

Article

Drivers of Purchase Intention Toward Electric Vehicles: Extending the Theory of Consumption Values in Indonesia

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Abstract

Interest in electric vehicles (EVs) is rising as the world shifts toward sustainable transportation, yet consumer adoption remains highly uneven, particularly in developing countries. This study examines how five dimensions of consumption value—functional, social, emotional, novelty, and conditional—influence consumers' purchase intention toward EVs in Indonesia, while also testing the moderating role of infrastructure readiness. Using a quantitative approach, data were collected through an online survey with purposive sampling, yielding 455 valid responses. Partial least squares structural equation modeling (PLS-SEM) was applied to assess the measurement and structural models. The results reveal that functional, social, emotional, and conditional values significantly influence consumers' purchase intention toward EVs, whereas novelty value has no significant effect. Infrastructure readiness also significantly moderates most consumption values, with negative coefficients indicating that limited charging access and inadequate maintenance support weaken the positive impact of consumer values on EV adoption. The findings show that although consumers value performance, social image, emotional appeal, and situational factors, poor charging infrastructure hinders purchase intention toward EVs. This study contributes to EV adoption literature by integrating consumption value theory with infrastructure readiness as a moderator. The results emphasize that developing charging infrastructure, expanding service availability, and maintaining supportive government policies are critical steps for accelerating EV adoption in emerging markets.

Keywords: electric vehicles; consumer choice behavior; purchase intention; infrastructure readiness; theory of consumption values



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1. Introduction

The rapid advancement of economic development has led to increased human progress but at the same time has led to increased environmental degradation. As a result, sustainability concerns have become increasingly well known internationally. Tu [1] identifies new energy vehicles as one means to overcome these environmental challenges, and scholars have also agreed that moving towards green energy is key, as fossil fuel combustion remains a leading source of greenhouse gas emissions [2].

Electric vehicles (EVs) are one way to effectively reduce emissions in the transport sector [3]. However, EVs are sustainable innovations due to their ability to reduce pollution

and fossil fuel usage as well as minimize noise and vibration, ultimately improving comfort [4,5]. Policies have been developed by governments around the globe to encourage EV development [6]. Sales of global EVs exceeded one million units in 2017, representing 54% growth compared with 2016, though China had the largest market share overall, according to the IEA's report.

Consumer acceptance is the most important aspect of EV success, despite the growth in sales [7]. Consumers often exhibit limited knowledge and experience with EVs, contributing to uncertainty in forming purchase intention for EVs [8]. Consumer value theory asserts that Consumers tend to select products that align with their perceived value dimensions and personal needs [9,10]. Therefore, understanding these values is essential in improving EV penetration [11]. Consumers are often able to associate EVs' financial benefits in terms of low operational cost [12], emotional rewards, and environmental benefits [13].

Research on perceived value theory proposes that value perception explains how consumers choose sustainable means of transport, namely bike-sharing and public transport [14,15]. Scholars frequently categorize these values to examine their influence on consumer perceptions. Han et al. [5], for instance, found functional values—including monetary, performance, and convenience—to be most likely to motivate purchase intention toward EVs. In keeping with the Theory of Consumption Values [10], consumers select the products that they perceive as having the most value (and therefore, are most likely to purchase), which supports the theoretical rationale behind some products' purchase intention, purchasing behavior [16], and sustainable purchasing behaviors [17,18].

But while the global EV market is growing, uptake in many developing countries (including Indonesia, one of the largest automotive markets in Southeast Asia) remains low. EV development in Indonesia is further encouraged by national policies and incentives that were designed to stimulate EV development in Indonesia. Studies on how to implement consumer value theory, particularly in developing countries, remain scarce. Accordingly, this study investigates the effect of consumption values on consumers' purchase intention toward EVs and seeks out which consumption values primarily drive their decision-making.

Consumer intention to purchase EVs is also shaped by the perceived advantages and disadvantages of the technology. Key advantages include lower operating and maintenance costs, reduced emissions, and government incentives such as tax reductions and odd-even exemption policies in Indonesia. However, disadvantages such as limited charging infrastructure, range anxiety, and higher upfront purchase price remain significant barriers to purchase. Furthermore, it is important to distinguish between battery electric vehicles and hybrid electric vehicles. While hybrid and plug-in hybrid vehicles offer transitional solutions by combining internal combustion engines with electric motors, this study focuses specifically on consumer purchase intention toward battery electric vehicles in Indonesia.

2. Literature Review and Hypotheses

The systematic study of consumer behavior deals with how individuals choose, acquire, use, and dispose of products and services that satisfy their needs. An understanding of consumer behavior has an immediate bearing upon the successful creation of marketing tactics [19]. Value is the cornerstone of marketing in this arena. As emphasized by [20,21], marketing managers are encouraged to adopt strategies that meet the value expectations from clients of a firm for long-term success. A leading outcome of the broader model of consumer experience, customer value is found among [22] most influential forces in today's marketplace [23].

Consumer value, as we know it, has developed over the years. Perceived value was defined by [24] as the overall valuation of a product or service by a consumer based on

their perceptions about the utility of the product or service provided (what is received as compared to what is lost). A majority of the early work concentrated on quality and price as critical determinants of value judgments [25]. From the 1990s to today, however, multidimensional views of consumer perceived value (CPV) have been gaining influence. Sheth et al. [10] argued that consumer choice is modulated by various dimensions of consumption value contributing to varying degrees within the context of a decision situation.

Value is an integral facet of marketing and is well-researched, as it has an immense influence on consumers' attitudes, purchasing intentions, and loyalty towards the marketing-related products [15,26]. It is described as one of the basic elements for successful marketing techniques [27]. CPV is inherently subjective and affected by the factors and features that create a situation and an individual product, differentiating one product from another [28].

Based on decades of research in sociology, psychology, economics, and consumer behavior, ref. [10] proposed the Theory of Consumption Values (TCV). The Theory of Consumption Values has been widely applied and validated across various contexts, repeatedly exhibiting strong explanatory reliability [29,30]. TCV has defined five dimensions of consumer value: functional, emotional, social, epistemic, and conditional.

Functional value is the perceived usefulness of a product or service according to the functional, utilitarian, or physical characteristics of a product or service. Typically, functional values have been defined as price, durability, and reliability [29]. The importance of practical needs and tangible product characteristics influences purchase decisions [31]. Previous studies have demonstrated that functional value positively influences behavior [32]. In the case of electric vehicles (EVs), functional values are manifested by observed product features such as performance, cost savings, and energy-efficient methods [13]. However, some research published in recent years [17] also emphasized that functional value has limited impact on decision-making. As such, we put forward the following hypothesis:

H1. *Functional value has a positive effect on purchase intention toward EVs.*

The second most widely described dimension is that of social value, which is sometimes called symbolic value. It deals with perceived benefits from a product's social affiliation, such as with certain cultural and socioeconomic groups or with specific demographic categories. This value is related to both the image and the meanings that a product can be understood to provide [10]. Since symbolic value is essentially constructed by society, it tends to be more difficult to measure than functional value [33]. When facing social risk, consumers have a tendency to need more information in order to reduce negative consequences, thereby decreasing the level of uncertainty and leading them to rely on expert opinion [34].

Based on previous research, it is known that the symbolic nature of green products enhances their adoption beyond the purely functional or instrumental characteristics [35]. This could suggest that social status and recognition influence the products consumers select. In contrast, prior research [17] also found minor influence of social value on decision-making. Whitmarsh [36] also observed that pro-environmental identity may represent a significant symbolic marker which might communicate that owning an EV could convey technological sophistication and environmental consciousness. Based on this, we propose:

H2. *Social value positively predicts purchase intention toward EVs.*

Rational and emotional forces are fundamental components of consumer decisions [37]. Emotional value comprises the ability of an event that derives from a product or service generated from feelings or emotions [10]. This dimension illustrates the degree to which the product can produce positive emotional states [31]. Prior research highlights that emotional

aspects can be the main drivers for decision-makers in consumer choice [38]. Gonçalves et al. [18] claim that emotion or non-functional value would have been enough to predict green purchasing behavior. Bodker et al. [31] also found a positive correlation with both emotional value and behavioral intentions. Accordingly, we hypothesize:

H3. *Emotional value plays a positive role in purchase intention toward EVs.*

Consumers tend to seek information prior to purchase due to curiosity, novelty motivation, or knowledge enrichment [39]. Epistemic (novelty) value is the utility that derives from a product's ability to generate curiosity, provide novelty, or satisfy a consumer's need for knowledge [10]. Exploring new features also has a significant impact on consumers' intention to buy green products [40]. The adoption of new technology is extremely dependent on product expertise [41]. Before making decisions about innovative products, consumers evaluate available information [17]. As a result, consumers might find EVs appealing because of the revolutionary technology they adopt [42]. Based on this reasoning, the following hypothesis is proposed:

H4. *Epistemic value has a positive effect on purchase intention toward EVs.*

Conditional value is the utility extracted from a product according to circumstances or situations [10]. Conditional value arises in contexts where particular settings or conditions contribute to the functional or social benefit of the product. According to [43], conditional value is usually applicable to products that are primarily used at specific times. Consumers tend to assign value to products based on specific situational contexts [31]. As such, a number of studies [17] identify conditional value as a strong predictor of consumer choice. Furthermore, studies on sustainable consumption [44] indicate that the availability of situational factors greatly contributes to environmentally responsible actions. Pro-environmental behavior can be enabled or resisted by context and infrastructural influences [45]. Changes in situational variables can influence consumers' purchase intention of green products [46]. Thus, we hypothesize:

H5. *Conditional value has a positive influence on purchase intention toward EVs.*

It has been suggested in previous works [47] that electric vehicles can be an inexpensive alternative to conventional automobiles. Nonetheless, basing consumer intentions solely on perceived value remains inadequate. Several operational issues, such as a narrow driving range, long battery recharge time [48], and insufficient charging infrastructure [49,50] still contribute to consumer perception of the viability of EVs. Thus, infrastructure readiness influences consumers' attitudes towards EVs strongly. It can magnify or dampen perceived value impacts on purchasing behavior. From these results, the following hypotheses are suggested:

H6. *Infrastructure readiness moderates the effect of functional value on purchase intention toward EVs.*

H7. *Infrastructure readiness moderates the effect of social value on purchase intention toward EVs.*

H8. *Infrastructure readiness moderates the effect of emotional value on purchase intention toward EVs.*

H9. *Infrastructure readiness moderates the impact of epistemic value on purchase intention toward EVs.*

H10. *The effect of conditional value on purchase intention toward EVs is moderated by infrastructure readiness.*

While previous research has examined individual consumption values and their effects on EV adoption, only a few studies have considered the extent to which consumption values contribute to individual EV adoption within an integrated framework, particularly for emerging markets. There is still limited scientific evidence on how both functional, social, emotional, conditional, and epistemic values together contribute to the consumer decision-making process toward EVs.

3. Methodology

3.1. Research Design, Sampling Procedure, and Participants

This study used a quantitative cross-sectional survey design to test the Theory of Consumption Values in Indonesia's EV context. Partial least squares structural equation modeling (PLS-SEM) was selected because the model includes a formative construct, infrastructure readiness, and aims for predictive explanation of EV choice behavior. The analysis was conducted using SmartPLS 4.0.9.5. Purposive sampling was applied from February to 30 March 2025. Participants were recruited through social media targeted at users aged 18+ in Jabodetabek, Bandung, and Surabaya who engaged with EV-related content. Screening questions were applied: "Do you currently own an EV or seriously plan to purchase one within 2 years?" "Are you 18 years or older and residing in Indonesia?" Only respondents who answered "Yes" to both questions proceeded. No incentive was offered, and participation was voluntary to avoid response bias. From 412 initial responses, 27 failed attention checks, yielding 385 valid samples. This exceeds the minimum sample of 138 calculated by G_Power 3.1 for PLS-SEM with 5 predictors, $\alpha = 0.05$, power = 0.95, $f^2 = 0.15$.

3.2. Questionnaire Design, Measurement Items, and Adaptation

The questionnaire contained 36 items, each rated on a 5-point Likert scale from 1 = Strongly Disagree to 5 = Strongly Agree. The constructs measured were as follows: functional value, 4 items; social value, 3 items; emotional value, 3 items; epistemic value, 3 items; conditional value, 4 items; infrastructure readiness, 4 items; formative and EV choice behavior, 3 items. Scales were adapted from validated Theory of Consumption Values studies in prior EV and green product research. Adaptation procedure: back-translation to Bahasa Indonesia by 2 bilingual experts; contextualization to Indonesia by replacing general terms with "EVs" and adding Indonesia-specific items such as "Odd-even exemption" and "charging in my area"; pre-test with 30 EV users for clarity and face validity. Full measurement items, sources, and construct definitions are provided in Appendix A to ensure replicability while maintaining readability of the methodology section.

3.3. Data Analysis Procedure

Data were analyzed using SmartPLS 4.0. The analysis followed a two-stage approach. Stage 1 assessed the measurement model. Reflective constructs were evaluated using outer loadings, Average Variance Extracted (AVE), and Composite Reliability (CR). Formative construct infrastructure readiness was assessed via indicator weights and Variance Inflation Factor (VIF) to check for multicollinearity.

Stage 2 tested the structural model using 5000 bootstrap subsamples to report path coefficients β , t-statistics, and effect size f^2 . A two-stage approach was used for the moderation analysis due to the formative moderator. The Standardized Root Mean Square Residual (SRMR) was used to assess overall model fit.

4. Results and Discussion

Before analyzing the structural model, the demographic characteristics of the respondents were examined. As shown in Table 1, the sample consisted of 455 respondents, with 58% male and 42% female. In terms of age distribution, the majority (48%) were between 21 and 30 years old, followed by those aged 31–40 (36%). Regarding education, most respondents held a bachelor's degree (71%), followed by master's degree holders (11%) and high school students/graduates (18%). By occupation, employees accounted for the largest proportion (48%), followed by professionals or business owners (21%), housewives (10%), students (15%), and others (6%).

Table 1. The demographics of the respondents.

Characteristic	Percentage
Gender	- Female 42
	- Male 58
Age	- Below 20 2
	- 21–30 48
	- 31–40 36
	- Above 40 14
Education	- Master's degree 11
	- Bachelor's degree 71
	- High School/Students 18
Occupation	- Employee 48
	- Professional/ business owner 21
	- Housewife 15
	- Students 10
	- Other 6

n = 455.

This study examines the effect of consumer value on purchase intention and the moderating role of infrastructure readiness, using SmartPLS for the analysis. Figure 1 presents the estimated model generated from the calculation.

Prior to testing the structural relationships, the measurement model was evaluated to ensure the reliability and validity of the latent constructs. Following the recommendations of [51], the assessment comprised internal consistency reliability, convergent validity, discriminant validity, collinearity diagnostics, and overall model fit (Table 2).

Table 2. Measurement model assessment.

Construct	Cronbach's α	Composite Reliability	AVE	Interpretation
Functional Value	0.805	0.857	0.462	Reliable; convergent validity marginal but acceptable
Social Value	0.883	0.919	0.740	Excellent reliability and convergent validity
Emotional Value	0.780	0.845	0.477	Reliable; convergent validity marginal but acceptable
Novelty (Epistemic) Value	0.631	0.803	0.576	Acceptable reliability and validity
Conditional Value	0.698	0.815	0.525	Acceptable reliability and validity
Purchase Intention	0.813	0.866	0.519	Good reliability and validity
Infrastructure Readiness	0.806	0.872	0.631	Good reliability and validity

Source: SmartPLS output.

The results indicate satisfactory internal consistency reliability across all constructs. Cronbach's alpha values ranged from 0.631 to 0.883, exceeding the minimum recommended threshold of 0.60. These findings indicate that the measurement items consistently represent their respective latent constructs. Since Cronbach's alpha tends to underestimate reliability in PLS-SEM, Composite Reliability (CR) was also examined. The CR values

ranged from 0.803 to 0.919, all surpassing the recommended threshold of 0.70, confirming robust construct reliability. Collectively, these results demonstrate that the measurement instrument possesses adequate internal consistency for subsequent structural analysis.

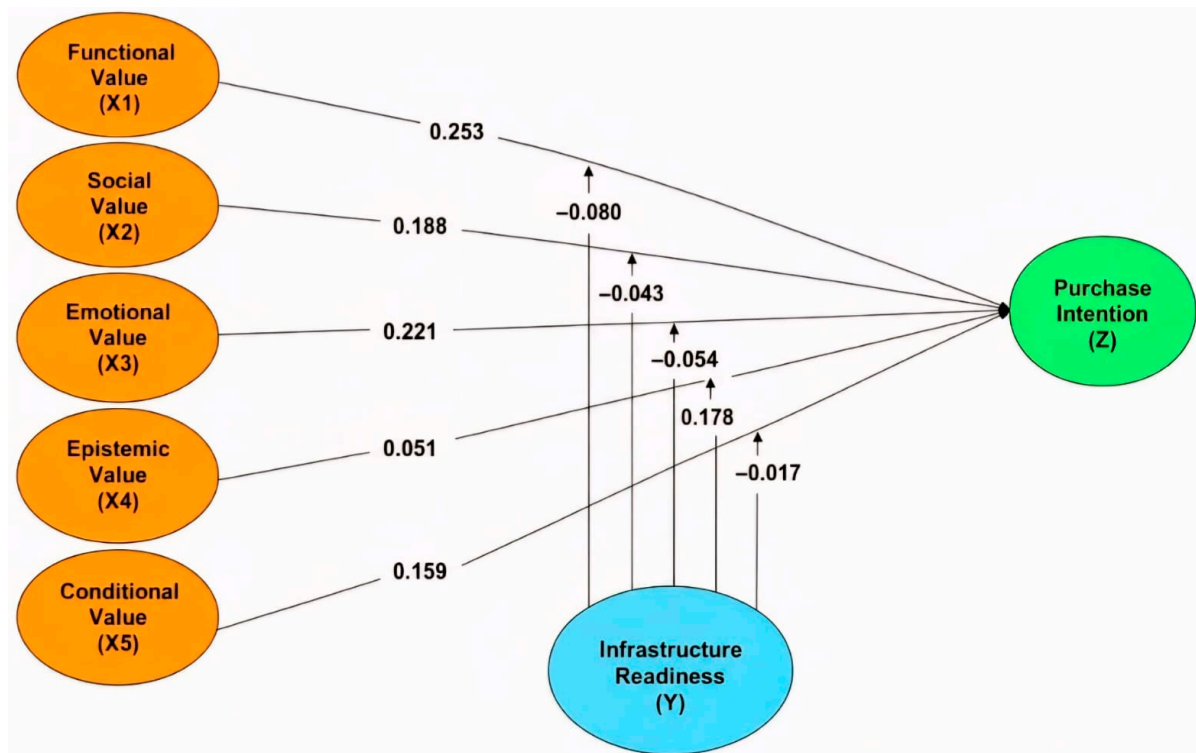


Figure 1. Measurement model.

Convergent validity was assessed using the Average Variance Extracted (AVE), which measures the proportion of variance in the indicators explained by their underlying latent construct. Five constructs achieved AVE values above the recommended threshold of 0.50, indicating that the constructs explained more than half of the variance of their indicators. Functional value (AVE = 0.462) and emotional value (AVE = 0.477) were slightly below the recommended criterion. However, both constructs demonstrated relatively high Composite Reliability values (0.857 and 0.845, respectively), suggesting that the indicators still consistently represented their intended constructs. As suggested by [51], AVE values marginally below 0.50 may still be considered acceptable when Composite Reliability exceeds 0.70. Therefore, no indicators were removed from the measurement model because the overall construct reliability remained satisfactory.

Discriminant validity was subsequently evaluated using the Fornell–Larcker criterion. As presented in Appendix A, the square root of the AVE for every construct exceeded its correlations with other constructs, indicating that each latent variable shared greater variance with its own indicators than with other constructs. This finding confirms that functional value, social value, emotional value, novelty value, conditional value, purchase intention, and infrastructure readiness represent empirically distinct concepts and that no substantial overlap exists among the latent variables.

To examine the potential influence of multicollinearity, the Variance Inflation Factor (VIF) was calculated for all predictor constructs (Table 3).

Table 3. Collinearity statistics.

Predictor	VIF
Functional Value	4.324
Social Value	2.636
Emotional Value	4.714
Novelty Value	3.145
Conditional Value	3.522
Infrastructure Readiness	2.185

Source: SmartPLS output.

All VIF values ranged from 2.185 to 4.714, remaining below the conservative threshold of 5.0. These results indicate that although several predictor constructs are moderately correlated—as expected under the Theory of Consumption Values—the degree of correlation is insufficient to create multicollinearity problems. Consequently, the estimated path coefficients are unlikely to be distorted by excessive correlations among the predictor variables.

Finally, the overall model fit was evaluated using the Standardized Root Mean Square Residual (SRMR) (Table 4).

Table 4. Overall Model Fit.

Index	Saturated Model	Estimated Model	Recommended	Interpretation
SRMR	0.072	0.071	<0.08	Good model fit

Source: SmartPLS output.

The estimated model produced an SRMR value of 0.071, which is below the recommended threshold of 0.08, indicating a satisfactory level of overall model fit. This result suggests that the discrepancy between the observed covariance matrix and the covariance matrix reproduced by the proposed model is relatively small. In other words, the measurement model adequately represents the observed data and provides a sound basis for evaluating the structural relationships among the constructs. Detailed indicator loadings and discriminant validity matrices are presented in Appendix A to improve readability while ensuring full transparency of the measurement model assessment (Table 5).

Table 5. The effects of consumer values on consumer choice behavior.

Hypothesis	Path	Path Co-Efficient	T-Values	p-Values	Result
H1	Functional Value → Purchase Intention	0.253	4.664	0.000	Supported
H2	Social Value → Purchase Intention	0.188	3.672	0.000	Supported
H3	Emotional Value → Purchase Intention	0.222	3.892	0.000	Supported
H4	Epistemic Value → Purchase Intention	0.051	1.070	0.285	Not Supported
H5	Conditional Value → Purchase Intention	0.159	2.963	0.003	Supported
H6	Infrastructure Readiness × Functional Value → Purchase Intention	−0.083	2.585	0.013	Supported
H7	Infrastructure Readiness × Social Value → Purchase Intention	−0.043	2.254	0.021	Supported
H8	Infrastructure Readiness × Emotional Value → Purchase Intention	−0.032	2.518	0.012	Supported
H9	Infrastructure Readiness × Novelty Value → Purchase Intention	0.137	0.607	0.544	Not Supported
H10	Infrastructure Readiness × Conditional Value → Purchase Intention	−0.017	2.349	0.072	Not Supported

Source: SmartPLS output.

The findings suggest that functional value (H1), social value (H2), emotional value (H3), and conditional value (H5) have statistically significant positive effects on consumer choice behavior. In contrast, epistemic (novelty) value (H4) has no significant effect on consumer choice.

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As for the moderating effects, infrastructure readiness has a significant moderating effect on the relationship between functional value (H6), social value (H7), and emotional value (H8) and purchase intention toward EVs. Its moderating effect on novelty value (H9) and conditional value (H10), however, is not statistically significant.

Among the five consumption values, functional value emerges as the dominant driver of purchase intention toward EVs in Indonesia, $\beta = 0.253$, $t = 4.664$, $p < 0.001$, supporting H1. This confirms that Indonesian consumers anchor decisions on rational utility calculations—operational cost savings, energy efficiency, and performance reliability—rather than on symbolic motives. The standardized coefficient magnitude underscores its primacy. Contextually, this dominance makes sense: fuel price volatility and middle-class budget constraints push total cost of ownership to the top of the decision filter. Thus, EV purchase in Indonesia remains in the “pragmatic stage” of diffusion, where utilitarian benefits must be proven before other values gain traction. These results are in line with Noor [52], which also showed that functional value has a great influence on purchasing intention for hybrid and electric vehicles. Similarly, Han et.al [5] verified that monetary and performance benefits of EVs directly affect adoption intention.

Beyond rational calculus, social value also plays a significant role, $\beta = 0.188$, $t = 3.672$, $p < 0.001$, supporting H2. However, its effect size falls below functional value, revealing a clear hierarchy in consumer decision-making. For Indonesia’s urban, educated sample, EVs operate as a “green status symbol”—a signal of technological sophistication and pro-environmental identity. The pattern suggests a two-stage process: consumers first satisfy functional thresholds, then layer on identity expression. This aligns with ref. [53], which noted ecological products often connote a socially responsible identity and an understanding of membership in a social group.

EV is not a purely cognitive calculation. Emotional value significantly influences purchase intention, $\beta = 0.222$, $t = 3.892$, $p < 0.001$, supporting H3. Positive affective responses—pride, excitement, reduced guilt—provide substantial lift to purchase intention, with an effect size approaching that of functional value. For Indonesian consumers, the “affective pull” comes from driving futuristic, quiet, eco-friendly vehicles. This feeling is critical to overcome inertia against switching from familiar ICE cars. Yet emotional benefits are experiential and require test drives or exposure to EV design to activate. For example, Sweeney et.al [54] highlighted the strong positive relationship between perceived emotional value and buying intentions; similarly, Moons et.al [55] discovered the strong association of emotional evaluations with EV usage intention. Modernity, futuristic design, and enjoyable driving experience of EVs all help reinforce consumers’ preferences.

In contrast, epistemic value fails to reach significance, $\beta = 0.051$, $t = 1.070$, $p = 0.285$, rejecting H4. This null finding is theoretically informative. Indonesian consumers show little motivation from curiosity or knowledge enrichment. The market appears to prioritize reliability, cost, and proven performance over technological exploration. With limited charging infrastructure and low product awareness, uncertainty avoidance trumps curiosity. This finding is in agreement with Nayum et.al [56], which also found no evidence that novelty

value was associated with attitudes toward EVs. However, Lee et.al [57] noted different evidence, suggesting that novelty-seeking can affect EV-buying behavior in some contexts.

The final direct driver is conditional value, $\beta = 0.159$, $t = 2.963$, $p = 0.003$, supporting H5. Unlike intrinsic product values, conditional value depends entirely on external context: tax exemptions, Jakarta's odd–even policy exemptions, free parking, battery warranties. Its significance highlights that purchase intention toward EVs in Indonesia is highly situational and policy-actionable. This explains the geographic clustering of adoption in cities with supportive regulations. This finding is in line with [58,59], which found that consumer attitudes toward energy-efficient vehicles are positively impacted by conditional value.

Infrastructure readiness is key to purchase intention for EVs, as it provides immediate solutions to issues around the availability of the charging network, range anxiety, and vehicle maintenance. Adding infrastructure as a moderation variable yielded two main findings from the study.

First, infrastructure readiness significantly and negatively moderates the relationships of functional value, social value, and emotional value with purchase intention, supporting H6, H7, and H8. This means that when charging infrastructure is perceived as adequate, consumers rely less on functional and emotional benefits to form purchase intention.

Second, infrastructure readiness does not significantly moderate epistemic value and conditional value, rejecting H9 and H10. The result for H10 suggests policy incentives operate as standalone motivators. Whether charging stations are scarce or adequate, tax exemptions and odd–even rules retain their pull on purchase intention.

Descriptive statistics support this pattern. Respondents reported low infrastructure readiness, confirming Indonesia's charging network remains limited. In such an early-stage context, consumers lean heavily on functional benefits, such as cost savings and emotional benefits like environmental pride, to justify purchase intention despite access barriers. The negative interaction coefficients reveal a dynamic of diminishing returns. Even small improvements in perceived infrastructure within this low-readiness environment reduce consumers' reliance on these values. As basic charging anxiety drops, the decision weight shifts away from cost and emotion toward other factors. Over time, as infrastructure matures, purchase intention toward EVs should transition from barrier-driven to preference-driven decisions.

This transition is visualized in the moderation plots. For functional and emotional values, the slope for high infrastructure readiness is noticeably flatter than for low readiness. At low IR, a one-unit increase in value produces a steep jump in purchase intention. At high IR, the same increase yields a gentler rise. The gap between slopes is largest at moderate value levels, exactly where mainstream consumers sit. This suggests infrastructure investment will have the highest marginal impact on the middle market.

Together, these findings paint a stage-specific picture of EV diffusion in Indonesia. When infrastructure is underdeveloped, consumption values carry the burden of compensating for access risk. As infrastructure improves, that burden lifts. Policy incentives remain constant throughout, but the psychological drivers evolve. Accelerating public charging deployment and incentivizing private investment is therefore critical.

5. Conclusions

This research indicates that consumption value shapes how consumers choose electric vehicles (EVs). Functional value—performance, technical specifications, and efficiency—is a driving factor for EV adoption. EVs combine high performance, cost-effectiveness, and innovative features. Social value is important too, as EVs align with buyers' identities and self-images, representing prestige, environmental responsibility, and forward-thinking

lifestyles. Emotional value, manifested in the technological thrill and the peace and quiet of driving, further enhances positive attitudes around EV adoption.

Similar to previous studies, conditional values like government subsidies, tax exemptions, and competitive pricing play a key role in adoption by lowering financial barriers. In contrast, epistemic value does not meaningfully contribute to purchase intention toward EVs. This suggests Indonesian consumers prioritize practical benefits over curiosity or novelty-seeking.

Infrastructure readiness is critical so that EVs can address issues with charging availability and maintenance. Descriptive results show that perceived availability of charging facilities in Indonesia remains low. However, this study reveals a key finding: infrastructure readiness negatively moderates the effects of functional and emotional values on EV choice behavior. This supports a “diminishing return” pattern. In the current low-readiness context, consumers rely heavily on cost savings and emotional benefits to justify adoption despite charging barriers. As perceived infrastructure improves, dependence on these values decreases because infrastructure itself reduces the risk of adoption.

5.1. Theoretical Contributions

This study advances EV adoption literature in three ways. First, it extends Theory of Consumption Values by integrating infrastructure readiness as a moderator within the Indonesian context. Most prior EV studies are set in developed markets with mature infrastructure, while this study examines an emerging market with limited charging availability and strong fiscal incentives. Second, the finding that infrastructure readiness negatively moderates functional and emotional values introduces a mechanism of diminishing returns. This suggests that as infrastructure improves, consumers rely less on personal cost–benefit and emotional evaluations. Third, the insignificance of epistemic value contrasts with findings from tech-oriented markets. This indicates that Indonesian consumers emphasize practical utility and financial savings over curiosity or novelty when considering EVs.

5.2. Managerial and Policy Implications

For manufacturers, messaging should prioritize total cost of ownership, reliability, and experiential benefits, such as test drives. For policymakers, maintaining fiscal incentives remains critical, but accelerating the deployment of charging infrastructure is the key lever for reducing psychological thresholds and shifting consumer reliance from personal values to system readiness.

5.3. Limitations and Future Research

This study has two limitations. First, all data were collected through a single online questionnaire, which may introduce common method bias. Future studies should test for this using Harman’s single-factor test or include a marker variable. Second, purposive sampling through social media limits generalizability. The sample is dominated by urban, educated 21–30-year-olds, so the results may not extend to rural consumers or older age groups with lower digital access. Future studies should investigate how consumer values function in specific cultural and socioeconomic contexts to increase the generalizability of these findings.

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Conflicts of Interest: The authors declare no conflicts of interest.

Appendix A

Table A1. Measurement items, sources, and construct.

Construct	Definition	Items	Source
Functional Value	Perceived utility from performance, quality, and price of EVs	FV1: EV provides good value for money. FV2: EV performs consistently. FV3: EV has acceptable quality. FV4: EV is economical to operate.	Sweeney & Soutar, 2001 [54]; Sheth et al., 1991 [10]
Social Value	Utility derived from social approval and image	SV1: People important to me think I should use EV. SV2: Using EV improves how I am perceived. SV3: EV is socially acceptable.	Sweeney & Soutar, 2001 [54]; Sheth et al., 1991 [10]
Emotional Value	Feelings and affective states generated from using EVs	EV1: Using EV makes me feel good. EV2: EV gives me pleasure. EV3: EV makes me feel proud.	Sweeney & Soutar, 2001 [54]; Sheth et al., 1991 [10]
Epistemic Value	Utility derived from novelty and curiosity	EpV1: EV satisfies my curiosity. EpV2: Using EV provides a new experience. EpV3: EV is innovative.	Sweeney & Soutar, 2001 [54]; Sheth et al., 1991 [10]
Conditional Value	Utility dependent on specific situations or circumstances	CV1: EV is useful when fuel prices are high. CV2: EV is beneficial due to odd-even traffic regulation exemptions. CV3: EV is practical for daily commuting. CV4: EV is suitable for environmental concerns.	Sweeney & Soutar, 2001 [54]; Sheth et al., 1991 [10]
Infrastructure Readiness	Perceived availability of supporting EV infrastructure	IR1: Charging stations are available in my area. IR2: The charging process is convenient. IR3: Battery range is sufficient for my needs. IR4: Maintenance services are accessible.	Developed for this study based on context
Purchase Intention	Intention and decision to choose EVs	CH1: I intend to choose an EV for my next vehicle. CH2: I am likely to recommend EVs to others. CH3: I prefer EVs over conventional vehicles.	Sweeney & Soutar, 2001 [54]; Sheth et al., 1991 [10]

Note. All items were measured using a five-point Likert scale ranging from 1 = Strongly Disagree to 5 = Strongly Agree.

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