicle options and place greater emphasis on obtaining value for money. Consequently, manufacturers and policymakers should continue improving affordability and emphasizing the long-term cost savings of EV ownership.

Second, driving range emerged as the most influential factor in Jakarta ($\beta = 0.705$), while its effect was comparatively weaker in Bangkok ($\beta = 0.155$). This result highlights the existence of range anxiety among Indonesian consumers. Since Indonesia is still developing its EV ecosystem, consumers may be concerned about battery limitations and the availability of charging facilities during longer trips. The finding is consistent with prior literature emphasizing that driving range remains one of the primary barriers to EV adoption in emerging markets. In contrast, the lower influence observed in Bangkok may indicate that Thai consumers have become more familiar with EV technology and possess greater confidence in existing infrastructure, reducing concerns regarding travel distance.

Third, charging station availability significantly affects EV purchase intention in both cities, with a stronger effect observed in Bangkok ($\beta = 0.310$) than in Jakarta ($\beta = 0.231$). This finding confirms the importance of supporting infrastructure in facilitating EV adoption. Consumers are more likely to consider EVs when charging facilities are accessible, reliable, and conveniently located. The stronger impact in Bangkok may reflect consumers' expectations for comprehensive infrastructure coverage as EV adoption continues to grow in Thailand. These findings support previous studies that identify charging infrastructure as a critical enabler of EV market development.

Interestingly, monetary incentive policy did not significantly influence purchase intention in either city. This finding contrasts with many previous studies conducted in developed countries, where government subsidies and tax incentives have been shown to encourage EV adoption. One possible explanation is that consumers in Jakarta and Bangkok may prioritize practical considerations such as vehicle performance, range, and charging accessibility over financial incentives. Another explanation is that existing incentive programs may not be sufficiently visible, attractive, or well understood by consumers. Therefore, policymakers should not rely solely on monetary incentives but should complement them with infrastructure development, public awareness campaigns, and technological improvements.

Furthermore, the interaction effect between monetary incentive policy and price value was not significant in either city. This suggests that government incentives do not substantially strengthen consumers' perceptions of EV price attractiveness. In other words, consumers evaluate vehicle value primarily based on intrinsic economic and functional benefits rather than on temporary financial incentives. This finding reinforces the argument that sustainable EV adoption requires a comprehensive ecosystem rather than isolated financial support mechanisms.

The comparative analysis also reveals notable differences between Jakarta and Bangkok. While Jakarta consumers prioritize functional performance, particularly driving range, Bangkok consumers place greater emphasis on economic considerations, particularly price value. These differences may reflect varying levels of EV market maturity, infrastructure readiness, consumer awareness, and government support between the two cities. Therefore, a one-size-fits-all strategy may not be effective in promoting EV adoption across Southeast Asia. Instead, policymakers and manufacturers should develop localized strategies tailored to the unique concerns and preferences of consumers in each market.

Finally, the R^2 values of 0.273 for Jakarta and 0.334 for Bangkok indicate that the proposed model explains a moderate proportion of the variance in EV purchase intention. This suggests that additional factors not included in the present study may also influence consumers' decisions. Future research may incorporate variables such as environmental concern, social influence, technological trust, perceived risk, brand image, and environmental awareness to achieve a more comprehensive understanding of EV adoption behavior.

Overall, this study contributes to the growing literature on electric vehicle adoption by demonstrating that practical and economic factors remain the primary determinants of purchase intention in emerging Southeast Asian markets, whereas monetary incentives alone are insufficient to stimulate consumer demand. The findings provide important implications for policymakers, manufacturers, and infrastructure providers seeking to accelerate the transition toward sustainable transportation.

CONCLUSION

The results showed that price value, driving range, and charging station availability significantly affect the intention to purchase electric vehicles in both cities, while monetary incentive policies do not have a significant impact. The moderating role of monetary incentive policy on the relationship between price value and purchase intention was also not supported. The structural model assessment yielded R^2 values of 0.273 for Jakarta and 0.334 for Bangkok, indicating that the independent variables explained 27.3% and 33.4% of the variance in purchase intention, respectively. The driving range had the strongest influence in Jakarta, while price value was the most significant factor

in Bangkok. These results suggest that manufacturers and relevant stakeholders should focus on these three factors to support the government's efforts in promoting EV adoption. By prioritizing these aspects, they can effectively encourage consumers to purchase electric vehicles. Interestingly, monetary incentive policies, which are often considered crucial by the government for promoting the shift from fossil fuels to EVs, did not significantly affect purchase intentions in both Jakarta and Bangkok. This discovery challenges the assumption that providing monetary incentives to consumers effectively encourages EV purchases. The validated information from this study is valuable, offering a comprehensive understanding of the factors driving consumer intention to buy EVs. Relevant parties can now concentrate their efforts on these key factors.

For future research, it is crucial to review previous relevant studies to gain a better understanding of how these factors can provide practical solutions to EV-related challenges. Subsequent studies should involve a broader consumer population and simultaneously test those factors to identify fundamental aspects, such as perceived customer value, environmental and infrastructure issues. This approach will help producers and decision-makers take appropriate actions to ensure successful EV adoption in both cities.

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DECLARATION OF CONFLICTING INTERESTS

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