Ann PUBLISHER
Journal of Economic Sciences (Ekuisci)
e-ISSN: 3047-0579
p-ISSN: 3046-837X

Factors Influencing Consumers to Repurchase Electric Vehicles ——A Case of BYD

Bingxiong Pan[1], Xuegang Zhan[2], Nutteera Phakdeephirot[3]
[1*, 2, 3] Rattanakosin International College of Creative Entrepreneurship, Rajamangala University of Technology Rattanakosin, Salaya, 73101, Thailand.
Corresponding Author Email: 1662110471107@rmutr.ac.th

Abstract. This research aims to verify the factors affecting the intention to repurchase electric vehicles in the context of BYD and to propose a strategic framework for the marketing of electric vehicles in China. This quantitative study employed a structured questionnaire to collect 419 BYD electric vehicle (EV) owners. Data analysis included descriptive statistics, reliability and validity tests, exploratory factor analysis, and structural equation modeling. The results indicate that functional, emotional, social, epistemic, and conditional values positively influence consumer satisfaction, which drives loyalty and enhances repurchase intention. Furthermore, this study encourages manufacturers to optimize product design, marketing strategies, and after-sales services while advising policymakers on incentive structures to support EV adoption and sustainable development goals.
Keywords: consumer value theory, electric vehicle, satisfaction, loyalty, repurchase intention.

INTRODUCTION

Climate change, energy shortages, and environmental pollution are pressing global challenges confronting humanity (Pacheco et al., 2021). To combat these issues, governments and international organizations have increasingly prioritized reducing carbon emissions and promoting sustainable development. The transportation sector, a key contributor to greenhouse gas emissions (Lamb et al., 2021), plays a pivotal role in the global shift toward a low-carbon economy. Emissions from conventional fuel-powered vehicles are major contributors to urban air pollution and climate change. These emissions not only deteriorate air quality, posing significant health risks for urban populations but also exacerbate global warming (Fayyazbakhsh et al., 2022). Consequently, the electrification of the automotive sector has become essential.

New energy vehicles (NEVs), particularly pure electric vehicles, are emerging as critical solutions for advancing green transportation due to their low-carbon, energy-efficient, and environmentally friendly attributes. The International Energy Agency (IEA) highlights the adoption of NEVs as a cornerstone in restructuring the global energy landscape(Yan et al., 2018). In response, many nations have set definitive timelines for discontinuing the sale of internal combustion engine vehicles. For example, the European Union aims to fully ban such

sales by 2035, with similar initiatives underway in the United States and Japan (Noussan et al., 2020).

As global attention shifts toward the advancement of NEV technologies, numerous countries have introduced favorable policies to facilitate technological innovation and industrial upgrades within the automotive sector. China, aligning with this trend, has heavily supported the growth of its NEV industry (Liu et al., 2018). NEVs represent a crucial step toward low-carbon transportation and symbolize the future trajectory of the automotive industry. China's significant policy support has been a primary driver of this sector's rapid growth. Since 2010, the government has introduced a range of incentives, including purchase subsidies, tax exemptions, and prioritized road usage, fostering the widespread adoption of electric vehicles (Zhang et al., 2014).

According to the China Association of Automobile Manufacturers (CAAM), in 2022, China's NEV sales accounted for over 60% of global totals, securing its position as the largest market for several consecutive years (Chu et al., 2022). Recent advancements further underscore this trend. Data from the December 2023 report by the Passenger Car Market Information Joint Branch of the China Automobile Dealers Association reveals that cumulative NEV sales for 2023 reached 7.3 million units, marking a 39.1% year-on-year increase (Association, 2023).

This study focuses on BYD Auto(hereinafter referred to as: BYD), a leading player in China's NEV market. BYD ventured into the electric vehicle industry in 2003 and has since achieved the top spot in China's NEV sales rankings (Li, 2020). The company has built a sustainable competitive advantage through extensive technological innovation and a robust research and development infrastructure. With a portfolio of cutting-edge technologies, BYD has established itself as a global leader in the NEV industry.

An analysis of monthly reports from the Passenger Vehicle Market Information Joint Branch of the China Automobile Dealers Association for December 2021, 2022, and 2023 identifies the top three NEV vendors, showcasing the dominance of BYD in driving market growth and innovation. (Table 1)

Table 1 . New Energy Market Top 3 Ranking of Manufacturers' Sales 2021-2023

Serial number	Manufacturer's name in 2021	2021 manufacturer sales (vehicle)	Manufacturer's name in 2022	2022 manufacturer sales (vehicle)	Manufacturer's name in 2023	2023 manufacturer sales (vehicle)
1	BYD	525861	BYD	1583220	BYD	2389739
2	Shanghai GM	423171	Shanghai GM	446762	Tesla (China)	604217
3	Tesla (China)	322020	Tesla (China)	441697	Shanghai GM	451999

Data analysis indicates that BYD's sales of new energy vehicles (NEVs) experienced substantial growth from 2021 to 2023, consistently maintaining its position as the leader in the NEV market throughout this period. Despite the rapid expansion of the NEV industry, driven

by supportive policies and increasing consumer demand, several challenges continue to hinder wider adoption of electric vehicles.

One of the primary obstacles is range anxiety, which remains a significant concern for consumers (Chakraborty et al., 2022). While battery technology has advanced considerably in recent years, the driving range of electric vehicles still falls short of meeting consumer expectations, particularly for long-distance travel and in extreme weather conditions. Additionally, the development of charging infrastructure has not kept pace with the growing adoption of NEVs. This issue is particularly pronounced in urban, rural, and remote areas, where the availability of charging stations is limited, exacerbating consumers' concerns about range.

Another key issue is battery safety, which has frequently raised public concerns. Incidents involving electric vehicles in extreme situations, such as high temperatures or collisions, have highlighted risks, including the potential for spontaneous combustion. These safety concerns have made some consumers hesitant to adopt electric vehicles(Gong et al., 2021).

LITERATURE REVIEW

Consumer Value Theory

Consumer Value Theory, introduced by Sheth et al. (1991), explores consumer behavior from the perspective of epistemic value. The theory identifies five dimensions—functional, emotional, epistemic, social, and conditional value—that influence the purchase satisfaction of BYD automobile consumers. This satisfaction subsequently fosters consumer loyalty, ultimately shaping their intention to repurchase BYD vehicle.

Satisfaction reflects consumers' feelings and evaluations regarding the products or services they have purchased. This typically encompasses assessments of product or service quality, pricing, after-sales support, and related factors(Shokouhyar et al., 2020). Consumer loyalty refers to the sustained alignment between a consumer's internal preference and external repetitive purchasing behavior toward a particular product or service over an extended period. It is characterized by recognition and satisfaction with the product or company, resulting in consistent repurchase behavior or recommendations to others(Kurdi et al., 2020). Customer repurchase intention plays a vital role in the success of most businesses, with the value provided by loyal customers significantly influencing overall company performance. This largely depends on their willingness to make repeat purchases. Consumer satisfaction and loyalty are deeply interconnected and mutually reinforcing (Tendian, 2022). However, not all satisfied customers necessarily become loyal. Only loyal customers tend to experience a higher sense of satisfaction. Research on satisfaction and loyalty has led to the concept of repurchase intention, which refers to a consumer's willingness to make repeat purchases after an initial transaction, maintaining their preference for a product or service over time (Prasetyo et al., 2021). The difference between merely satisfied customers and fully satisfied customers can substantially impact a business's success.

Ali et al. (2021) emphasized the importance of customer satisfaction, defining it as a customer's willingness to engage in further transactions with a seller following an initial purchase. This willingness reflects a tendency to sustain a long-term purchase or sale relationship. The study also explores changes in customer repurchase intentions under specific

conditions, such as during periods of crisis. In times of uncertainty, consumers' epistemic risks often rise significantly, directly influencing their purchasing decisions. For instance, during economic downturns or unforeseen market disruptions, consumers may carefully consider how external uncertainties impact supply and demand. Nonetheless, highly engaged customers who feel a strong connection to a product or brand are more likely to continue purchasing from the brand despite elevated risks (Laparojkit & Suttipun, 2021).

Furthermore, in a dynamic market environment, brand fit and brand relationship quality have emerged as critical factors influencing repurchase intentions (Khoa et al., 2020). Companies with strong brand fit are better positioned to create an emotional connection with consumers, thereby enhancing brand loyalty. Brand relationship quality goes beyond customer trust and satisfaction, encompassing the emotional bond that develops between a customer and a brand. As consumers' identification with a brand strengthens, so does their likelihood of repurchasing. This illustrates that brand fit transcends a mere transactional interaction, representing a deeper level of trust and engagement(Diallo et al., 2021).

In modern competitive markets, improving brand fit and fostering strong brand relationship quality are essential strategies for encouraging repeat purchases (Khoa et al., 2020). By cultivating these aspects, businesses can build enduring customer relationships and drive long-term loyalty, even in uncertain market conditions.

The concept of repurchase

Seminari et al. (2023) define "re-purchase" as a consumer's subsequent purchase of the same product or service following an initial transaction. According to Anggara et al. (2023), repurchase behavior reflects consumer loyalty, signifying their recognition of and satisfaction with the brand. Positive experiences often encourage consumers to develop repurchase habits, making this behavior a tangible expression of brand loyalty. Moreover, repeat purchases serve as an indicator of consumer satisfaction with aspects such as product quality, after-sales service, and price fairness. Research indicates a strong connection between repurchase behavior and consumers' decision-making processes. For instance, consumer decision models suggest that individuals are more likely to repurchase a product if its epistemic value after the initial purchase exceeds their expectations (Ampadu et al., 2023). From a business perspective, repurchase behavior is not only a testament to consumer trust but also essential for long-term profitability (Fiiwe et al., 2023). Retaining existing customers is often more cost-effective than acquiring new ones, and repurchase behavior helps companies lower marketing expenses while increasing brand market share.

By studying repurchase behavior in depth, businesses can refine their marketing strategies and improve customer relationship management. This approach enhances customer lifetime value, supports sustainable growth, and fosters long-term customer loyalty.

Research hypothesis

GuangBing (2023) examined the relationship between functional value and satisfaction among college students regarding health insurance and confirmed the positive influence of functional value on their satisfaction. Similarly, another study investigated the link between functional value, customer satisfaction, and repurchase intention concerning geographical

indication agricultural products. The results demonstrated that functional value significantly enhances customer satisfaction(Rasoolimanesh et al., 2023).

Cachero-Martínez et al. (2024) expressed a comparable perspective, emphasizing that functional value is not only a direct determinant of consumer satisfaction but also profoundly affects psychological expectations and decision-making processes. The study argued that improving functional value increases the epistemic worth of a product or service, thereby boosting overall satisfaction. Moreover, it highlighted the importance of adapting to evolving consumer needs and expectations, urging businesses and policymakers to continually optimize the functional value of their offerings to maintain competitiveness and appeal.functional value in various contexts, underscoring its central importance in modern consumer behavior research. Hence, this study posits:

H1: Functional value has a positive effect on satisfaction.

Emotional value plays a significant role in enhancing consumer satisfaction (Naige, 2023). Emotional value exerts a substantial positive influence on customer satisfaction (Hongying, 2023).

Rane et al. (2023) supported emotional value not only impacts consumer satisfaction but also contributes to increased brand loyalty and repeat purchase intentions. Collectively, this study posits:

H2: Emotional value has a positive effect on satisfaction.

Jigang (2012) examined the influence of cultural epistemic value on tourism experience satisfaction, highlighting that tourists' understanding and appreciation of a destination's culture significantly boost their overall satisfaction levels. Similarly, research has emphasized the positive impact of epistemic value on consumer purchase satisfaction, revealing that factors such as product features, quality, and price play a key role in how consumers evaluate a product's value. High epistemic value not only enhances satisfaction but also fosters brand loyalty (Ampadu et al., 2023). Additionally, Zeng and Kim (2024) supported the integration of culture and a brand's epistemic value can deepen consumers' emotional connections. This emotional resonance, in turn, increases purchase intention and satisfaction. Collectively, this study posits:

H3: Epistemic value has a positive effect on satisfaction.

Robina-Ramírez et al. (2023) investigated the impact of social value on tourism experience satisfaction and confirmed a significant positive correlation between social value and satisfaction. This finding suggests that when travelers perceive higher social value, their satisfaction increases correspondingly. Similarly, GuangBing (2023) explored the relationship between college students' epistemic social value of health care and their satisfaction with health care services, concluding that social value positively influences satisfaction and highlighting its critical role in shaping perceptions of health care coverage. Additionally, Rasoolimanesh et al. (2023) examined the role of social value in cultural tourism, noting that increased social value not only enhances tourists' sense of participation and belonging but also significantly boosts overall satisfaction with their tourism experience. Hence, this research posits:

H4: Social values have a positive effect on satisfaction.

Conditional value plays a significant role in consumer satisfaction research, particularly in specific contexts. Consumer choice theory suggests that value perceptions are influenced by particular conditions or situations, such as the purchase environment or specific product usage scenarios, which subsequently impact satisfaction (Meißner et al., 2020). In the domain of business services, conditional value is closely tied to specific business requirements and has been shown to have a notable effect on satisfaction levels (Tran & Le, 2020).

Similarly, in the travel industry, travelers evaluate their satisfaction based on the epistemic value of conditions within the travel context (Tran & Le, 2020). Research in leisure services also indicates that consumer satisfaction increases when services address condition-specific needs (PJ et al., 2023). Higher conditional value epistemic by users in particular task situations correlates with greater satisfaction. Overall, conditional value has been identified as a crucial determinant of consumer satisfaction across diverse industries and scenarios. Based on these findings, the following hypotheses are proposed:

H5: Conditional value has a positive effect on satisfaction.

In the field of consumer behavior research, consumer satisfaction is widely recognized as a crucial factor influencing consumer loyalty. Higher levels of consumer satisfaction with a product or service are associated with greater loyalty (Dam & Dam, 2021). This relationship is evident in the tourism sector as well. Králiková et al. (2020) demonstrated a significant positive correlation between tourists' satisfaction and the image of tourist attractions, and their resulting loyalty, through a study of the tourism industry. Furthermore, satisfied consumers are not only more likely to make repeat purchases but also positively impact other potential consumers through word-of-mouth recommendations, thereby strengthening brand loyalty (Al-Adwan et al., 2020). The study posits:

H6: Consumer satisfaction and consumer loyalty as positive influences.

Higher levels of brand loyalty among consumers are closely associated with a stronger inclination to repurchase products from the same brand (Dawes et al., 2021). This relationship was further validated in an empirical study by Widayati et al. (2020), which revealed that tourists' loyalty to attractions not only increased their intention to revisit but also amplified their willingness to engage in word-of-mouth promotion of those attractions.

Similarly, Dawes (2022) demonstrated that brand loyalty serves as a significant predictor of consumers' future purchasing behavior. Higher loyalty levels strongly correlate with a greater likelihood of repeat purchases of the same brand. Hence, this study posits:

H7: Consumer loyalty has a positive effect on consumer repurchase intention.

Building on the aforementioned hypotheses, this study focuses on the following key dimensions: functional value, emotional value, epistemic value, social value, conditional value, satisfaction, loyalty, and repurchase intention. Based on the above explanation, figure 1 develops a conceptual framework:

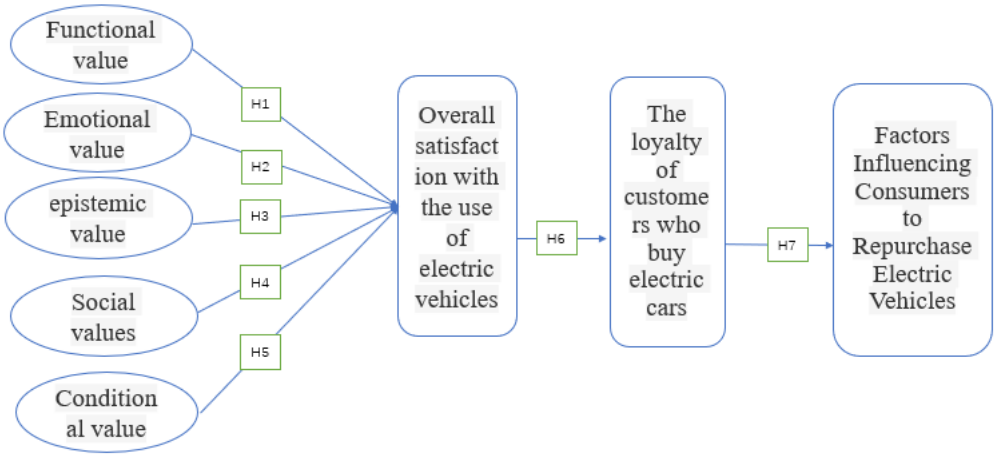

Figure 1. Conceptual framework

METHOD

Consumers who have already purchased BYD automobiles were selected for this study, and an online questionnaire was used to collect the Data. Six hundred questionnaires were distributed, and 470 questionnaires were recovered; after strict screening, 445 valid questionnaires were retained, with a validity rate of 94.68%. The questionnaires were distributed through social media platforms such as microblogging, WeChat and QQ, and the collection process lasted for one month, starting from November 22, 2024, to December 21, 2024, respectively. An internationally recognized and widely validated scale was used to develop the Chinese questionnaire, which was translated into Chinese by two professional English teachers. The questionnaire development process was rigorously translated and vetted, and the Index of Content Validity (IOC) was evaluated to ensure the consistency and accuracy of the different language versions of the questionnaire.

The questionnaire consisted of two parts: the first part was a survey of demographic information, including gender, age, family situation, and level of education; the second part measured, in order, the functional, emotional, conditional, social, and epistemic values in the theory of consumer value; all of them were based on a five-point Likert scale, with a gradual increase in the degree of scoring from 1 to 5, with a score of 1 indicating a strong disagreement and a score of 5 indicating a strong agreement. indicating strong agreement.

A total of 470 questionnaires were collected and went through a rigorous screening process to exclude incomplete questionnaires whose responses did not make sense or showed a clear pattern of questionnaires. Finally, 445 valid questionnaires were retained, with a validity rate of 94.80%, providing a solid foundation for the subsequent data analysis.The validity rate reached 94.80%, providing a solid foundation for the subsequent data analysis.

RESULTS

Descriptive statistical analysis

Table 2. Sample Information

Items	Categories	N	Percent (%)
Gender	Male	314	70.56
	Female	131	29.44
Age	18-24 years old	49	11.01
	25-34 years old	130	29.21
	35-44 years old	134	30.11
	35-44 years old	91	20.45
	45-54 years old	23	5.17
	Age 55 and older	18	4.04
Occupation	Enterprise managers	53	11.91
	Professional technical personnel	81	18.2
	Service worker	169	37.98
	Civil servant/public institution personnel	71	15.96
	Freelancer	57	12.81
	Other	14	3.15
Educational level	High school (technical secondary school) and below	26	5.84
	Junior college	85	19.1
	Undergraduate course	259	58.2
	Master degree or above	75	16.85
Monthly income level	4000-7500 yuan	34	7.64
	7501-10000 yuan	134	30.11
	10000-20000 yuan	200	44.94
	More than 20,000	77	17.3

According to the table2, in terms of gender, males are in the majority with a percentage of 70.56% and females with 29.44%. The age distribution shows that the largest group is between 35-44 years of age with 30.11%, followed by 25-34 years of age with 29.21%. The younger group (18-24 years old) accounted for 11.01%, while the older groups (45-54 years old and 55+ years old) accounted for smaller proportions of 5.17% and 4.04% respectively.

In terms of occupation, service workers accounted for the largest proportion at 37.98%, followed by professionals and technicians (18.2%) and civil servants/public sector workers (15.96%). Business managers and freelancers accounted for 11.91% and 12.81%, respectively, while the “other” category had a smaller share of 3.15%. In terms of education level, 58.2% of the respondents had completed a bachelor's degree, 19.1% had a college degree, 16.85% had a master's degree or higher, and only 5.84% had a high school diploma or less.

Finally, in terms of income distribution, the vast majority of respondents, or 44.94%, had a monthly income of between $10,000 and $20,000, followed by the $7,501-$10,000 income group, or 30.11%. Those earning more than $20,000 accounted for 17.3%, while those earning between $4,000 and $7,500 accounted for 7.64%. According to the above table, in terms of

gender, males are in the majority with a percentage of 70.56% and females with 29.44%. The age distribution shows that the largest group is between 35-44 years of age with 30.11%, followed by 25-34 years of age with 29.21%. The younger group (18-24 years old) accounted for 11.01%, while the older groups (45-54 years old and 55+ years old) accounted for smaller proportions of 5.17% and 4.04% respectively.

In terms of occupation, service workers accounted for the largest proportion at 37.98%, followed by professionals and technicians (18.2%) and civil servants/public sector workers (15.96%). Business managers and freelancers accounted for 11.91% and 12.81%, respectively, while the "other" category had a smaller share of 3.15%. In terms of education level, 58.2% of the respondents had completed a bachelor's degree, 19.1% had a college degree, 16.85% had a master's degree or higher, and only 5.84% had a high school diploma or less.

Finally, in terms of income distribution, the vast majority of respondents, or 44.94%, had a monthly income of between $10,000 and $20,000, followed by the $7,501-$10,000 income group, or 30.11%. Those earning more than $20,000 accounted for 17.3%, while those earning between $4,000 and $7,500 accounted for 7.64%. According to the above table, in terms of gender, males are in the majority with a percentage of 70.56% and females with 29.44%. The age distribution shows that the largest group is between 35-44 years of age with 30.11%, followed by 25-34 years of age with 29.21%. The younger group (18-24 years old) accounted for 11.01%, while the older groups (45-54 years old and 55+ years old) accounted for smaller proportions of 5.17% and 4.04% respectively.

In terms of occupation, service workers accounted for the largest proportion at 37.98%, followed by professionals and technicians (18.2%) and civil servants/public sector workers (15.96%). Business managers and freelancers accounted for 11.91% and 12.81%, respectively, while the "other" category had a smaller share of 3.15%. In terms of education level, 58.2% of the respondents had completed a bachelor's degree, 19.1% had a college degree, 16.85% had a master's degree or higher, and only 5.84% had a high school diploma or less.

Finally, in terms of income distribution, the vast majority of respondents, or 44.94%, had a monthly income of between $10,000 and $20,000, followed by the $7,501-$10,000 income group, or 30.11%. Those earning more than $20,000 accounted for 17.3%, while those earning between $4,000 and $7,500 accounted for 7.64%.

Table 3. Spending Patterns and Budget Preferences for BYD Electric Cars

Items	Categories	N	Percent (%)
How much did you spend on your first BYD electric car?	Less than 100,000 yuan	64	14.38
	100,000 to 200,000 yuan	210	47.19
	200,000 to 300,000 yuan	125	28.09
	More than 300,000 yuan	46	10.34
If you plan to repurchase an BYD electric car, what is your budget?	Less than 100,000 yuan	15	3.37
	100,000 to 200,000 yuan	191	42.92
	200,000 to 300,000 yuan	147	33.03
	More than 300,000 yuan	92	20.67

Based on the table 3, we analyzed respondents' spending amount when they first purchased a BYD electric vehicle and their budget when they repurchase in the future.

First-time purchase spending amount: 14.38% of respondents (64 people) spent less than 100,000 RMB when making their first purchase, showing that some consumers are price-sensitive. The highest percentage of consumers is between 100,000 and 200,000 RMB, at 47.19% (210 people), which may be the main market for BYD's EVs. 28.09% of respondents (125 people) spend between 200,000 and 300,000 RMB, indicating that there is also some demand in the higher price range. More than 300,000 RMB accounted for 10.34% (46 people) of respondents, reflecting BYD's small share of the high-end market.

Future purchase budget:

When planning to buy again, the proportion of those with a budget of less than 100,000 yuan dropped to 3.37% (15 people), indicating that consumers no longer prefer low-priced EVs or want to upgrade to models with higher configurations. The proportion of "100,000-200,000 yuan" budget declined, but still accounted for 42.92% (191 people), indicating that this range is the mainstream of future purchases. The proportion with a budget of 200,000-300,000 yuan rose to 33.03% (147 people), indicating that more consumers are willing to increase their budgets. The proportion of budgets above 300,000 RMB rose significantly to 20.67% (92 people), reflecting the elevated demand for high-end models.

Taken together, the overall consumption trend of consumers is moving towards high-end. While first-time purchases are mainly concentrated in the 100,000-200,000 RMB range, the number of consumers with budgets above 200,000 RMB in the future has increased significantly, showing a rising interest in high-performance and highly-equipped models. This suggests that BYD's product upgrades are able to meet consumer demand, and that future market competition is likely to focus more on mid-to-high-end models. If BYD can continue to introduce quality models that meet these budgets, it will help to further increase its market share.

Table 4. The BYD electric vehicle types

Categories	Response		Popularity rate (n=419)
	n	Response rate	
Sedan	201	33.39%	45.17%
SUV	180	29.90%	40.45%
MPV	119	19.77%	26.74%
Other	102	16.94%	22.92%
Total	602	100%	135.28%

According to table 4, the distribution of respondents' purchase types of BYD Electric Vehicles includes sedans, SUVs, MPVs and other types, and the following is the analysis of each type:

Sedan: The number of purchasers is 201, accounting for 45.17%, which is the most popular type of BYD EV. Sedan attracts a wide range of consumers due to its flexibility and comfort for urban transportation. However, its share did not exceed half, showing that the

competitiveness of other models is on the rise.

SUV: The number of purchasers is 180, accounting for 40.45%. SUVs are favored by consumers due to their spaciousness and multi-purpose characteristics, which are suitable for both family and outdoor use. This also reflects the continuous growth trend of the SUV market.

MPV: The number of purchasers was 119, accounting for 26.74%. Although MPVs have advantages in family and business use, they have a relatively small audience, probably due to their large size and limited use scenarios. However, with the rising demand for multi-purpose vehicles, MPVs still have a certain market share.

Other types: 102 or 22.92% were purchased. This category may include purpose-built vehicles or the more niche BYD models. Although the share is relatively low, nearly a quarter of consumers chose other types, indicating that there is market demand for non-mainstream models as well.

To summarize, sedans and SUVs are the main popular models, while MPVs and other types also have a share of the market.

Table 5. Evaluation of Key Factors Influencing BYD Electric Car Ownership

Items	Mean	Std. Deviation
Vehicle performance (e.g. range, acceleration, handling, etc.)	3.625	1.261
After-sales service	3.346	1.12
Charging convenience	3.384	1.092
Cost performance	3.38	1.116

According to Table 5, respondents' satisfaction ratings for the four key items (vehicle performance, after-sales service, charging convenience, and value for money) of BYD EVs are as follows:

The average score of 3.625 for vehicle performance is the highest among the four items, indicating that respondents are generally satisfied with the range, acceleration, and handling performance of BYD EVs.

The average satisfaction score for after-sales service is 3.346, which is slightly lower than that for vehicle performance. This indicates that most respondents have a more neutral or slightly satisfied view of after-sales service, but it is not particularly prominent.

The average satisfaction score for charging convenience is 3.384, which is close to neutral and on the upper side, indicating that respondents' evaluation of the convenience of charging facilities is average, suggesting that BYD still has room for improvement in charging infrastructure.

The average score for price/performance ratio is 3.38, indicating that consumers are generally satisfied with the price of BYD's EVs compared to their features and performance.

Reliability analysis

Reliability refers to the reliability or stability of a measurement instrument such as a questionnaire. Reliability analysis is used to assess the degree of consistency between items

in a questionnaire, i.e., whether the measurement results are reliable. Commonly used reliability analysis methods include Cronbach's alpha coefficient method.

Cronbach's alpha coefficient (Cronbach's alpha) is a reasonable indicator for testing the reliability of a questionnaire and is widely used in empirical data analysis. Generally speaking, when the Cronbach's alpha value of the scale designed by the questionnaire is even lower than 0.7, it means that the internal consistency of the variables of the scale is poor, and the scale needs to be re-compiled; when the Cronbach's alpha value of the scale is higher than 0.7, it can imply that the internal consistency of the constructed variables of the scale is better; furthermore, if the Cronbach's alpha value of the scale is higher than 0.7, the internal consistency of the constructed variables is better; and Further, if the Cronbach's alpha of the scale is higher than 0.9, it means that the internal consistency of the variables designed for the scale is very good and the measurement reliability is very high. $\text{Cronbach's } \alpha = \frac{k}{k-1}\left(1-\frac{\sum_{i=1}^{k} S_i^2}{S^2}\right)$, included among these k is the number of items in the questionnaire, S_i^2 is the variance of i the first item score, S^2 is the variance of the total score of the questionnaire.

Table 6. Reliability Statistics

	Items	Corrected Item-Total Correlation(CITC)	Cronbach Alpha if Item Deleted	Cronbach α
Functional value	FV1	0.773	0.768	0.848
	FV2	0.673	0.813	
	FV3	0.667	0.815	
	FV4	0.642	0.825	
Emotional value	SV1	0.691	0.716	0.811
	SV2	0.657	0.746	
	SV3	0.648	0.755	
Epistemic value	CV1	0.715	0.732	0.827
	CV2	0.7	0.747	
	CV3	0.645	0.798	
Social value	SOCV1	0.726	0.741	0.832
	SOCV2	0.69	0.771	
	SOCV3	0.677	0.783	
Conditional value	CONV1	0.735	0.705	0.824
	CONV2	0.65	0.788	
	CONV3	0.67	0.769	
Overall satisfaction with	SAT1	0.719	0.749	0.826
	SAT2	0.634	0.789	

electric vehicle use	SAT3	0.641	0.786	
	SAT4	0.621	0.795	
Loyalty of electric car buyers	LOY1	0.767	0.851	0.883
	LOY2	0.694	0.863	
	LOY3	0.671	0.867	
	LOY4	0.684	0.865	
	LOY5	0.677	0.866	
	LOY6	0.679	0.866	
Intention to repurchase an electric vehicle	PIA1	0.775	0.777	0.852
	PIA2	0.655	0.828	
	PIA3	0.681	0.818	
	PIA4	0.674	0.821	

In order to verify table 6, a reliability analysis was conducted. Cronbach's alpha coefficient was used in this analysis to assess the internal consistency of the questionnaire. Generally, when the Cronbach's alpha coefficient exceeds 0.7, it indicates an acceptable internal consistency reliability; while higher than 0.8 indicates a good consistency.

According to the results of the analysis, the Cronbach's alpha coefficients of each dimension exceeded 0.7, which were 0.848, 0.811, 0.827, 0.832, 0.824, 0.826, 0.883, and 0.852.These results indicate that there is a better internal consistency among the dimensions of the questionnaire. Therefore, the reliability of the survey is good and the results of the questionnaire are reliable for subsequent analysis.

Exploratory factor analysis (EFA)

Exploratory factor analysis is a statistical method designed to reveal underlying structure in multivariate data. It simplifies the structure of the data and provides a better understanding of the relationships between variables by grouping multiple correlated variables into a few uncorrelated factors. Before conducting factor analysis, it is first necessary to confirm whether the selected correlated variables are eligible for factor analysis through KMO test and Bartlett's sphericity test. According to Kaiser's criteria, a KMO value greater than 0.7 is usually considered to fulfill this condition.

Next, principal component analysis was used to extract the common factors. Generally, if the cumulative variance explained by all the male factors with eigenvalues greater than 1 exceeds 60%, the questionnaire data can be considered to have good structural validity. Finally, orthogonal rotation was performed by the maximum variance pivot method to obtain a rotated component matrix containing the factor loading values of each question item in order to identify and name the common factors.

Ideally, if a question item in the rotated component matrix has a factor loading of more than 0.5 on its corresponding common factor, while no question item has a loading of more than 0.4 on two or more common factors, the factor structure is clearer. On the contrary, if these conditions cannot be met, then consideration needs to be given to removing the relevant question items.

Table 7. KMO and Bartlett test

KMO		0.939
Bartlett test	Approx. Chi-Square	7198.604
	df	435
	p value	0

From the table7, the KMO value of 0.939 is much more than 0.7, which indicates that the data is suitable for factor analysis. In addition, the result of Bartlett's test of sphericity was significant ($p<0.05$), further confirming the suitability of the study data. This indicates that the data structure is suitable for more in-depth analysis.

Table 8. KMO Total Variance Explained

Factor	Eigen values			% of variance (Initial)			% of variance (Rotated)		
	Eigen	% of Variance	Cum. % of Variance	Eigen	% of Variance	Cum. % of Variance	Eigen	% of Variance	Cum. % of Variance
1	11.733	39.111	39.111	11.733	39.111	39.111	3.983	13.277	13.277
2	1.81	6.034	45.145	1.81	6.034	45.145	2.831	9.436	22.713
3	1.518	5.06	50.205	1.518	5.06	50.205	2.661	8.871	31.585
4	1.35	4.501	54.707	1.35	4.501	54.707	2.631	8.769	40.354
5	1.305	4.35	59.056	1.305	4.35	59.056	2.339	7.797	48.151
6	1.239	4.128	63.185	1.239	4.128	63.185	2.256	7.519	55.67
7	1.18	3.934	67.119	1.18	3.934	67.119	2.244	7.479	63.149
8	1.051	3.503	70.622	1.051	3.503	70.622	2.242	7.473	70.622

From the table 8, it can be seen that a total of 8 factors were extracted and their eigenroot values were all greater than 1. After rotation, the cumulative variance explained of these 8 factors reached 70.622%, which exceeded the standard of 60%, indicating that the scale has a strong ability to explain the data and possesses good validity.

Table 9. Factor loading (Rotated)

Items	Factor loading							
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8
FV1	0.164	0.84	0.142	0.093	0.137	0.114	0.113	0.072
FV2	0.218	0.693	0.163	0.113	0.167	0.109	0.227	0.087
FV3	0.132	0.715	0.14	0.189	0.145	0.19	0.117	0.145
FV4	0.272	0.686	0.157	0.158	0.066	0.082	0.12	0.138
SV1	0.101	0.124	0.135	0.136	0.113	0.13	0.826	0.07

SV2	0.174	0.229	0.214	0.144	0.127	0.122	0.72	0.105
SV3	0.21	0.162	0.16	0.206	0.083	0.14	0.726	0.117
CV1	0.16	0.101	0.076	0.091	0.097	0.857	0.111	0.091
CV2	0.171	0.17	0.13	0.174	0.205	0.747	0.145	0.159
CV3	0.17	0.188	0.254	0.208	0.077	0.704	0.15	0.075
SOCV1	0.12	0.12	0.112	0.112	0.844	0.157	0.096	0.099
SOCV2	0.165	0.194	0.188	0.24	0.72	0.074	0.133	0.152
SOCV3	0.169	0.152	0.207	0.165	0.751	0.123	0.099	0.143
CONV1	0.154	0.118	0.11	0.137	0.117	0.06	0.064	0.858
CONV2	0.212	0.131	0.148	0.136	0.096	0.205	0.093	0.742
CONV3	0.242	0.144	0.206	0.201	0.197	0.066	0.151	0.699
SAT1	0.136	0.108	0.825	0.131	0.128	0.097	0.132	0.11
SAT2	0.26	0.21	0.656	0.158	0.155	0.109	0.084	0.145
SAT3	0.22	0.128	0.662	0.177	0.219	0.14	0.159	0.128
SAT4	0.155	0.202	0.649	0.163	0.091	0.152	0.22	0.139
LOY1	0.836	0.086	0.092	0.095	0.114	0.077	0.095	0.094
LOY2	0.703	0.178	0.193	0.13	0.034	0.1	0.173	0.147
LOY3	0.72	0.145	0.155	0.157	0.046	0.089	0.028	0.135
LOY4	0.687	0.217	0.098	0.152	0.07	0.108	0.139	0.185
LOY5	0.643	0.155	0.117	0.183	0.218	0.234	0.087	0.18
LOY6	0.711	0.123	0.174	0.164	0.163	0.093	0.122	0.037
PIA1	0.184	0.105	0.157	0.799	0.139	0.146	0.169	0.181
PIA2	0.237	0.184	0.262	0.67	0.094	0.2	0.1	0.081
PIA3	0.243	0.21	0.155	0.684	0.182	0.14	0.132	0.116
PIA4	0.211	0.136	0.122	0.649	0.254	0.087	0.239	0.228

The results of Table 9 showed that FV1 to FV4 had high loadings on the second factor, which was therefore named “functional value”; the same can be said for the other variables. Therefore, the results of the loadings of these factors are consistent with the scale and dimensions designed for the study, and the loadings of each dimension are greater than 0.5, which proves that the scale passed the validity test.

Validation factor analysis

The main purpose of validation factor analysis (CFA) is to test whether the pre-determined latent factor structure matches the actual data. Unlike exploratory factor analysis, CFA requires the researcher to specify the number of potential factors and the relationship between variables and factors before analysis. In the CFA process, the researcher first needs to construct a clear theoretical model that contains the number of potential factors and their relationships with each variable. The construction of this model is usually based on existing research findings, theoretical frameworks, or empirical understanding.

Next, CFA focuses on validating this theoretical model. By setting up pre-defined assumptions, including the correlations of potential factors and the factor loadings of each

variable, CFA aims to assess the fit of the theoretical model to the actual data. Fit metrics, such as chi-square fit and root-mean-square error, are used to measure the fit between the theoretical model and the actual data.

Ultimately, the CFA results inform the validation of the theoretical model. The researcher assesses the structural validity of the model by analyzing results such as factor loadings. This helps to ensure that the measurement tools used accurately reflect the research concepts , thus providing a reliable basis for subsequent analysis and interpretation.

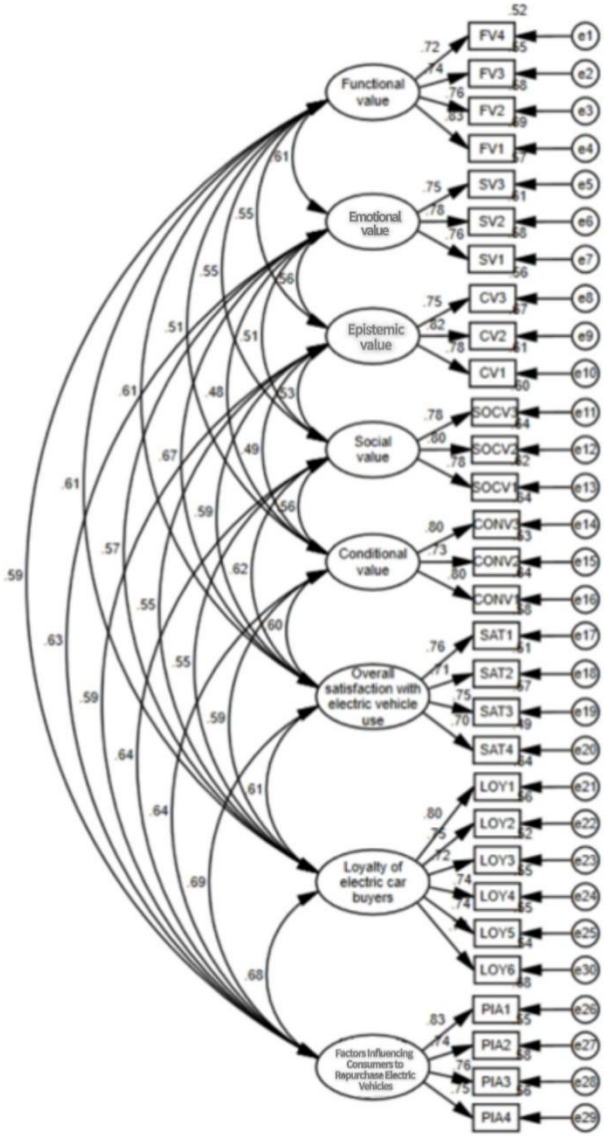

Figure 2. Measurement model

Table10. The factor load coefficient

Factor	Items	Coef.	Std. Error	C.R.	p	Std. Estimate	AVE	CR
Functional value	FV1	1	-	-	-	0.835	0.59	0.852
	FV2	0.789	0.045	17.398	***	0.767		
	FV3	0.79	0.047	16.822	***	0.746		
	FV4	0.714	0.044	16.091	***	0.72		
Emotional value	SV1	1	-	-	-	0.765	0.592	0.813
	SV2	0.861	0.056	15.25	***	0.782		
	SV3	0.835	0.056	14.929	***	0.761		
Epistemic value	CV1	1	-	-	-	0.781	0.618	0.829
	CV2	0.927	0.056	16.501	***	0.826		
	CV3	0.849	0.056	15.279	***	0.749		
Social value	SOCV1	1	-	-	-	0.794	0.628	0.835
	SOCV2	0.838	0.05	16.711	***	0.805		
	SOCV3	0.807	0.05	16.208	***	0.777		
Conditional value	CONV1	1	-	-	-	0.802	0.614	0.827
	CONV2	0.779	0.051	15.374	***	0.74		
	CONV3	0.857	0.052	16.584	***	0.807		
Overall satisfaction with electric vehicle use	SAT1	1	-	-	-	0.77	0.547	0.828
	SAT2	0.816	0.055	14.942	***	0.729		
	SAT3	0.894	0.059	15.244	***	0.743		
	SAT4	0.762	0.052	14.62	***	0.714		
Loyalty of electric car buyers	LOY1	1	-	-	-	0.803	0.561	0.884
	LOY2	0.824	0.049	16.971	***	0.753		
	LOY3	0.753	0.047	15.985	***	0.717		
	LOY4	0.772	0.046	16.681	***	0.742		
	LOY5	0.822	0.049	16.763	***	0.745		
	LOY6	0.774	0.047	16.354	***	0.731		
Intention to repurchase an electric vehicle	PIA1	1	-	-	-	0.833	0.598	0.856
	PIA2	0.755	0.045	16.693	***	0.732		
	PIA3	0.785	0.045	17.481	***	0.759		
	PIA4	0.753	0.043	17.669	***	0.765		

As can be seen from the above table10, the standardized factor loading coefficients of all measurement items are greater than 0.6, and the AVE values of all eight dimensions are greater than 0.5 and the CR values are greater than 0.7, therefore, all of them arrive at the passing standard in the convergent validity.

Table11. Distinguishing validity

	Functional value	Emotional value	Epistemic value	Social value	Conditional value	Overall satisfaction with electric vehicle use	Loyalty of electric car buyers	Intention to repurchase an electric vehicle
Functional value	0.768							
Emotional value	0.495	0.77						
Epistemic value	0.461	0.444	0.786					
Social value	0.462	0.404	0.424	0.792				
Conditional value	0.431	0.385	0.399	0.441	0.784			
Overall satisfaction with electric vehicle use	0.521	0.513	0.474	0.505	0.48	0.739		
Loyalty of electric car buyers	0.526	0.449	0.46	0.438	0.5	0.531	0.749	
Intention to repurchase an electric vehicle	0.518	0.525	0.506	0.532	0.517	0.568	0.568	0.773

Note: The diagonal diagonal number is the AVE square root value

On the diagonal are the square root values of the AVE values (i.e., the bolded values), and the rest of the values are the values of the Pearson correlation coefficients between the dimensions. In a sense the square root of the AVE value represents the correlation within each dimension and the Pearson value represents the correlation outside the dimension, if the internal correlation is higher than the external correlation then it can be assumed that, the differentiation is higher. From the above table, it can be seen that for Functional value, its AVE square root value is 0.768, which is greater than the maximum value of the absolute value of the correlation coefficient between the factors, 0.526, implying that it has good discriminative validity; Emotional value, Epistemic value, Social value, Conditional Emotional value, Epistemic value, Social value, Conditional value, Overall satisfaction with electric vehicle use, Loyalty of electric car buyers, and Intention to repurchase an electric vehicle all have square root AVE values greater than their correlations with other dimensions. are greater than the values of their correlation coefficients with the other dimensions, indicating that the discriminant validity of each dimension is met.

Table12. Model fit

Fitting the index	Standard of judgment	Actual value	Fits the results
Absolute fit index			
CMIN/DF	<3	1.654	Good
GFI	>0.8	0.921	Good
AGFI	>0.8	0.903	Good
RMSEA	<0.08	0.038	Good
Value-added fit index			
NFI	>0.8	0.916	Good
IFI	>0.8	0.965	Good
TLI	>0.8	0.959	Good
CFI	>0.8	0.965	Good
Simple fit index			
PNFI	>0.5	0.793	Good
PCFI	>0.5	0.836	Good

According to the above table12, it can be seen that according to the criteria for judging the model fit indicators, most of the model fit indicators such as CMIN/DF, NFI, IFI, TLI, CFI, GFI, AGFI, RMSEA, and so on, meet the criteria in the validated factor analytic model of this study, so the model fit is good.

Related Analysis

Correlation analysis is a statistical method to study the strength and direction of the linear relationship between two or more variables. Commonly used correlation coefficients include Pearson's correlation coefficient. $r = \frac{\sum_{i=1}^{n}(x_i-\bar{x})(y_i-\bar{y})}{\sqrt{\sum_{i=1}^{n}(x_i-\bar{x})^2\sum_{i=1}^{n}(y_i-\bar{y})^2}}$,included among these x_i and y_i are the i observations of the two variables, respectively, $\bar{x}$ and $\bar{y}$ respectively, is the average of the two variables, n is the total number of observations.

Table 13. Pearson Correlation

	Functional value	Emotional value	Epistemic value	Social value	Conditional value	Overall satisfaction with electric vehicle use	Loyalty of electric car buyers	Intention to repurchase an electric vehicle
Functional value	1							
Emotional	0.494**	1						

value								
Epistemic value	0.461**	0.444**	1					
Social value	0.462**	0.404**	0.424**	1				
Conditional value	0.431**	0.385**	0.399**	0.441**	1			
Overall satisfaction with electric vehicle use	0.521**	0.513**	0.474**	0.505**	0.480**	1		
Loyalty of electric car buyers	0.525**	0.449**	0.461**	0.438**	0.500**	0.531**	1	
Intention to repurchase an electric vehicle	0.518**	0.525**	0.506**	0.532**	0.517**	0.568**	0.568**	1
* p<0.05 ** p<0.01								

As can be seen from table 13, there is a significant positive correlation between each of the value dimensions and Overall satisfaction with electric vehicle use. Specifically, the correlation coefficient between Functional value and Overall satisfaction is 0.521, Emotional value is 0.513, Epistemic value is 0.474, Social value is 0.505, and Conditional value 0.480, all indicating a positive association between them and Overall satisfaction. In addition, the correlation coefficient between Overall satisfaction and Loyalty of electric car buyers is 0.531, which shows that they are also positively related. Finally, the correlation coefficient between the Loyalty of electric car buyers and the Intention to purchase an electric vehicle again is 0.568, indicating a strong correlation.

Structural Equation Modeling Analysis

Structural Equation Modeling (SEM) is a statistical analysis technique used to study complex relationships between variables. It combines the characteristics of factor analysis and path analysis, and is able to deal with multiple factors and observed variables at the same time. It is suitable for validating theoretical models and analyzing direct and indirect relationships between variables.

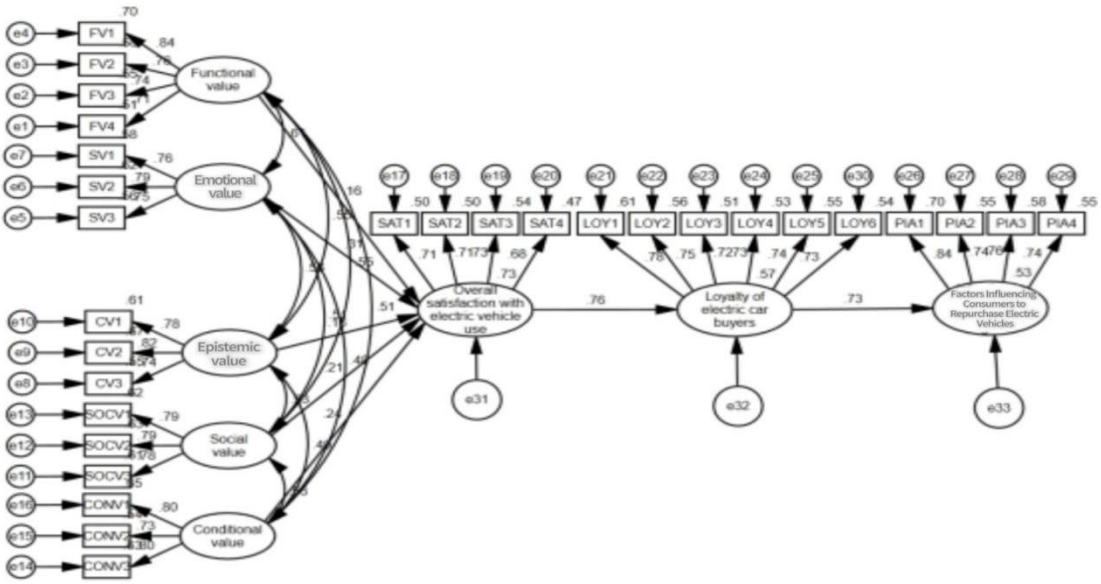

Figure *3*. Structural model

Table14. Model fit

Fitting the index	Standard of judgment	Actual value	Fits the results
Absolute fit index			
CMIN/DF	<3	2.094	Good
GFI	>0.8	0.899	Good
AGFI	>0.8	0.879	Good
RMSEA	<0.08	0.05	Good
Value-added fit index			
NFI	>0.8	0.89	Good
IFI	>0.8	0.939	Good
TLI	>0.8	0.931	Good
CFI	>0.8	0.939	Good
Simple fit index			
PNFI	>0.5	0.794	Good
PCFI	>0.5	0.837	Good

From the table14, it can be seen that the model fits well. For the absolute fitting index, CMIN/DF is 2.094, lower than the standard value of 3, indicating that the model complexity is moderate; GFI is 0.899, more than 0.8, indicating that the model can explain the data better; AGFI is 0.879, which is in line with the standard, and further verifies the goodness of the model fit; and RMSEA is 0.05, lower than 0.08, indicating that the model error is small. For the value-added fitting index, NFI is 0.89, more than 0.8, indicating that the model is superior to the unstructured model; IFI is 0.939, meeting the standard, indicating that the model fits well; TLI and CFI are 0.931 and 0.939, respectively, both higher than 0.8, showing that the model has

superior overall fitting effect. For the parsimony fitting index, PNFI and PCFI were 0.794 and 0.837, respectively, both higher than 0.5, indicating that the model achieved a good balance between parsimony and fitting effect.

Table15. Path coefficient table

Path	β	B	S.E.	C.R.	P	Results
Epistemic value→Satisfaction	0.15	0.15	0.056	2.686	0.007	Accepted
Emotional value→Satisfaction	0.254	0.262	0.062	4.238	***	Accepted
Functional value→Satisfaction	0.203	0.226	0.066	3.44	***	Accepted
Social value→Satisfaction	0.211	0.215	0.058	3.692	***	Accepted
Conditional value→Satisfaction	0.231	0.22	0.052	4.218	***	Accepted
Satisfaction →Loyalty	0.737	0.86	0.07	12.319	***	Accepted
Loyalty→Intention to repurchase	0.681	0.749	0.059	12.765	***	Accepted

According to the table15, the standardized path coefficients of each path indicate a significant positive relationship between the variables. In the path “Epistemic value→Overall satisfaction with electric vehicle use”, the standardized path coefficient is 0.15, and the p-value is less than 0.05, which indicates that Epistemic value has a positive effect on overall satisfaction. satisfaction, and consumers' epistemic value of BYD electric vehicles increases their satisfaction. Similarly, the standardized path coefficient of the path “Emotional value→Overall satisfaction with electric vehicle use” is 0.254, which also reaches the level of significance ($P<0.05$), indicating that affective value has a significant effect on overall satisfaction. The standardized path coefficient of “Functional value→Overall satisfaction with electric vehicle use” is 0.254, which also reaches a significant level ($P<0.05$), indicating that emotional value has a significant effect on overall satisfaction, and that consumers' emotional resonance and brand identification enhance their satisfaction.

In the path of “Functional value→Overall satisfaction with electric vehicle use”, the standardized path coefficient is 0.203, and the p-value is less than 0.05, which indicates that functional value has a positive effect on overall satisfaction. This indicates that functional value has a positive effect on overall satisfaction, and the convenience and energy-saving advantages felt by consumers in use increase their satisfaction. In the path “Social value→Overall satisfaction with electric vehicle use”, the standardized path coefficient is 0.211, which also reaches the significance level, indicating that social value also has a significant positive effect on satisfaction. Consumers' sense of social identity or environmental awareness enhanced by owning electric vehicles helps to increase their satisfaction.

In the path “Conditional value→Overall satisfaction with electric vehicle use”, the standardized path coefficient is 0.231, and the significance level is $P<0.05$, which indicates that the performance or advantages of electric vehicles also have a significant positive effect on consumer satisfaction under special circumstances. performance or advantage also has a significant impact on consumer satisfaction. For example, the cost advantage of electric vehicles appears when the number is limited or the price of oil rises, which improves consumer satisfaction.

In addition, the standardized path coefficient of the path “Overall satisfaction with electric vehicle use→Loyalty of electric car buyers” is 0.737, indicating that overall satisfaction has a significant positive effect on consumer loyalty. This indicates that overall satisfaction has a significant positive effect on consumer loyalty, and the higher the satisfaction, the stronger the consumer's loyalty to the brand. Finally, the standardized path coefficient of “Loyalty of electric car buyers→Intention to purchase an electric vehicle again” is 0.681, indicating that loyalty has a strong positive effect on future purchase intention. The standardized path coefficient of 0.681 in “Loyalty of electric car buyers→Intention to repurchase an electric vehicle” indicates that loyalty has a strong positive effect on future purchase intention.

In summary, the epistemic, emotional, functional, social and conditional values of BYD's electric vehicles significantly increase consumers' overall satisfaction, which in turn enhances their loyalty and contributes to future repurchase rates.

DISCUSSION AND CONCLUSION

This study validates the applicability and explanatory power of consumer value theory in the new energy vehicle (NEV) market by analyzing five dimensions: functional value, emotional value, epistemic value, social value, and conditional value. Results indicate that functional value (e.g., range, charging convenience, technical performance) plays a critical role in consumer satisfaction and loyalty. Emotional value, reflected in the brand’s support for environmental protection and consumer resonance, significantly drives repurchase intentions. Epistemic value emphasizes the importance of technological innovation and transparent information. Social value, rooted in environmental awareness and social recognition, strengthens brand loyalty. Conditional value, such as subsidies and promotions, significantly boosts purchase motivation.

In summary, this study, combined with recent literature from the past five years, deepens the application of consumer value theory in high-tech and environmentally-oriented markets, offering new directions and empirical support for consumer behavior research on complex, high-tech products. Using structural equation modeling (SEM) analysis, this study offers the following recommendations:Optimize functional value: Enhance technological features such as range and charging speed to improve consumer satisfaction.Strengthen emotional value: Create brand stories around environmental responsibility to foster emotional connections with consumers.Highlight epistemic value: Promote technological innovations and host experiential activities to enhance consumer awareness of technical strengths.Enhance social value: Emphasize environmental benefits and use social platforms to promote the brand as an environmental pioneer.Leverage conditional value: Optimize subsidies and promotions, offer installment plans, and design personalized discounts. Additionally, companies should focus on after-sales services and customer care to boost loyalty. Measures such as referral rewards and loyalty programs can further encourage repurchase intentions.

This study is limited to BYD users and employs a cross-sectional design, which may affect external validity and the ability to analyze dynamic consumer behavior. Future research could broaden the sample, adopt longitudinal designs, and incorporate variables like environmental awareness and policy influence. Methods to mitigate social desirability bias, such as behavioral tracking and mixed data collection, are also worth exploring. Furthermore, in-depth research

on post-use experiences and their impact on repurchase intentions is needed to provide a more comprehensive understanding of consumer behavior.

This study confirms through quantitative analysis that functional, emotional, epistemic, social, and conditional values significantly influence consumer satisfaction, loyalty, and repurchase intentions. Functional and conditional values are primary drivers of satisfaction, emotional and social values strengthen brand loyalty, and epistemic value gains importance through technological innovation. Moreover, positive relationships between satisfaction and loyalty, as well as between loyalty and repurchase intentions, are validated.

The findings enrich consumer value theory and provide strategic insights for the NEV industry. By enhancing these value dimensions, companies can optimize the customer experience and maintain competitiveness. Future research should expand samples, incorporate longitudinal designs, and explore additional variables to deepen the understanding of NEV consumer behavior.

BIBLIOGRAPHY

Al-Adwan, A. S., Kokash, H., Adwan, A. A., Alhorani, A., & Yaseen, H. (2020). Building customer loyalty in online shopping: the role of online trust, online satisfaction and electronic word of mouth. *International Journal of Electronic Marketing and Retailing*, *11*(3), 278-306.

Ampadu, S., Jiang, Y., Gyamfi, S. A., Debrah, E., & Amankwa, E. (2023). Perceived value of recommended product and consumer e-loyalty: an expectation confirmation perspective. *Young Consumers*, *24*(6), 742-766.

Anggara, A. K. D., Ratnasari, R. T., & Osman, I. (2023). How store attribute affects customer experience, brand love and brand loyalty. *Journal of Islamic Marketing*, *14*(11), 2980-3006.

Association, C. A. D. (2023). https://www.360kuai.com/pc/95e743615db4d7a74?cota=3&kuai_so=1&sign=360_57c3bbd1&refer_scene=so_1

Cachero-Martínez, S., García-Rodríguez, N., & Salido-Andrés, N. (2024). Because I'm happy: exploring the happiness of shopping in social enterprises and its effect on customer satisfaction and loyalty. *Management Decision*, *62*(2), 492-512.

Chakraborty, P., Parker, R., Hoque, T., Cruz, J., Du, L., Wang, S., & Bhunia, S. (2022). Addressing the range anxiety of battery electric vehicles with charging en route. *scientific reports*, *12*(1), 5588.

Chu, Y., He, H., Jin, L., Wang, X., Zhang, J., Hao, F., & Li, Y. (2022). Assessment of Leading New Energy Vehicle City Markets in China and Policy Lessons. *Электронный ресурс].—Режим доступа: https://theicct. org/wp-content/uploads/2022/09/China-EV-citymarkets_final. pdf*, 1.

Dam, S. M., & Dam, T. C. (2021). Relationships between service quality, brand image, customer satisfaction, and customer loyalty. *The Journal of Asian Finance, Economics and Business*, *8*(3), 585-593.

Dawes, J. (2022). Factors that influence manufacturer and store brand behavioral loyalty. *Journal of Retailing and Consumer Services*, *68*, 103020.

Dawes, J. G., Graham, C., & Trinh, G. (2021). The long-term erosion of repeat-purchase loyalty. *European Journal of Marketing*, *55*(3), 763-789.

Diallo, M. F., Moulins, J.-L., & Roux, E. (2021). Unpacking brand loyalty in retailing: a three-dimensional approach to customer–brand relationships. *International Journal of Retail & Distribution Management*, *49*(2), 204-222.

Fayyazbakhsh, A., Bell, M. L., Zhu, X., Mei, X., Koutný, M., Hajinajaf, N., & Zhang, Y. (2022). Engine emissions with air pollutants and greenhouse gases and their control technologies. *Journal of Cleaner Production*, *376*, 134260.

Fiiwe, J., Egele, A., Ozo, J., & Obasiabara, B. (2023). Customer Relationship Management and Customers Repeat Purchase Behavior in Nigeria. *Scholars Journal of Economics, Business and Management*, *1*, 19-28.

Gong, C., Liu, J., Han, Y., Hu, Y., Yu, H., & Zeng, R. (2021). Safety of electric vehicles in crash conditions: A review of hazards to occupants, regulatory activities, and technical support. *IEEE Transactions on Transportation Electrification*, *8*(3), 3870-3883.

GuangBing, M. (2023). A study on the relationship between perceived value and satisfaction of medical insurance among college students.

Holbrook, M. B. (1999). Consumer value. *A framework for analysis and research*.

Hongying, P. H. X. (2023). A study on the relationship between customer perceived value, customer satisfaction and willingness to repurchase agricultural products.

Jigang, M. L. B. (2012). Traditional festival tourism experience from the perspective of perceived value

——Taking the Xishuangbanna Dai Water Splashing Festival as an example.

Khoa, B. T., Nguyen, T. D., & Nguyen, V. T.-t. (2020). Factors affecting customer relationship and the repurchase intention of designed fashion products. *Journal of Distribution Science*, *18*(2), 17-28.

Králiková, A., Peruthová, A., & Ryglová, K. (2020). Impact of destination image on satisfaction and loyalty. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, *68*(1).

Kurdi, B., Alshurideh, M., & Alnaser, A. (2020). The impact of employee satisfaction on customer satisfaction: Theoretical and empirical underpinning. *Management Science Letters*, *10*(15), 3561-3570.

Lamb, W. F., Wiedmann, T., Pongratz, J., Andrew, R., Crippa, M., Olivier, J. G., Wiedenhofer, D., Mattioli, G., Al Khourdajie, A., & House, J. (2021). A review of trends and drivers of greenhouse gas emissions by sector from 1990 to 2018. *Environmental research letters*, *16*(7), 073005.

Laparojkit, S., & Suttipun, M. (2021). The influence of customer trust and loyalty on repurchase intention of domestic tourism: a case study in Thailand during COVID-19 crisis. *The Journal of Asian Finance, Economics and Business*, *8*(5), 961-969.

Li, J. (2020). Charging Chinese future: the roadmap of China's policy for new energy automotive industry. *International Journal of Hydrogen Energy*, *45*(20), 11409-11423.

Liu, Z., Hao, H., Cheng, X., & Zhao, F. (2018). Critical issues of energy efficient and new energy vehicles development in China. *Energy Policy*, *115*, 92-97.

Meißner, M., Pfeiffer, J., Peukert, C., Dietrich, H., & Pfeiffer, T. (2020). How virtual reality affects consumer choice. *Journal of Business research*, *117*, 219-231.

Naige, L. (2023). Internet product design and marketing——Based on consumer value theory.

Noussan, M., Hafner, M., Tagliapietra, S., Noussan, M., Hafner, M., & Tagliapietra, S. (2020). Policies to decarbonize the transport sector. *The future of transport between digitalization and decarbonization: Trends, strategies and effects on energy consumption*, 71-112.

Pacheco, S. E., Guidos-Fogelbach, G., Annesi-Maesano, I., Pawankar, R., d'Amato, G., Latour-Staffeld, P., Urrutia-Pereira, M., Kesic, M. J., Hernandez, M. L., & American Academy of Allergy, A. (2021). Climate change and global issues in allergy and immunology. *Journal of Allergy and Clinical Immunology*, *148*(6), 1366-1377.

PJ, S., Singh, K., Kokkranikal, J., Bharadwaj, R., Rai, S., & Antony, J. (2023). Service quality and customer satisfaction in hospitality, leisure, sport and tourism: An assessment of research in web of science. *Journal of Quality Assurance in Hospitality & Tourism*, *24*(1), 24-50.

Prasetyo, Y. T., Castillo, A. M., Salonga, L. J., Sia, J. A., Chuenyindee, T., Young, M. N., Persada, S. F., Miraja, B. A., & Redi, A. A. N. P. (2021). Factors influencing repurchase intention in drive-through Fast Food: A structural equation modeling approach. *Foods*, *10*(6), 1205.

Rane, N. L., Achari, A., & Choudhary, S. P. (2023). Enhancing customer loyalty through quality of service: Effective strategies to improve customer satisfaction, experience, relationship, and engagement. *International Research Journal of Modernization in Engineering Technology and Science*, *5*(5), 427-452.

Rasoolimanesh, S. M., Iranmanesh, M., Seyfi, S., Ari Ragavan, N., & Jaafar, M. (2023). Effects of perceived value on satisfaction and revisit intention: Domestic vs. international tourists. *Journal of Vacation Marketing*, *29*(2), 222-241.

Robina-Ramírez, R., Leal-Solís, A., Medina-Merodio, J. A., & Estriegana-Valdehita, R. (2023). From satisfaction to happiness in the co-creation of value: the role of moral emotions in the Spanish tourism sector. *Quality & Quantity*, *57*(4), 3783-3804.

Seminari, N., Rahyuda, I., Sukaatmadja, I., & Sukawati, T. (2023). The role of self-brand connection to mediate the effect of customer satisfaction on repurchase intention in moderation of lovemark. *International Journal of Data and Network Science*, *7*(3), 1295-1302.

Sheth, J. N., Newman, B. I., & Gross, B. L. (1991). Why we buy what we buy: A theory of consumption values. *Journal of Business research*, *22*(2), 159-170.

Shokouhyar, S., Shokoohyar, S., & Safari, S. (2020). Research on the influence of after-sales service quality factors on customer satisfaction. *Journal of Retailing and Consumer Services*, *56*, 102139.

Tendian, C. M. (2022). Customer Loyalty With Customer Satisfaction As A Mediating Variable At Toko Damai In Kendari. *Enrichment: Journal of Management*, *12*(2), 1494-14501.

Tran, V. D., & Le, N. M. T. (2020). Impact of service quality and perceived value on customer satisfaction and behavioral intentions: Evidence from convenience stores in Vietnam. *The Journal of Asian Finance, Economics and Business*, *7*(9), 517-526.

Widayati, C. C., Ali, H., Permana, D., & Nugroho, A. (2020). The role of destination image on visiting decisions through word of mouth in urban tourism in Yogyakarta. *International Journal of Innovation, Creativity and Change*, *12*(3), 177-196.

Yan, J., Tseng, F.-M., & Lu, L. Y. (2018). Developmental trajectories of new energy vehicle research in economic management: Main path analysis. *Technological forecasting and social change*, *137*, 168-181.

Zeng, W., & Kim, E. (2024). How perceived local iconness of culturally mixed products enhances purchase intention: the mediating role of consumer perceived value. *Asia Pacific Journal of Marketing and Logistics*.

Zhang, X., Rao, R., Xie, J., & Liang, Y. (2014). The current dilemma and future path of China's electric vehicles. *Sustainability*, *6*(3), 1567-1593.