

KEY FACTORS INFLUENCING CONSUMER PURCHASE INTENTIONS FOR CHINESE BRAND ELECTRIC VEHICLES

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ABSTRACT

In light of the escalating environmental pollution and the pressing issue of climate change attributed to vehicle emissions, a growing number of electric vehicle companies have emerged in China. Despite various study endeavors focusing on consumers' purchase intention for electric vehicles, there remains a significant gap when it comes to exploring the purchase intentions specifically related to Chinese brand electric vehicles. This study seeks to bridge this gap by examining the relationship between brand image, perceived benefits, attitude, and the purchase intention of potential consumers in the context of Chinese brand electric vehicles. The study was conducted through the distribution of questionnaires, both in offline stores specializing in Chinese brand electric vehicles and online via WenJuanXing, a survey platform. To ensure the data collected is reflective of the target audience, a purposive sampling technique was employed, gathering 187 valid questionnaires from individuals between the ages of 18 and 70 who have a genuine interest in electric vehicles and intend to make a purchase in the near future. The gathered data was analyzed using SPSS and SmartPLS. This study's results prove that brand image, encompassing functional, symbolic, and experiential aspects, plays a crucial role in shaping consumers' perceived benefits and attitude, thereby significantly positively influencing their purchase intention. This study holds immense significance for car sellers and industry stakeholders. By unraveling the dynamics of brand image, perceived benefits, and consumer attitude toward Chinese brand electric vehicles, the findings provide essential insights to empower companies to align their strategies, thereby significantly motivating potential consumers to make their purchase intention a reality. Ultimately, this study contributes to the growing field of electric vehicles, particularly within the unique context of the Chinese market.

Keywords: Brand Image, Chinese Brand Electric Vehicles, Perceived Benefits, Attitude, Purchase Intention

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1. INTRODUCTION

1.1. Background

In recent years, with the blessing of electrification, intelligence, networking, and sharing, electric vehicles have become the focus of the global automotive field (Liu et al., 2023). There is also a growing emphasis on electric vehicles and a heightened interest in their usage (Jaiswal et al., 2021a). Electric vehicles, as high-tech products based on battery technology, can make daily travel safer, commute time shorter, and exhaust emissions less (Jaiswal et al., 2021b; Toglaw et al., 2018). At this stage, many countries have proposed transportation transformation and actively gearing up for the robust development of electric vehicles (Sanguesa et al., 2021). Simultaneously, various automakers have issued statements indicating they will only manufacture electric vehicles (Vidhi et al., 2021). Electric vehicles are expected to dominate the sales of cars by 2030 (Vidhi et al., 2021).

According to *Global EV Outlook 2023 – Analysis - IEA (2023)*, today's global demand for electric vehicles is huge, and such huge demand has spawned vigorous development. The global electric vehicle market is showing explosive growth in 2022. Annual electric vehicle sales exceeded 10 million, accounting for 14% of all new car sales, significantly rising from 5% in 2020 and 9% in 2021. It is expected that the annual electric vehicle sales will reach 14 million in 2023, a year-on-year increase of 35%. Additionally, *Electric Vehicles Are Forecast to Be Half of Global Car Sales by 2035 (2023)* predicted that the demand for electric vehicles will peak as the global acceptance of zero-carbon emissions becomes widespread. By 2035, electric vehicles will account for about half of the new car sales globally. By 2040, the annual electric vehicle sales will reach 73 million.

Presently, the greenhouse effect caused by the excessive use of fossil energy and the release of a significant quantity of carbon dioxide into the atmosphere, which in turn causes global warming, has become one of the most concerning issues for human survival today (Alanazi, 2023). Emissions from vehicles with internal combustion engines are a major contributor to air pollution and the greenhouse effect (Sagheb et al., 2021). Concurrently, producing, distributing, and transporting the gasoline used to power vehicles also produces significant amounts of greenhouse gases. The United States Environmental Protection Agency (2024) reports that a typical passenger vehicle emits about 4.6 tons of carbon dioxide per year. Global vehicle-related carbon dioxide emissions are projected to increase significantly in the future, growing by more than 70% by 2050 (Zhong et al., 2023). Emissions of large amounts of greenhouse gases will accelerate the trend of global warming. However, the impact of vehicles on the global environment is not limited to air, and a large amount of emissions have also caused huge pollution to land and water sources around the world (Williams & Blyth, 2023).

China is by far the world's largest automobile market, and more than 80% of vehicles require gasoline and diesel (Yang et al., 2017; Guo et al., 2023). According to statistics from the Ministry of Ecology and Environment of the People's Republic of China, in 2019, the air quality of 53.4% of China's cities did not meet the national air quality standards. This was primarily attributed to the surge in vehicle exhaust emissions and escalating energy demand (Ministry of Ecology and Environment of the People's Republic of China, 2019). As a substantial donor to air pollution in China (Wang et al., 2019), vehicles have become the focus of reducing CO₂ emissions in China

(Zhou et al., 2021). At this time, electric vehicles, as vehicles driven by electricity, can significantly reduce fuel consumption and greenhouse gas emissions (Sudjoko et al., 2021). Accelerating its development and reducing the proportion of traditional fuel vehicles has become China's new national strategy (Guo et al., 2023). Today, China has emerged as the biggest market for electric vehicles worldwide and is experiencing rapid expansion (Lin & Wu, 2018). It is estimated that by 2030, electric vehicles in China will account for 30% to 40% of the total sales volume of passenger vehicles and achieve about 43% CO₂ emission reduction (Wang et al., 2023a).

In the past four decades, foreign-funded enterprises have dominated joint ventures in China with advanced technology and strong brand effects, accounting for half of the Chinese vehicle market (Teece, 2019). However, in the field of electric vehicles, there is not a big gap between Chinese brands and foreign brands, and China boasts of a comprehensive electric vehicle supply chain. With the Chinese government's first new energy vehicle development plan proposed in 2012 and the success of Tesla, Chinese entrepreneurs saw the huge potential of the electric vehicle market, and many Chinese electric vehicle companies emerged (Zang et al., 2022), including BYD, GEELY, LEADING IDEAL, NIO, XPENG, ORA, etc. Meanwhile, since China has the biggest auto market in the world (Yang et al., 2017), vigorously developing electric vehicles of Chinese brands at this stage is an excellent opportunity to rival foreign brands at the equal stage of development (Li et al., 2021a). Facing the Chinese government's policy of restricting the use of city license plates and the "new four modernizations" transformation of China's auto industry, these Chinese electric vehicle companies have seized the opportunity, achieved rapid development with the financial support of traditional Chinese auto companies and Internet giants (Jiang et al., 2021). Regardless of price, performance, or functions, these Chinese electric vehicle brands have put a lot of pressure on electric vehicle brands in other countries (Kageyama & McDonald, 2023).

Chinese electric vehicle companies have achieved rapid development with solid support from the Chinese government, but most consumers are still hesitant to purchase them (He et al., 2018). According to Li et al. (2021b), there is still a large gap between brand awareness, technological innovation, and the appearance of Chinese brand electric vehicles and electric vehicle brands in other countries. This direct gap has a significant impact on consumers' purchase intention, brand image, perceived benefits, and attitude. According to the survey results of the "2020 Mobility Study", 86% of Chinese respondents stated that they have a strong intention to purchase electric vehicles (Continental, 2022). However, it is well known that Chinese consumers are not loyal to vehicle brands and are particularly price-sensitive. This means that electric vehicle brands must show a good brand image to Chinese consumers and provide them with a proven electric vehicle product so that they have a new attitude toward the brand (Ren & Ren, 2020).

With overall vehicle sales declining since their peak in 2017, electric vehicles have become the only growth area in the auto market. As the world transitions to a sustainable future, the electric vehicle market will be one of the key areas to foster innovation and drive economic growth. China is at the forefront of this transformation with its booming electric vehicle industry, where consumer demand for electric vehicles is growing, driven by government incentives, environmental regulations, preferential policies, and technological innovation. While government incentives and subsidies have been the driving force behind China's electric vehicle market growth, growing consumer demand for electric vehicles is also coming into play. Although direct purchase subsidies given to consumers by the Chinese government are disappearing, tax incentives and the provision

of free license plates to electric vehicle owners in some cities will also continue to support market growth and meet consumer demand. At the same time, China's electric vehicle market slumped between January and April 2023 due to weak consumer demand. What followed was a price war in China's electric vehicle market, as manufacturers of electric vehicles hoped to attract consumers worried about the economy and incomes. Dozens of electric vehicle manufacturers have cut prices by 40% to retain market share. However, deep discounts failed to arouse consumer demand. Instead, improvements in cockpit technology and the addition of AR technology arouse consumer demand (South China Morning Post, 2023). In the current economic downturn in China, if the improvements in cockpit technology and the addition of AR technology can arouse consumer demand but cannot get actual purchase support from consumers, then the increased costs drag down the sales of Chinese and foreign brand electric vehicles. This means that while electric vehicle brands arouse consumer demand, they must formulate and implement effective strategies to increase consumers' purchase intention for their brands.

1.2. Problem Statement

The Chinese government aims to realize electric vehicles as the main force of new car sales and all passenger vehicles to be electrified by 2035 (Wang et al., 2023b). In pursuit of this goal, the government encourages market-demand-oriented Chinese electric vehicle brands that grow into big brands that are sales leaders in China and the world's electric vehicles market. In general, electric vehicles from Chinese brands currently account for more than 50% of sales in the Chinese market (Pang & Luman, 2023), but this does not mean that electric vehicles from Chinese brands have won the favor of most consumers in China. According to the survey results of the "2020 Mobility Study", 86% of Chinese respondents expressed a strong intention to purchase electric vehicles (Continental, 2022). However, when Chinese respondents were asked to choose their three favorite electric vehicles, only one was the Chinese brand electric vehicle BYD. Compared with BYD, Chinese consumers are more willing to buy Tesla and Volkswagen, indicating a preference for international brands over domestic ones (Cheng, 2021). According to Wedbush's survey of more than 500 Chinese consumers, 76% of them consider buying Tesla in 2023, while Chinese electric car brands BYD and NIO only rank second and third (Shtrubel, 2023). In addition, Tesla's Model Y became the sales champion of China's electric vehicle market with 94,469 units in the first quarter of 2023 (Malleck, 2023). A unique brand, minimalist design, and better battery technology are still the reasons why Chinese consumers choose Tesla as their first choice (Shtrubel, 2023). At the same time, Continental collaborated with Infas, a well-known social research organization, to conduct a survey on the purchase of Chinese brand electric vehicles by a representative group of people in China. Among them, 63% of the respondents believed that the obstacle to purchasing Chinese brand electric vehicles was the low availability of charging stations, and 59% of the respondents believed that the short range that could be driven on a single charge was a major obstacle to purchasing Chinese brand electric vehicles. 44% of respondents believed that the need to plan for charging during long journeys was an additional deterrent affecting their perceived benefits (Continental, 2022). The reduction in consumer perceived benefits has become an important reason for the poor sales of Chinese brand electric vehicles in China. Statistics show that China currently has 147 electric vehicle brands and 372 electric vehicle models. Ideally, these brands should show strong market competitiveness, but in fact, their average monthly sales are only about 1,100 vehicles, which is far lower than the actual market demand (ThinkChina, 2023). Take BYD as an example. BYD's average sales of electric vehicles per store in the first 10 months of 2023 were less than 600 units. But during the same period in 2023, Tesla's average sales of

electric vehicles per store in China exceeded 1500 units (Zhang & Goh, 2024). Under this circumstance, although the design, appearance, and comfort of Chinese brand electric vehicles can already compete with international brands such as Tesla. However, the lack of brand image means that Chinese brand electric vehicles can only satisfy the niche market at this stage, with a low market share. Only a few models can truly compete with major global electric vehicle brands such as Tesla (ThinkChina, 2023). The strong technological advantages of major global electric vehicle brands such as Tesla have enabled these brands to maintain a high degree of competitiveness and have room to significantly reduce prices to defeat Chinese brand electric vehicles. According to Cheng (2023), Tesla's electric vehicle price cuts in China in 2023 exceeded the price cuts of BYD's flagship electric vehicle Han. Among them, Tesla reduced the price of Model 3 by 6% and the price of Model Y by 11%. The price of BYD's flagship electric vehicle Han has dropped by only 5%. It is for this reason that a large portion of Chinese consumers still have a negative attitude toward Chinese brand electric vehicles. They believe Tesla is the king of electric vehicles and plan to choose Tesla when upgrading to new models (ThinkChina, 2023). This means there is still a gap between Chinese consumers' purchase intention of Chinese brands electric vehicles and foreign brands. If this gap in purchase intentions persists, the aim of electric vehicles as the main force of new car sales could be elusive. As a result, it's essential to examine the elements that impact Chinese consumers' intention to purchase Chinese brand electric vehicles.

In the context of the increasingly urgent issue of global climate change, consumers' intention to purchase electric vehicles is an important issue worthy of research. Several research have examined factors that increase consumers' intention to purchase electric vehicles (Lashari et al., 2021; Thakur et al., 2023). However, research specifically focusing on Chinese consumers' purchase intention for Chinese brand electric vehicles is very limited. Although there are currently more and more electric vehicle brands in China, Chinese consumers are generally less willing to purchase Chinese brand electric vehicles, underscoring the need for more focused research in this domain.

1.3. Research Questions

This study had four primary research questions:

- RQ 1:** What is the relationship between consumers' brand image perception and perceived benefits toward Chinese brand electric vehicles?
- RQ 2:** What is the relationship between consumers' brand image perception and attitude toward Chinese brand electric vehicles?
- RQ 3:** What is the relationship between consumers' perceived benefits and purchase intention toward Chinese brand electric vehicles?
- RQ 4:** What is the relationship between consumers' attitude and purchase intention toward Chinese brand electric vehicles?

1.4. Research Objectives

This study had four primary research objectives:

- RO 1:** To determine the significant and positive relationship between consumers' brand image perception and perceived benefits toward Chinese brand electric vehicles.
- RO 2:** To investigate the significant and positive relationship between consumers' brand image perception and attitude toward Chinese brand electric vehicles.
- RO 3:** To identify the significant and positive relationship between consumers' perceived benefits and purchase intention toward Chinese brand electric vehicles.
- RO 4:** To examine the significant and positive relationship between consumers' attitude and purchase intention toward Chinese brand electric vehicles.

2. LITERATURE REVIEW

The topic of electric vehicles is currently trending, and scholars have fulfilled numerous studies to examine the different elements that impact consumers' intention to purchase electric vehicles. Some studies suggest that the price, operating cost, time cost, and performance of electric vehicles are the key elements that influence consumers' intention to purchase electric vehicles (Zang et al., 2022; Jiang et al., 2021). At this stage, the technical issues related to electric vehicles and the lack of infrastructure (Liao et al., 2016; Chhikara et al., 2021) are also important reasons why electric vehicles have not gained widespread acceptance because consumers. Another factor that hinders consumers from buying electric vehicles is driving range (Kim et al., 2017). If the driving range can be significantly improved, electric vehicles will be easier to promote to consumers (Li et al., 2017). Furthermore, Zhao et al. (2022) showed that consumers' purchase intentions in Shanghai, China, are mainly influenced by peer effects and government policies related to electric vehicles.

Numerous factors impact a consumer's purchase intention for Chinese brand electric vehicles. Apart from the factors above, a theoretical framework for purchase intention, attitude, brand image, and perceived benefits is presented in this study. The theoretical framework is based on the Chinese electric vehicle companies' characteristics. The descriptions of the hypotheses are as follows:

2.1. Purchase Intention

Purchase intention is defined as the subjective tendency of consumers when choosing products (Lin & Shen, 2023; Pandjaitan, 2019; Haryanto et al., 2019), and it is considered a plan to purchase products (Lin & Shen, 2023; Yeo et al., 2022), which refers to the possibility of consumers to purchase a certain product (Lin & Shen, 2023; Yeo et al., 2022; Mahmoud, 2018; Pandjaitan, 2019; Haryanto et al., 2019; Cham et al., 2020). Besides, purchase intention is an essential indicator for predicting consumer behavior (Mahmoud, 2018; Pandjaitan, 2019). When consumers' intention to purchase increases, the possibility of purchasing will also increase accordingly (Mahmoud, 2018; Pandjaitan, 2019).

In this study, purchase intention refers to consumers' purchase intention for Chinese brand electric vehicles (Jiang et al., 2021). The strong intention of consumers to purchase Chinese brand electric vehicles means that consumers are highly likely to purchase Chinese brand electric vehicles. In the context of the emergence of many Chinese electric vehicle companies in recent years, purchase intention is the prerequisite for consumers to purchase Chinese brand electric vehicles. It is also the psychological reflection of consumers' brand image, perceived benefits, and attitude towards Chinese brand electric vehicles.

2.2. Brand Image

Brand image is crucial for enhancing brand equity (Işoraité, 2018; Fu, 2023), and refers to consumers' perception, cognition, and feelings about a brand (Işoraité, 2018; Ghorbanzadeh & Sharbatiyan, 2024; Rodrigues et al., 2021). Brand image is an important part of the branding process (Le, 2021; Salehzadeh et al., 2021). In addition, brand image is also one of the critical areas of marketing research, and one of the main tasks of marketing is to communicate a brand's image to the intended consumers (Singh et al., 2023). To better manage the brand image, the Brand Concept Management (BCM) framework is proposed, which is divided into three strategies: functional, symbolic, and experiential (Saraf & Sujatha, 2018). Singh et al. (2023) found that most brand image research conducted in different contexts used the Brand Concept Management (BCM) framework and that functional, symbolic, and experiential images created in consumers' minds are important reasons consumers attach to brands. Therefore, this study used functional, symbolic, and experiential as the three brand image dimensions for further study.

2.2.1 Functional

Functional pertains to the extent to which consumers reckon that its functions can meet their needs (Mohan et al., 2017). This functional need motivates people to find suitable products that can solve issues related to consumption, such as addressing consumers' current consumption needs, thus forming a more positive brand attitude (Singh et al., 2023; Nagar & Rana, 2015). In the field of electric vehicles, functional refers to the degree to which consumers can benefit from the functions and additional attributes provided by electric vehicles (Liu et al., 2017). It includes electric vehicles' quality, price, performance, and other aspects (Bridi et al., 2022). Furthermore, Long et al. (2019) showed that consumers may prefer brands based on their functionality.

In this study, a functional Chinese brand electric vehicle should provide consumers with a high-quality and affordable electric vehicle product (Bridi et al., 2022). As a functional Chinese brand electric vehicle, it can change consumers' inherent impression of Chinese brand electric vehicles and enhance consumers' favorability of Chinese brand electric vehicles. In addition, the functional Chinese brand electric vehicle also includes good product services to meet consumer needs. For example, rescue remote calls and free battery replacement.

2.2.2 Symbolic

Symbolic refers to the brand's ability to satisfy consumers' needs for self-image, internal needs, and needs in specific groups (Dalal & Aljarah, 2021). This symbolic need depends more on the

external advantages of the product, which can satisfy consumers' potential needs for social status, personal expression, self-worth, self-identity, and identity signals (Yuan et al., 2022; Nagar & Rana, 2015). Li et al. (2021) found that many Chinese consumers purchase electric vehicles to demonstrate their success. Therefore, when electric vehicle brands symbolic can make consumers feel superior, self-worth and improve their social status, the attitude towards electric vehicle brands will turn positive, and the perceived benefits will be enhanced accordingly (Yuan et al., 2022; Nagar & Rana, 2015).

In this study, symbolic is for Chinese consumers. A symbolic Chinese brand electric vehicles can provide personalized customization services according to the different needs of different consumers (Yuan et al., 2022). Chinese brand electric vehicles will always focus on the identity needs and personal image needs that Chinese consumers are most concerned about, including personalized customized electric vehicle paint, hubs, interiors, etc. to meet consumers. In addition, Chinese brand electric vehicles must show symbolic by catering to the various needs of consumers' daily lifestyles.

2.2.3 Experiential

Experiential refers to providing consumers with a good experience and pleasant feelings through interaction, while satisfying consumers' sensory needs and inner desires (Beig & Nika, 2019; Nagar & Rana, 2015). When consumers' sensory needs and inner desires are met, consumers' attitudes toward brands will become more positive (Nagar & Rana, 2015). Schmalfuß et al. (2017) found that consumers who have not experienced electric vehicles and consumers who have experienced electric vehicles have different attitudes, perceived benefits, and purchase intentions toward electric vehicle brands. Experiential can affect consumers' attitudes and perceived benefits of electric vehicle brands, thereby affecting their purchase intentions for electric vehicle brands (Schmalfuß et al., 2017).

In the field of electric vehicles, experiential is derived from the driving feeling of Chinese brand electric vehicles, which can meet consumers' daily driving needs (Schmalfuß et al., 2017). In addition to meeting the needs of daily driving, Chinese brand electric vehicles also meet the needs of consumers pursuing a high-quality life and pursuing a diversified life. In order to ensure that consumers can change the inherent impression of Chinese brand electric vehicles, Chinese brand electric vehicles should meet the needs of consumers' pursuit of life fun, such as being equipped with smart voice assistants, in-car karaoke, gesture control, remote driving, and other functions. Let consumers think that the experience of Chinese brand electric vehicles is not lost to foreign brand electric vehicles, thereby enhancing the brand image of Chinese brand electric vehicles.

2.3. Perceived Benefits

Perceived benefits refer to the belief in the positive consequences of a specific action (Copeland & Bhaduri, 2019; Arora & Aggarwal, 2018). For consumers, perceived benefits directly affect their purchasing decisions and purchasing behaviors (Evelina, 2022). The richer and more diverse the benefits perceived by consumers are, the more significant their positive impact on purchasing decisions and purchasing behaviors will be (Al-Debei et al., 2015; Engriani & Novaris, 2020). It is worth noting that consumers tend to develop a strong association with a product brand when the perceived benefits significantly exceed the associated costs. This association not only deepens

consumers' trust in the product, but also stimulates consumers' purchase intention for the product (Akroush et al., 2019; Copeland & Bhaduri, 2019). Therefore, perceived benefits are a key factor in building the relationship between brands and consumers and promoting purchase intention (Akroush et al., 2019).

2.4. Attitude

In this study, attitude is defined as an individual's feelings, thoughts, and decision-making factors about specific future actions, which is mainly expressed as the degree of positive or negative cognition of the product (Hussain et al., 2024; Chanda et al., 2023). Attitude is not only a subjective view of things, but also an important factor in determining and influencing individual behavior. Of particular concern is that attitude plays a key role in predicting and shaping consumer behavior and can be regarded as a direct antecedent of consumer purchase intention (Yáñez et al., 2021; Bakış & Kitapçı, 2023; Khan et al., 2022; Haryanto et al., 2019). The formation of attitude is affected by many factors, including but not limited to product characteristics, brand image, and market communication. These factors jointly construct an individual's comprehensive understanding of the product, thereby shaping consumers' attitude toward the product (Yáñez et al., 2021; Chanda et al., 2023; Lacap et al., 2023).

2.5. Hypotheses Development

2.5.1 Brand Image and Perceived Benefits

Based on the aforementioned three aspects of Functional, Symbolic, and Experiential, the shaping of brand image can have a profound impact on consumers' purchasing behavior (İşoraitè, 2018; Fu, 2023). In general, a more positive brand image is often more likely to win the favor of consumers and have a positive impact on their perceived benefits (Fu, 2023; Lopes et al., 2022). This positive impact may manifest as consumers being more inclined to choose the brand's products or services based on their perceived benefits, and being more willing to establish a long-term relationship with the brand (Lopes et al., 2022). In summary, the study hypothesized that:

H1: Consumer brand image perception toward Chinese brand electric vehicles is significantly positively correlated to their perceived benefits.

2.5.2 Brand Image and Attitude

According to Salehzadeh et al. (2021), when the brand image is consistent with consumers' intrinsic values, this consistency can arouse consumers' associations with the brand and produce a more positive attitude towards the brand on a psychological level. Zhang (2015) emphasized that a good brand image can establish an emotional bond between consumers and the brand and show a more positive attitude in shopping decisions. Nagar and Rana (2015) proved that there is a significant relationship between brand image and consumer attitude towards the brand. In summary, the study hypothesized that:

H2: Consumer brand image perception toward Chinese brand electric vehicles is significantly positively correlated to their attitude.

2.5.3 Perceived Benefits and Purchase Intention

Numerous studies have expounded in detail on consumers' perceived benefits of electric vehicles on purchase intention from different perspectives. Perceived benefits of electric vehicles refer to consumers' perceptions of the benefits offered by electric vehicles, such as a new driving experience and a change in lifestyle for consumers from electric vehicles (Featherman et al., 2021). On the economic side of consumers, the Chinese government provides high subsidies for electric vehicle purchases (Zhang et al., 2020; Liu, 2022; Zhao et al., 2019). Electric vehicles' lower energy and maintenance costs are also the main factors chosen by consumers (Sanguesa et al., 2021; Heinicke & Wagenhaus, 2015; Chen & Zhang, 2019). On the non-economic side, the green energy consumption saved by electric vehicles is beneficial to protect the environment (Klabi & Binzafrah, 2021; Yeğın & Ikram, 2022; Chen & Zhang, 2019; Zhao et al., 2019). Electric vehicles are also quiet (Un-Noor et al., 2017), comfortable to ride (Featherman et al., 2021), design fashion (Featherman et al., 2021), have fast acceleration (Gopal, 2021), have high technology (Chen & Zhang, 2019), can charge at home (Ivanova & Moreira, 2023) and other advantages. Therefore, perceived benefits are one of the reasons why consumers actively purchase electric vehicles (He et al., 2022). In summary, the study hypothesized that:

H3: Consumer perceived benefits toward Chinese brand electric vehicles are significantly positively correlated to their purchase intention

2.5.4 Attitude and Purchase Intention

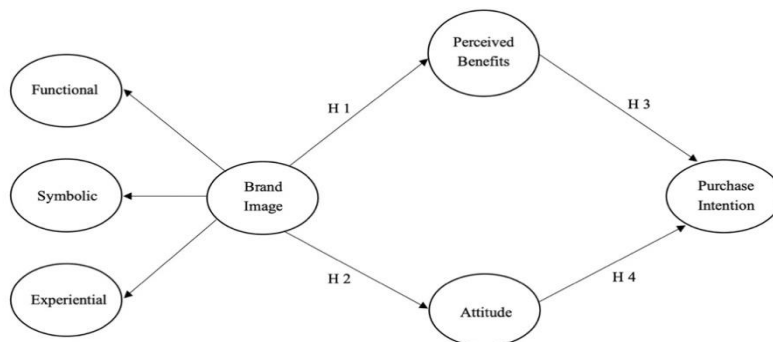
Wang et al. (2022) found that due to the relatively low penetration rate of electric vehicles, consumers' positive attitude towards electric vehicles will help to increase their purchase intention of electric vehicles. However, many consumers still maintain a wait-and-see attitude toward electric vehicles (Liu et al., 2020). From the perspective of consumers, the attitude towards electric vehicles can be regarded as the attitude towards various attributes of electric vehicles, that is, the cruising range of electric vehicles, the convenience of charging, the economy, noise, emissions, etc. Liu et al. (2020) explored the impact of electric vehicle range and charging convenience on consumer attitudes and found that range anxiety will affect consumers' attitudes and thus their purchase intention for electric vehicles. Moreover, Junquera et al. (2016) proposed that the higher the price of electric vehicles, the worse consumers' attitudes toward them and the lower their purchase intentions. Van Tuán et al. (2022) stated that excellent quality, extremely low noise levels, and environmentally friendly low-emission characteristics have enhanced consumers' positive attitudes toward electric vehicles and increased their intention to purchase electric vehicles. Jaiswal et al. (2021b) pointed out that under the influence of environmental psychology at this stage, consumers' good attitude toward electric vehicles will significantly increase their purchase intention. In summary, the study hypothesized that:

H4: Consumer attitude toward Chinese brand electric vehicles is significantly positively correlated to their purchase intention.

2.6. Research Framework

The figure below illustrates the research conceptual model used in the current study. In this study, there are three independent variables, namely Brand Image, Perceived Benefits, and Attitude. Among them, Brand Image is divided into three aspects to discuss, namely Functional, Symbolic, and Experiential. There is one dependent variable, Purchase Intention. It is hypothesized that the independent variable of this study, Brand Image, is significantly positively correlated with consumers' perceived benefits and attitude, thereby affecting their purchase intention. The framework comes from Jiang et al. (2021) and Zang et al. (2022) respectively. Figure 1 summarizes the research framework in this current study.

Figure 1: Research Framework



3. RESEARCH METHODOLOGY

3.1. Research Design

This study was about improving consumers' intention to purchase electric vehicles from Chinese brands. A research design is a framework used to guide the research process in a particular research direction, and a general plan that links the research question to the appropriate empirical research. There were three distinct categories in which research design could be classified: Qualitative, Quantitative, and Mixed methods. The research design for this study was quantitative in nature. Quantitative research design can be viewed as scientific, a type of research that emphasizes facts and figures in data gathering and analysis (Daniel, 2016).

The study conducted research and analysis from the responses collected from the questionnaire to help derive methods that could maximize consumers' intention to purchase electric vehicles of Chinese brands. Since the quantitative research design has clear objectives and guidelines (Daniel, 2016), the study was conducted by distributing questionnaires at offline stores of Chinese brand electric vehicles and online using WenJuanXing. To guarantee the authenticity and dependability of this study, the researcher used the five-point Likert scale for research to ensure accurate and

consistent identification of the relationship between independent and dependent variables. The available response options are "Strongly Disagree," "Disagree," "Neutral," "Agree," and "Strongly Agree," and the scale scores ranged from one to five (Anjaria, 2022).

3.2. Population and Sampling

A population is a collection of individuals, entities, or items resembling attributes and characteristics. As a source of evidence for research, a research population refers to a set of people who possess one or more traits of interest (Asiamah et al., 2017). In addition, Majid (2018) believes that the target population pertains to the group of intent people of interest in our study. The study's target population was individuals interested in electric vehicles and individuals who plan to purchase electric vehicles soon. Participants ranged in age from 18 to 70 years old.

A sample represents a population and can also be understood as a subset of the population. It is a specific group from which the researcher collects the required data (Obilor, 2023). The main purpose of the sample is to increase the accessibility of researchers to specific groups, save time and reduce costs, thereby facilitating researchers to conduct research on subjects and ensuring that the final research results can be applied to the entire group (Obilor, 2023). In quantitative research, sample size pertains to the number of individuals required to acquire precise statistics and draw valid conclusions. The minimum sample size in this study was determined by using The Cohen Table. According to Cohen's research, the medium effect size could essentially observe the average of the effects of each domain. Combined with the three independent variables the researcher studied, Brand Image, Perceived Benefits, and Attitude, the researcher could determine the sample size to be 108 respondents. Andrade (2020) proved that many researchers increased the resulting sample size by another 10% to account for any possible non-compliance with the test. Accordingly, the minimum sample size in the study was 119 respondents.

3.3. Sampling Technique

Sampling is an important tool in research that involves selecting a group of individuals and taking a sample from them (Majid, 2018). This study used purposive sampling, which belonged to the non-probability sampling category. Non-probability sampling means that members will be selected from the population using a non-random technique (Tyrer & Heyman, 2016). It contains the representation of all respondents to the entire population. Purposive sampling, a form of non-probability sampling, reflects the researcher's personal judgment in selecting subjects for the research (Sharma, 2017). This sampling technique mainly uses continuous sampling until the researcher cannot obtain new and valuable research information (Etikan et al., 2016). In this study, the researcher selected respondents according to the research content and purpose, so the purposive sampling technique used in this study could not only ensure the rigor of the research process but also ensure the authenticity of the final data (Campbell et al., 2020).

3.4. Research Instrument

A research instrument is a tool for researchers to collect data, and the research instrument used naturally differs depending on the purpose, nature, and structure of the research. As the most popular online questionnaire platform in China, Wen Juan Xing can significantly reduce costs,

improve collection efficiency, and provide detailed results (Shan et al., 2022). Therefore, the questionnaire was distributed to the respondents in the form of a Wen Juan Xing, and the data was collected in two parts to understand consumers' purchase intentions for Chinese brands electric vehicles.

Section A comprised fundamental details about the respondents, including their gender, age, occupation, income, education, what brand of car do you drive now, which of the following electric vehicle brands do you know, how did you learn about the electric vehicle brands mentioned above, and if you intend to purchase an electric vehicle, do you intend to purchase one of the Chinese Brand electric vehicles above.

Section B investigated the influence of attitude, perceived benefits, functional, symbolic, and experiential on consumers' purchase intention for Chinese brand electric vehicles. There were 18 items in total. The items for both dependent and independent variables were evaluated using a five-point Likert scale, where one represents “strongly disagree” and five indicates “strongly agree”.

4. DATA ANALYSIS

4.1. Profile of Respondents

This study adopted a quantitative research method, and the questionnaire questions used a five-point Likert scale, which was distributed to the study respondents to fill in. The questionnaire for this study was entered into the Chinese online questionnaire platform WenJuanXing. The website address and QR code generated by the system were distributed to the respondents of this study through social platforms such as Email and WeChat. The respondents of this study are individuals interested in electric vehicles and individuals who plan to purchase Chinese brand electric vehicles soon. The minimum sample size for this study is 119 respondents. After actual distribution and recycling, a total of 192 respondents were collected. Individuals who have no intention to purchase Chinese brand electric vehicles are regarded as invalid individuals, and their questionnaires are regarded as invalid questionnaires. This study has a total of 192 questionnaires, five invalid questionnaires were eliminated, and a total of 187 valid questionnaires were recovered, with an effective recovery rate of 97.40%. The sample size meets the requirements of empirical analysis and makes the study results reliable. The demographic survey questions in this study were mainly compiled based on the background information of the individuals being surveyed, such as gender, age, education, occupation, income, and other important demographic variables. The demographic variables designed in this study are all important demographic attributes that this study focuses on. The specific demographic distribution is as follows in Table 1.

Table 1: Demographic Profile

| Demographic | Variable | Frequency (F) | Percent (%) |
|-------------------------------------|---|----------------------|--------------------|
| Gender | Male | 125 | 66.8 |
| | Female | 62 | 33.2 |
| Age | 18 - 25 | 7 | 3.7 |
| | 26 - 30 | 30 | 16 |
| | 31 - 40 | 63 | 33.7 |
| | 41 - 50 | 53 | 28.3 |
| | 51 - 60 | 33 | 17.6 |
| | 61 - 70 | 1 | 0.5 |
| Education | Middle school and below | 5 | 2.7 |
| | High school or technical secondary school | 60 | 32.1 |
| | Undergraduate or junior college | 90 | 48.1 |
| | Postgraduate and above | 32 | 17.1 |
| Occupation | Student | 16 | 8.6 |
| | Public servant | 36 | 19.3 |
| | National-capital enterprise | 39 | 20.9 |
| | Private-owned enterprise | 34 | 18.2 |
| | Foreign-capital enterprise | 17 | 9.1 |
| | Public service organization | 45 | 24.1 |
| Income (RMB) | Under 4000 | 36 | 19.3 |
| | 4001 - 6000 | 44 | 23.5 |
| | 6001 - 12,000 | 73 | 39 |
| | 12,001 - 20,000 | 16 | 8.6 |
| | Above 20,001 | 18 | 9.6 |
| What brand of car do you drive now? | Toyota | 11 | 5.9 |
| | Honda | 10 | 5.3 |
| | Nissan | 14 | 7.5 |
| | Hyundai | 6 | 3.2 |
| | Volkswagen | 25 | 13.4 |
| | Buick | 15 | 8 |
| | BMW | 16 | 8.6 |
| | Mercedes Benz | 17 | 9.1 |
| | Audi | 10 | 5.3 |
| | Land Rover | 8 | 4.3 |
| Porsche | 10 | 5.3 | |

| | | | |
|--|----------------------------|----|------|
| | Other | 45 | 24.1 |
| | TV | 21 | 11.2 |
| How did you learn about the electric vehicle brands mentioned above? | Internet | 71 | 38 |
| | Magazine | 21 | 11.2 |
| | From relatives and friends | 55 | 29.4 |
| | Other | 19 | 10.2 |

It can be seen from the above table that the distribution of gender, age, education, occupation, income (RMB), what brand of car do you drive now, and how did you learn about the electric vehicle brands mentioned above is reasonable and representative. The frequency statistics of multi-select multiple-choice question is as follows in Table 2. It can be seen that the top three electric vehicle brands that the respondents are most familiar with are BYD, Tesla, and Geely, and the three least familiar electric vehicle brands are NIO, Audi, and Xpeng.

Table 2: Multi-select Multiple-choice Question Frequency Statistics

| Demographic | Variable | Frequency (F) | Percent (%) |
|--|---------------|---------------|-------------|
| Which of the following electric vehicle brands do you know? (can choose more than one) | Tesla | 186 | 99.5 |
| | BYD | 187 | 100 |
| | LEADING IDEAL | 137 | 73.3 |
| | Xpeng | 93 | 49.7 |
| | NIO | 109 | 58.3 |
| | Geely | 152 | 81.3 |
| | BMW | 114 | 61 |
| | Mercedes Benz | 113 | 60.4 |
| | Audi | 98 | 52.4 |

4.2. Normality Test

It is planned to use the structural equation model to verify the hypothesis. The normality test measures the central location used to determine sample data analysis (Mishra et al., 2019). The study utilized skewness and kurtosis to perform a normality test. Skewness pertains to the relationship between the median and means of a given set of data, and kurtosis is related to the distance of the data from or from the mean (Demir, 22). According to Orcan (2020), skewness and kurtosis are considered acceptable if they are between -1.96 and +1.96. Descriptive statistical analysis was conducted on each item in the six dimensions of Functional, Symbolic, Experiential, Perceived Benefits, Attitude, and Purchase Intention. The specific statistics are as follows in Table 3. It can be seen that the skewness and kurtosis values of the measurement items of each variable are less than 1.96, which proves that each measurement item conforms to the normal distribution, and a structural equation model can be constructed to verify the hypothesis.

Table 3: Normality Test of Measurement Item

| Item | N | Minimum | Maximum | Mean | SD | Skewness | Kurtosis |
|-------------|----------|----------------|----------------|-------------|-----------|-----------------|-----------------|
| FUN1 | 187 | 1 | 5 | 3.24 | 0.885 | 0.037 | -0.273 |
| FUN2 | 187 | 1 | 5 | 3.29 | 0.906 | -0.355 | -0.273 |
| FUN3 | 187 | 1 | 5 | 3.26 | 0.962 | -0.254 | -0.321 |
| SYM1 | 187 | 1 | 5 | 3.71 | 0.947 | -0.263 | -0.656 |
| SYM2 | 187 | 1 | 5 | 3.78 | 0.95 | -0.345 | -0.624 |
| SYM3 | 187 | 1 | 5 | 3.76 | 0.915 | -0.282 | -0.54 |
| EXP1 | 187 | 1 | 5 | 3.61 | 0.974 | -0.171 | -0.646 |
| EXP2 | 187 | 1 | 5 | 3.68 | 1.089 | -0.468 | -0.515 |
| EXP3 | 187 | 1 | 5 | 3.66 | 1.14 | -0.431 | -0.77 |
| PB1 | 187 | 1 | 5 | 3.57 | 1.178 | -0.422 | -0.783 |
| PB2 | 187 | 1 | 5 | 3.59 | 1.18 | -0.474 | -0.683 |
| PB3 | 187 | 1 | 5 | 3.71 | 1.044 | -0.417 | -0.65 |
| ATT1 | 187 | 1 | 5 | 3.1 | 1.019 | 0.195 | -0.639 |
| ATT2 | 187 | 1 | 5 | 3.22 | 1.063 | 0.149 | -0.814 |
| ATT3 | 187 | 1 | 5 | 3.27 | 1.104 | -0.062 | -0.841 |
| PI1 | 187 | 1 | 5 | 3.18 | 1.031 | -0.193 | -0.452 |
| PI2 | 187 | 1 | 5 | 3.4 | 1.034 | -0.263 | -0.59 |
| PI3 | 187 | 1 | 5 | 3.26 | 1.121 | -0.22 | -0.828 |

4.3. Assessment of Measurement Model

4.3.1 Internal Consistency Reliability

The scale's reliability in this study was assessed using Cronbach's Alpha coefficient. This study set up a total of 6 dimensions, and each dimension used Cronbach's Alpha to measure whether the reliability was qualified. If Cronbach's Alpha coefficient of this dimension is greater than 0.7, it means that the reliability of this dimension reaches the standard, and the CITC coefficient of each item should remain greater than 0.4. The specific reliability test of each dimension of this study is as follows in Table 4. The table below shows that the Cronbach's Alpha distribution range of the six dimensions of Functional, Symbolic, Experiential, Perceived Benefits, Attitude, and Purchase Intention is 0.773-0.861, all greater than 0.7. The CITC values of the items are all greater than 0.4, indicating that each variable and its corresponding item reliability test meets the requirements, indicating that the scale in this study has a certain degree of reliability.

Table 4: Internal Consistency Reliability

| Variable | Item | CITC | Cronbach's Alpha |
|--------------------|------|-------|------------------|
| Functional | FUN1 | 0.712 | 0.840 |
| | FUN2 | 0.701 | |
| | FUN3 | 0.699 | |
| Symbolic | SYM1 | 0.702 | 0.861 |
| | SYM2 | 0.739 | |
| | SYM3 | 0.769 | |
| Experiential | EXP1 | 0.537 | 0.775 |
| | EXP2 | 0.668 | |
| | EXP3 | 0.638 | |
| Perceived Benefits | PB1 | 0.695 | 0.827 |
| | PB2 | 0.673 | |
| | PB3 | 0.69 | |
| Attitude | ATT1 | 0.507 | 0.773 |
| | ATT2 | 0.698 | |
| | ATT3 | 0.628 | |
| Purchase Intention | PI1 | 0.714 | 0.845 |
| | PI2 | 0.738 | |
| | PI3 | 0.687 | |

4.3.2 Convergent Validity and Discriminant Validity

Validity refers to how accurately a research item is measured in quantitative research (Heale & Twycross, 2015). There are two main categories of validity: internal and external. These categories include content validity, face validity, criterion validity, and construct validity (Bolarinwa, 2015; Sürücü & Maslakci, 2020). Construct validity is currently the most commonly used validity testing method (Albano, 2020). Therefore, this study mainly uses construct validity to prove the scale validity. The most common methods of validity testing are exploratory factor analysis and confirmatory factor analysis.

Confirmatory factor analysis is often used to test the construct validity of questionnaires. It mainly tests whether the relationship between a factor and the corresponding measurement items conforms to the originally designed item division. Generally, the study uses structural equation modeling to construct confirmatory factor analysis. Confirmatory factor analysis mainly tests convergent validity and discriminant validity. Convergent validity mainly measures the convergence of items on factors, while discriminant validity mainly measures the discrimination between scales of each variable. A multi-variable measurement scale must have certain discriminability and convergence at the same time. This study used SmartPLS 4.0 to construct a structural equation model to

complete confirmatory factor analysis. The specific convergent validity test is as follows in Table 5.

Table 5: Convergent Validity Test

| Variable | Item | Outer Loading | CR | AVE |
|--------------------|-------------|----------------------|-----------|------------|
| Functional | FUN1 | 0.872 | 0.841 | 0.758 |
| | FUN2 | 0.871 | | |
| | FUN3 | 0.869 | | |
| Symbolic | SYM1 | 0.868 | 0.861 | 0.783 |
| | SYM2 | 0.887 | | |
| | SYM3 | 0.899 | | |
| Experiential | EXP1 | 0.765 | 0.785 | 0.69 |
| | EXP2 | 0.871 | | |
| | EXP3 | 0.852 | | |
| Perceived Benefits | PB1 | 0.856 | 0.832 | 0.744 |
| | PB2 | 0.862 | | |
| | PB3 | 0.870 | | |
| Attitude | ATT1 | 0.746 | 0.789 | 0.689 |
| | ATT2 | 0.892 | | |
| | ATT3 | 0.846 | | |
| Purchase Intention | PI1 | 0.890 | 0.855 | 0.765 |
| | PI2 | 0.885 | | |
| | PI3 | 0.849 | | |

The above table shows that the AVE value of the six dimensions is greater than 0.5, and the CR value is greater than 0.7. At the same time, the outer loading of each item is ensured to be greater than 0.7, indicating that the convergent validity of this study is qualified. If the convergent validity is qualified, the discriminant validity of each variable needs to be further judged. The discriminant validity test adopts the discriminant validity method recommended by scholars Fornell & Larcker (Hamid et al., 2017). If the AVE root value of each variable is greater than the correlation coefficient between each variable, the study scale is considered to have certain discriminant validity. The specific discriminant validity test is as follows in Table 6. It can be seen from the table that the discriminant validity between each study variable is good. In summary, this study scale has a certain degree of validity.

Table 6: Discriminant Validity Test

| Variable | Attitude | Experiential | Functional | Perceived Benefits | Purchase Intention | Symbolic |
|--------------------|-------------|--------------|--------------|--------------------|--------------------|--------------|
| Attitude | 0.83 | | | | | |
| Experiential | 0.188 | 0.831 | | | | |
| Functional | 0.274 | 0.362 | 0.871 | | | |
| Perceived Benefits | 0.2 | 0.325 | 0.334 | 0.863 | | |
| Purchase Intention | 0.425 | 0.341 | 0.455 | 0.308 | 0.875 | |
| Symbolic | 0.159 | 0.269 | 0.387 | 0.232 | 0.403 | 0.885 |

At the same time, the HTMT method was used to continue to verify whether the discriminant validity was qualified. As follows in Table 7, the largest value in the HTMT table is 0.538, and all values are less than 0.85. Therefore, in summary, it is believed that the discriminant validity of this study scale is good. The structural equation model can be constructed according to variable relationships to verify hypotheses.

Table 7: Discriminant Validity Test (HTMT)

| Variable | Attitude | Experiential | Functional | Perceived Benefits | Purchase Intention | Symbolic |
|--------------------|----------|--------------|------------|--------------------|--------------------|----------|
| Attitude | | | | | | |
| Experiential | 0.244 | | | | | |
| Functional | 0.339 | 0.449 | | | | |
| Perceived Benefits | 0.243 | 0.41 | 0.398 | | | |
| Purchase Intention | 0.52 | 0.421 | 0.538 | 0.367 | | |
| Symbolic | 0.187 | 0.323 | 0.454 | 0.272 | 0.467 | |

4.4. Assessment of Structural Model

Hair et al. (2014) suggested that the quality of the structural model should be considered from three aspects: Determination Coefficient (R^2), Effect Size (f^2), and Predictive Relevance (Q^2). As can be seen from Table 8 below, the fitting degree of the measurement model is good and the quality of the structural model is high.

Table 8: Model Fit Index Assessment

| Variable | R² | f² | Q² |
|--------------------|----------------------|----------------------|----------------------|
| Perceived Benefits | 0.159 | 0.190 | 0.113 |
| Attitude | 0.079 | 0.085 | 0.050 |
| Purchase Intention | 0.232 | 0.246 | 0.168 |

As follows in Table 9, the VIF value of each measured variable is obtained. It can be seen that the VIF value of each variable is less than 5, which proves that the model does not have collinearity problems, the model is reasonable, and the reliability of the hypothesis test is high.

Table 9: Collinearity Test

| Item | VIF |
|-------------|------------|
| ATT1 | 1.367 |
| ATT2 | 2.017 |
| ATT3 | 1.823 |
| EXP1 | 1.411 |
| EXP2 | 1.833 |
| EXP3 | 1.747 |
| FUN1 | 2.03 |
| FUN2 | 1.969 |
| FUN3 | 1.956 |
| PB1 | 1.94 |
| PB2 | 1.827 |
| PB3 | 1.915 |
| PI1 | 2.081 |
| PI2 | 2.215 |
| PI3 | 1.898 |
| SYM1 | 1.986 |
| SYM2 | 2.266 |
| SYM3 | 2.469 |

The specific path coefficient tests corresponding to each hypothesized relationship are as follows in Table 10.

Table 10: Path Coefficient Test

| Relation | β | T | P | 2.5%LLCI | 97.5%ULCI |
|---|---------------------------|----------|----------|-----------------|------------------|
| Brand Image → Attitude | 0.280 | 3.853 | 0.000 | 0.137 | 0.423 |
| Brand Image → Perceived Benefits | 0.399 | 5.446 | 0.000 | 0.252 | 0.539 |
| Perceived Benefits → Purchase Intention | 0.232 | 3.510 | 0.000 | 0.103 | 0.358 |
| Attitude → Purchase Intention | 0.379 | 5.244 | 0.000 | 0.238 | 0.519 |

4.5. Summary of Hypothesis

The structural equation model is often used to verify the influence relationship between variables. Structural models represent the causal relationships of latent variables through path analysis and are designed to test hypotheses. As follows in Figure 2, based on the hypothesized relationship of this study, a structural equation model was constructed. The p-value was less than 0.05, and this path was considered established. As follows in Table 11, all proposed hypotheses were supported, with a p-value less than 0.05 for each path.

Figure 2: Bootstrapping Result of The Model

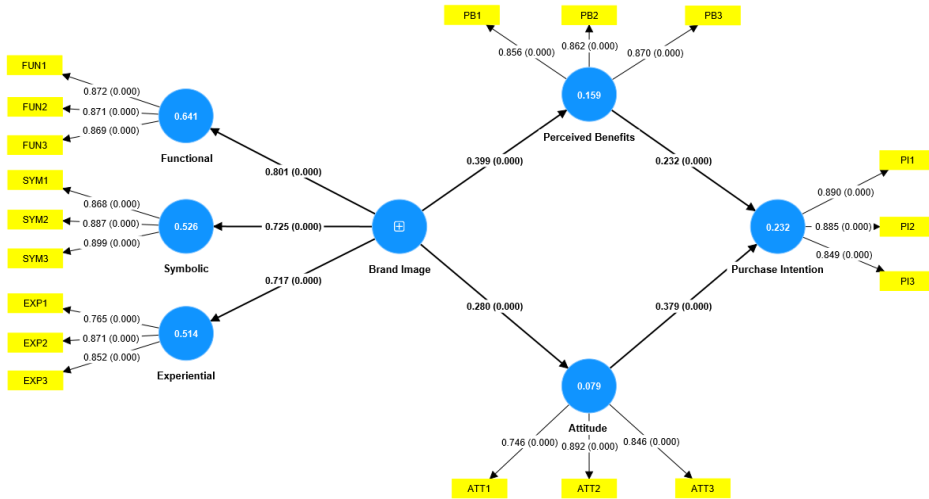


Table 11: Summary of Hypothesis

| Hypothesis | Statement Of Hypothesis | Result |
|------------|--|-----------|
| H1 | Consumer brand image perception toward Chinese brand electric vehicles is significantly positively correlated to their perceived benefits. | Supported |
| H2 | Consumer brand image perception toward Chinese brand electric vehicles is significantly positively correlated to their attitude. | Supported |
| H3 | Consumer perceived benefits toward Chinese brand electric vehicles are significantly positively correlated to their purchase intention. | Supported |
| H4 | Consumer attitude toward Chinese brand electric vehicles is significantly positively correlated to their purchase intention. | Supported |

5. DISCUSSION AND IMPLICATIONS

5.1 Discussion on Research Objectives

RO 1: To determine the significant and positive relationship between consumers' brand image perception and perceived benefits toward Chinese brand electric vehicles.

The result indicates that consumers' brand image perception can effectively improve the perceived benefits of Chinese brand electric vehicles. The findings ($\beta=0.399$, $T=5.446$, $p<0.001$) suggest that the brand image of Chinese brand electric vehicles is significantly positively correlated to perceived benefits. The result of this study is consistent with the previous study result of Lopes et al. (2022) that there is a positive relationship between brand image and perceived benefits. According to Fu (2023), and Lopes et al. (2022), a good brand image is more likely to be favored by consumers and can significantly improve consumers' perceived benefits. In this study, Chinese

brand electric vehicles are urged to start from three points: Functional, Symbolic, and Experiential, and add the latest cockpit technology and AR technology to meet consumers' identity needs, image needs, and lifestyle needs. And then increase the perceived benefits of consumers by improving the brand image. At the same time, the findings show that Chinese consumers believe that Chinese brand electric vehicles have been providing consumers with the highest perceived benefits by improving Functional, Symbolic, and Experiential and thereby improving brand image. To summarize, Hypothesis 1 is supported.

RO 2: To investigate the significant and positive relationship between consumers' brand image perception and attitude toward Chinese brand electric vehicles.

The result indicates that consumers' brand image perception can effectively improve attitudes toward Chinese brand electric vehicles. The findings ($\beta=0.280$, $T=3.853$, $p<0.001$) suggest that brand image perception is significantly positively correlated to consumers' attitude toward the brand. The result of this study is consistent with the previous study results of Salehzadeh et al. (2021) and Zhang (2015) that a good brand image can make consumers have a better attitude towards the brand. According to Nagar and Rana (2015), demonstrating that when the brand image conforms to consumers' inner thoughts, it can effectively deepen consumers' understanding of the brand and develop a more positive attitude towards the brand. For Chinese brand electric vehicles, in the process of improving the brand image, optimizing functions, adding personalized customized services, and improving the in-car driving and riding experience are particularly critical. Chinese brand electric vehicles can improve their brand image to show consumers that they are not much different from foreign brand electric vehicles, thereby eliminating consumers' resistance and slowly forming a positive attitude. At the same time, the findings show that Chinese consumers admit that the current brand image of Chinese brand electric vehicles has improved, which has gradually changed their attitude towards Chinese brand electric vehicles to a positive attitude. To summarize, Hypothesis 2 is supported.

RO 3: To identify the significant and positive relationship between consumers' perceived benefits and purchase intention toward Chinese brand electric vehicles.

The result indicates that consumers' perceived benefits of Chinese brand electric vehicles can effectively increase consumers' purchase intention. The findings ($\beta=0.232$, $T=3.510$, $p<0.001$) suggest that consumers' perceived benefits are significantly positively correlated to purchase intention. The result of this study is consistent with the previous study results of He et al. (2022), that is, perceived benefits are one of the important reasons for improving consumers' purchase intention for electric vehicles. Notably, studies by Sanguesa et al. (2021), Heinicke and Wagenhaus (2015), and Chen and Zhang (2019) emphasize that the lower energy and maintenance costs of electric vehicles are the main factors why consumers choose to purchase them. Additionally, Zhang et al. (2020), Liu (2022), and Zhao et al. (2019) believe that the Chinese government's high subsidies for the purchase of electric vehicles have increased consumers' intention to purchase electric vehicles. Klabi and Binzafrah (2021) and Yeğın and Ikram (2022) found that consumers' perceived benefits of the ecological environment have a positive effect on increasing the purchase intention of electric vehicles. In the field of electric vehicles, the more perceived benefits, the higher the consumer's intention to purchase. In this study, Chinese brand electric vehicles should allow consumers to experience more high-tech fun when driving electric vehicles, and gain

consumers' higher purchase intention by increasing perceived benefits. At the same time, the findings show that the perceived benefits of most Chinese consumers are at a high level, and they will increase their purchase intention when they are satisfied with the perceived benefits provided by Chinese brand electric vehicles. To summarize, Hypothesis 3 is supported.

RO 4: To examine the significant and positive relationship between consumers' attitude and purchase intention toward Chinese brand electric vehicles.

The result indicates that consumers' positive attitude towards Chinese brand electric vehicles can effectively increase consumers' purchase intention. The findings ($\beta=0.379$, $T=5.244$, $p<0.001$) suggest that consumers' attitude toward the brand is significantly positively correlated to purchase intention. The result of this study is consistent with the previous study results of Jaiswal et al. (2021), that is, consumers' attitude towards electric vehicles is considered a prerequisite for purchase intention, and a favorable attitude has a positive impact on enhancing purchase intention. According to Junquera et al. (2016), attitude is intricately linked to purchase intention, wherein the price of electric vehicles affects consumer attitude, which in turn affects purchase intention. In this study, the feedback from respondents showed that most consumers' attitude towards Chinese brand electric vehicles are changing and that Chinese brand electric vehicles should provide consumers with high-quality, quieter, and more environmentally friendly electric vehicle products. Attract more consumers' purchase intention. At the same time, the findings show that highly educated Chinese consumers aged 31-50 and with a monthly income of 4001-12,000 RMB have a more positive attitude towards Chinese brand electric vehicles. They agreed that the positive change in attitude towards Chinese brand electric vehicles has significantly increased their purchase intention. To summarize, Hypothesis 4 is supported.

5.2 Research Implications

This study has certain research significance and practical significance. In terms of research significance, this study validates novel findings indicating a significant correlation between brand image, perceived benefits, consumer attitude toward Chinese brand electric vehicles, and consumers' purchase intention. Each of these factors exerts a direct or indirect impact on consumers' purchase intention for Chinese brand electric vehicles. The study has established a new model that delineates the factors influencing consumers' purchase intention for Chinese brand electric vehicles. In theory, it will contribute to subsequent academic research.

In terms of practical significance, the results of this study prove that brand image, encompassing functional, symbolic, and experiential aspects, plays a crucial role in shaping consumers' perceived benefits and attitude, thereby influencing their purchase intention. Therefore, in order to increase consumers' intention to purchase Chinese brand electric vehicles, Chinese brand electric vehicles can strategically incorporate functional, symbolic, and experiential elements to fortify their brand image while upholding their existing brand image. Optimize the production technology of electric vehicles, elevate the quality of electric vehicle accessories, improve the service levels of online and offline stores, and pay attention to the vehicle attributes and vehicle needs that consumers are concerned about.

Simultaneously, consumers' perceived benefits when purchasing Chinese brand electric vehicles prompt consumers to compare Chinese brand electric vehicles with foreign brand electric vehicles.

Managers of Chinese brand electric vehicles should consistently monitor updates and replacement information of foreign brand electric vehicles, and provide consumers with a sense of satisfaction and security in terms of vehicle purchase subsidies, maintenance costs, driving experience, vehicle performance, and battery technology, this in turn increases consumers' purchase intention.

Moreover, some consumers maintain a wait-and-see attitude towards Chinese brand electric vehicles, perceiving them as automotive products yet to be validated by time. The attitude of Chinese consumers when purchasing electric vehicles often depends on the brand of the electric vehicle. If the brand of electric vehicles is a renowned foreign brand such as Tesla, Mercedes-Benz, BMW, Audi, etc., then consumers will think that the quality of the product can be guaranteed to a certain extent, their attitude will be more positive, and their purchase intention will be stronger. Therefore, managers of Chinese brand electric vehicles need to increase the cruising range of electric vehicles, minimize noise levels, and enhance functionalities while controlling the selling price to ensure that Chinese brand electric vehicles can match China's image.

5.3 *Limitation of Research*

Throughout the conduct of this study, the researcher encountered certain limitations. The first limitation arose during the research's design phase, data collection was primarily done through the distribution of questionnaires. However, the reality is that after the questionnaires are distributed, the researcher has no chance to communicate deeply with the respondents. This also led to the researcher being unable to know the reasons and deep-seated thoughts behind the answers to the questionnaires filled out by the respondents, which may affect the results of subsequent data analysis. In addition, the second limitation of this study is the exclusive utilization of a quantitative research design without the inclusion of a qualitative research design. This exclusive reliance on the quantitative method may result in conclusions that are not sufficiently comprehensive.

5.4 *Recommendations for Future Research*

Aiming at the limitations of this study, two recommendations for future research are put forward. The first recommendation suggests that, in future research, after the respondents fill out the questionnaire, the researcher should conduct in-depth communication with them to fully understand the reasons why the respondents chose the answers. Only in this way can we clarify the respondents' genuine and deep-seated thoughts on the purchase intention of Chinese brand electric vehicles and ensure that the results of subsequent data analysis will not be affected. The second recommendation suggests that, in future research, mixed methods research design can be used, that is, a combination of quantitative research design and qualitative research design, can be adopted to obtain a more comprehensive and detailed understanding of this study.

6. CONCLUSION

In summary, this study provides a series of useful insights for Chinese brand electric vehicle companies, aiming to increase consumers' purchase intention for Chinese brand electric vehicles. Based on the research results, this study verified that brand image, including functional, symbolic, and experiential, has a significant impact on consumers' perceived benefits and attitude, thereby increasing their purchase intention for Chinese brand electric vehicles. Therefore, Chinese brand

electric vehicle companies are encouraged to develop effective strategies to enhance their brand image. In addition, the study reflects that Chinese brand electric vehicle companies are actively developing and striving to compete with foreign brand electric vehicles in the Chinese market. Future study can work to reduce potential limiting factors while exploring the recommendations made by the current study.

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