

**INFLUENCE OF BRAND IMAGE AND SERVICE STRATEGY 7P'S ON THE PURCHASE
INTENTION OF CHINESE FAMILY ELECTRIC VEHICLES**

TANG QIANKUN

**AN INDEPENDENT STUDY SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENT FOR THE DEGREE OF MASTER OF BUSINESS
ADMINISTRATION PROGRAM IN MANAGEMENT
FACULTY OF BUSINESS ADMINISTRATION
RAJAMANGALA UNIVERSITY OF TECHNOLOGY THANYABURI
ACADEMIC YEAR 2024
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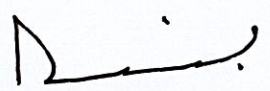

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ABSTRACT

The purpose of this study is to examine the influence of brand image and service strategy 7P's on the purchase intention of Chinese family electric vehicles. The objectives of this study are: 1) to analyze the demographic of customers who purchase family electric vehicles, 2) to analyze brand image, service strategy, and purchase intention and 3) to investigate the impact of brand image on marketing strategies targeting purchase intention. The focus of the research is the influence of brand image and service strategy 7P's on the purchase intention of Chinese family electric vehicles.

This study collected 400 sample data through a questionnaire survey and used Cronbach's α coefficient to verify the reliability and validity of the scale. SPSS statistical analysis software was used for frequency analysis, descriptive statistics, and multiple regression analysis.

The final results indicate that brand image has a significant impact on purchase intention, and when consumers perceive a good brand image, their purchase intention increases. The study also found that marketing strategies (price and promotion) have a significant impact on consumer purchase intention. This study provides preference data on consumer purchasing behavior, helping manufacturers of family electric vehicles better optimize their marketing strategies, and provides a good reference for the marketing development of China's family electric vehicle industry from both theoretical and practical perspectives.

Keywords: brand image, purchase intention, family electric vehicle, service strategy

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CHAPTER 1

INTRODUCTION

1.1 Research Background

Transportation is a means of moving people, animals, and goods from one place to another. Since the early existence of human civilization, people relied on horses and carts or carriages for this purpose. Countries around the world have been trading by sea using ships for hundreds of years. In more recent history, industrialization popularized the use of trains and rail freight, and further scientific development led to the invention of motor vehicles, aircraft, and even spacecraft. (Junkpiles, 2024).

On a global scale, with increasing attention to environmental issues, the use of fossil fuels has become one of the main contributing factors to global climate change.

Fossil fuels are formed from the decomposition of buried carbon-based organisms that died millions of years ago. They create carbon-rich deposits that are extracted and burned for energy. They are non-renewable and currently supply around 80% of the world's energy. They are also used to make plastic, steel and a huge range of products. There are three types of fossil fuel – coal, oil and gas. The Intergovernmental Panel on Climate Change (IPCC) has found that emissions from fossil fuels are the dominant cause of global warming. In 2018, 89% of global CO₂ emissions came from fossil fuels and industry. (Client earth, 2024, online).

The emissions of traditional fuel vehicles have a serious impact on air quality and environmental health, including the emissions of carbon dioxide and other harmful gases. In order to reduce the negative impact on the environment and meet the needs of sustainable development, governments around the world have begun to actively promote the development and application of new energy vehicles.

China, as one of the world's largest automobile markets, is actively promoting the development of electric vehicles (EVs). The Chinese government has implemented a series of policies to support the growth of new energy vehicles (NEVs), with a particular focus on electric vehicles. These policies include subsidy programs and preferential measures such as free licenses, aimed at fostering rapid expansion in the electric vehicle market.

The following pictures show the top selling family electric vehicle brands in China in April 2024, reflecting the rapid growth of the family electric vehicle market.

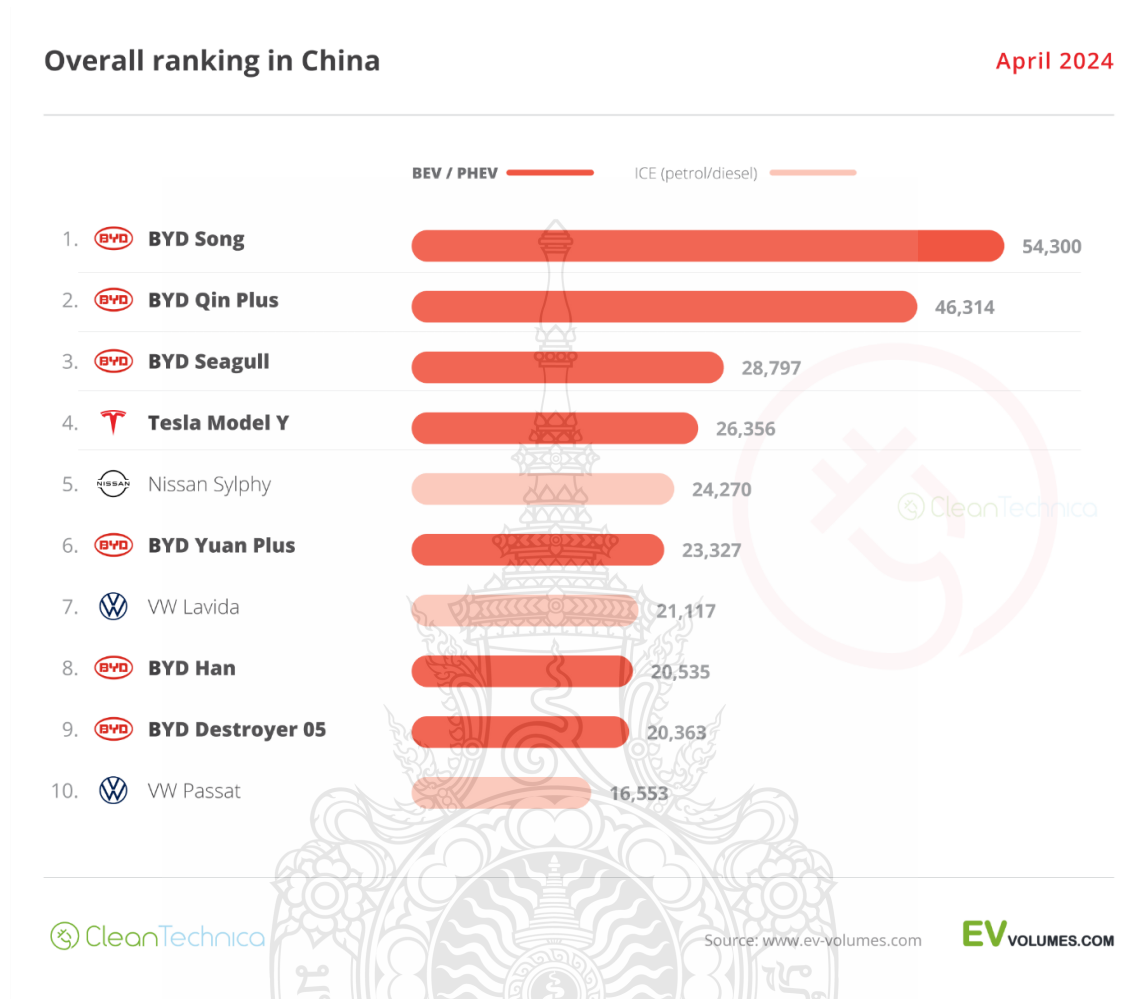


Figure 1.1 family electric vehicles Sales chart

China not only ranks among the largest automotive markets globally but also leads in advancing electric vehicle technology. To promote widespread adoption, the government has instituted comprehensive policies, including substantial subsidies and incentives like free license plates, significantly lowering the upfront costs of electric vehicles and incentivizing both consumers and manufacturers. As the electric vehicle market matures and technology evolves, China adjusts these policies to maintain market competitiveness and encourage ongoing innovation.

However, despite the enormous potential of the electric vehicle market, consumers' willingness to purchase electric vehicles is still influenced by various factors. For example, some consumers may be concerned about the range of electric vehicles or the inconvenience of charging facilities, which can affect their intention to purchase a car. Car purchase intention is one of the important factors for consumers to decide their purchasing behavior, and understanding the impact of different factors on car purchase intention has become a hot topic in the electric vehicle industry research. Among these factors, demographic characteristics, brand image, and service strategy (7P's) are considered important factors affecting consumer willingness to purchase electric cars.

The importance of this background lies in understanding the consumer's intention to purchase a car and the factors that influence this intention, which is of great significance for formulating effective marketing strategies and product design. As a representative of new energy vehicles, the market prospects and consumer behavior of electric vehicles are crucial for the development of the automotive industry.

1.2 Purpose of the Study

Chinese family electric vehicles are still in the development stage, which is an emerging industry. Most consumers are still in the wait-and-see stage.

This study is centered on investigating the intricate interplay among demographic characteristics, brand image, and service strategies in influencing the willingness of Chinese consumers to purchase electric vehicles (EVs). By delving deeply into these factors, the objective is to uncover patterns and variations in consumer attitudes and intentions towards EV adoption.

Demographic characteristics, encompassing factors such as age, income level, education, and urbanization, play a crucial role in shaping consumer perceptions and preferences towards EVs. Understanding how these variables interact with brand image comprising aspects like brand reputation, perceived quality, and environmental consciousness is essential in deciphering consumer behavior. Moreover, service strategies, including accessibility of charging infrastructure, after-sales support, and customer service quality, further influence consumer willingness to embrace EV technology.

So the objectives of this study as follows:

- 1: To analyze demographic of customer of purchase family electric vehicles.
- 2: To analyze brand image, service strategy and purchase intention.
- 3: To investigate the influence of brand image and service strategy on purchase intention.

1.3 Research questions and hypothesis

1.3.1 Research questions

1. Identify and analyze the demographic characteristics of Chinese consumers who tend to purchase family electric vehicles, and identify key demographic variables that affect consumers' willingness to purchase electric vehicles, such as age, gender, geographic location, education, income level.
2. How brand image affects the purchase intention of Chinese family electric vehicles, with a focus on understanding the role of brand reputation, product service quality, and market positioning awareness in shaping consumer attitudes and intentions to purchase electric vehicles.
3. What impact does service strategy (7P) have on the purchase intention of Chinese family electric vehicles? It examines how various elements of marketing mix, such as product, price, place, Promotion, People, Process, and physical evidence, affect consumers' willingness to purchase electric vehicles.

1.3.2 Definition Terms

1. Demographic

Demographic characteristics refer to the statistical data of a population that is typically considered in marketing and research to understand and segment consumer behavior. These characteristics significantly influence consumer preferences and behaviors. In the context of the electric vehicle (EV) market in China, key demographic factors include age, gender, geographic location, education level, and income level.

Age: Younger consumers tend to be more environmentally conscious and technologically savvy, making them more open to purchasing EVs.

Gender: Men and women prioritize different aspects when purchasing vehicles. Men might focus more on performance and technology, while women might prioritize safety and practicality.

Geographic Location: Urban residents are more likely to have better access to charging facilities, which reduces range anxiety and increases their likelihood of buying an electric vehicle.

Education Level: Higher education levels are often associated with greater environmental awareness and a better understanding of new technologies.

Income Level: Income levels directly affect purchasing power and the ability to afford the higher upfront costs of electric vehicles.

Understanding these demographic factors is essential for companies to develop targeted marketing strategies that resonate with different consumer segments. For instance, younger consumers, who are generally more receptive to new technologies and environmental issues, represent a key target group for electric vehicle marketing (Zhang et al., 2022). Additionally, urban residents with better access to charging infrastructure are more likely to consider purchasing an EV, highlighting the importance of developing robust charging networks (Li & Jiang, 2020). Educated consumers tend to have greater environmental awareness and a better understanding of the benefits of EVs, making them a crucial demographic for EV marketers (Chen et al., 2019). By addressing the specific needs and preferences of various demographic groups, companies can enhance the appeal of EVs and drive their adoption in China.

2. Brand Image

Brand image refers to the perception of a brand in the minds of consumers. It encompasses a range of attributes and associations that consumers link with a particular brand.

In China, where the government actively promotes green technology and sustainability, a positive brand image can significantly enhance consumer interest in EVs. For example, brands that are perceived as reliable and high-quality are more likely to gain consumer trust and drive the adoption of electric vehicles. Companies that can effectively communicate and demonstrate the quality and benefits of their EVs will likely see higher purchase intentions (Wang & Chen, 2020). Furthermore, brands that emphasize their

commitment to environmental sustainability can attract environmentally conscious consumers, enhancing the brand's appeal (Xu & Li, 2021). Companies that successfully build a strong brand image around reliability, quality, and environmental stewardship are more likely to gain consumer trust and drive market adoption of their electric vehicles.

3. Service Strategy (7P's)

The 7P's of marketing, also known as the marketing mix, are a set of controllable, tactical marketing tools that a company uses to produce the desired response from its target market. These are:

Product: The features, design, quality, and functionality of the electric vehicles offered.

Price: The pricing strategy, including the overall cost, financing options, and perceived value for money.

Place: The distribution channels and locations where electric vehicles are available.

Promotion: Advertising, sales promotions, public relations, and marketing communications strategies.

People: The employees, sales personnel, and customer service representatives who interact with customers.

Process: The procedures and processes involved in delivering the product.

Physical Evidence: The tangible proof of the product and service quality.

In the Chinese EV market, the 7P's play a crucial role in shaping consumer perceptions and purchase intentions. By optimizing these elements, companies can effectively address consumer concerns, enhance the attractiveness of their offerings, and drive the adoption of electric vehicles. For instance, product innovations such as extended driving range and faster charging times can significantly enhance consumer appeal (Li et al., 2021). Competitive pricing strategies, combined with government subsidies, can make electric vehicles more accessible and attractive to consumers (Zhang & Wang, 2021). Effective distribution channels ensure that consumers have easy access to electric vehicles, which is vital for market penetration (Chen et al., 2020). Moreover, well-trained sales personnel and excellent customer service can significantly enhance the consumer experience and increase the likelihood of purchase (Liu & Zhang, 2020). Providing tangible proof of product and service quality, such as through showrooms and customer testimonials, can reassure consumers and encourage them to choose EVs (Zhao & Li, 2021).

1.4 Hypothesis

H1: Brand image have influence on purchase intention.

H2: Service strategy have influence on purchase intention.

H2.1: Product have influence on purchase intention.

H2.2: Price have influence on purchase intention.

H2.3: Place have influence on purchase intention.

H2.4: Promotion have influence on purchase intention.

H2.5: People have influence on purchase intention.

H2.6: Process have influence on purchase intention.

H2.7: Physical evidence have influence on purchase intention.

H3: Brand image and service strategy have influence on purchase intention.

1.5 Research Framework

Independent Variable:

Dependent Variable:

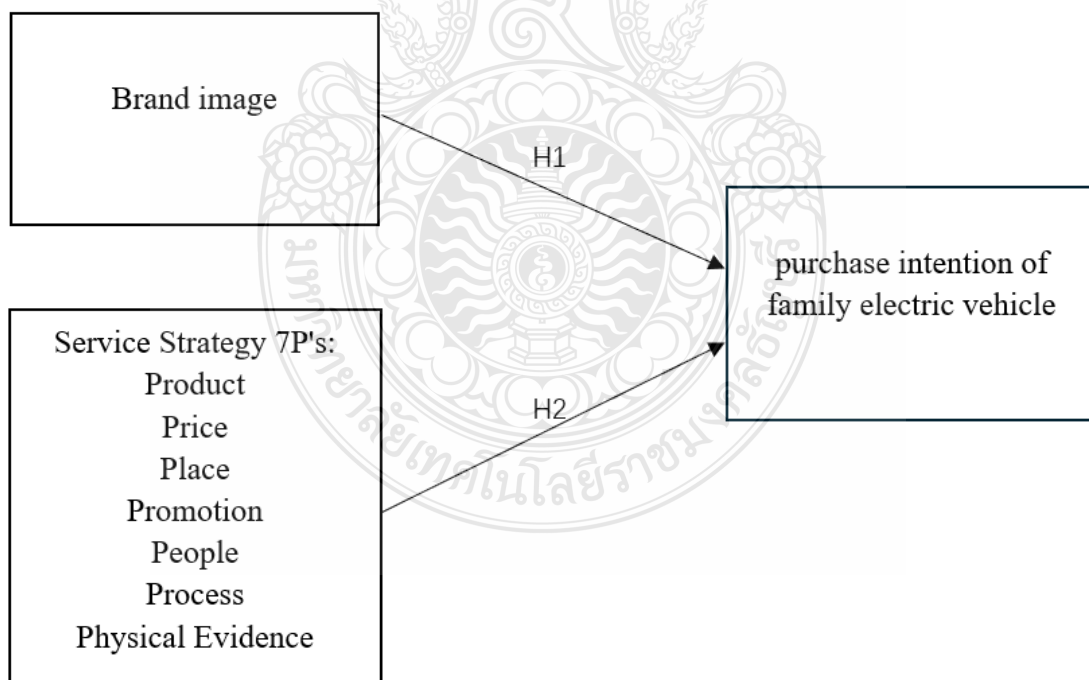


Figure 1.2 Research Framework

1.6 Significance of the Study

1.6.1 Theoretical significance of research

This study aims to provide insights into the factors influencing the purchase intention of electric vehicles among Chinese families. By examining the impact of demographic characteristics, brand image, and service strategy (7P's) on consumer behavior, this research offers valuable information for understanding the dynamics of the EV market in China. It can serve as a reference for future studies in similar contexts, helping to build a more comprehensive understanding of consumer behavior in the EV market.

1.6.2 Practical significance of research

The practical significance of this study lies in its potential to offer actionable insights for stakeholders in the electric vehicle industry, including policymakers, manufacturers, and marketers. The findings can assist in developing more effective market segmentation strategies and targeted marketing efforts. Insights into how brand image affects purchase intention can help refine brand positioning strategies to better appeal to consumers. Understanding the impact of the 7P's on purchase intention enables optimization of product offerings and service delivery, addressing consumer concerns more effectively. Additionally, the research findings can inform government policies aimed at promoting the adoption of electric vehicles, guiding the design of more effective incentive programs and infrastructure projects. By providing a clearer picture of the factors that drive consumer decisions in the EV market, this study aims to support the development of more effective strategies to increase the adoption of electric vehicles in China.

1.7 Limitations of the study

Due to limitations in research level, this article still has many shortcomings:

1. The number of survey questionnaires is relatively limited. The data involved in this article is mainly obtained online. Due to limited communication online, there may be situations where consumers may not take the filling out seriously, resulting in too many invalid questionnaires. In the future, larger sample sizes may be used for such studies, which will further improve the accuracy of the results.

2. This article only focuses on the situation of family electric vehicles in China, and cannot guarantee the universality of the research results. Subsequent research can be expanded to the scope of family electric vehicles worldwide.

CHAPTER 2

REVIEW OF THE LITERATURE

2.1 service marketing strategy 7p's

The 7P marketing theory was proposed by Bernard H. Booms and Mary Jo Bitner in 1981. This theory builds on the traditional 4P marketing mix (product, price, place, promotion) developed by E. Jerome McCarthy in 1960 to better suit the needs of the service industry and modern marketing practices. The 7P framework includes product, price, place, promotion, people, process, and physical evidence (Booms & Bitner, 1981).

McCarthy's original 4P theory was primarily geared toward manufacturing sectors (McCarthy, 1960). However, as the service industry expanded, Booms and Bitner recognized that the 4P model was insufficient for fully capturing the complexities of modern marketing activities. Consequently, they added people, process, and physical evidence to the traditional mix, creating a more comprehensive 7P marketing model (Rafiq & Ahmed, 1995).

The significance of the 7P marketing theory lies in its holistic framework, which aids businesses in systematically and meticulously considering various aspects when formulating and implementing marketing strategies. This approach is not only applicable to traditional product marketing but is particularly beneficial for the service sector, as it emphasizes critical elements such as service personnel and process management (Lovelock & Wirtz, 2016).

2.2 Family electric vehicle industry research

By utilizing the 7P marketing theory, companies can better understand and meet consumer needs, enhance customer satisfaction, and build brand loyalty, thereby gaining a competitive edge in the market. In the electric vehicle sector, specifically, the 7P model enables firms to consider product quality, pricing strategies, distribution channels, promotional activities, service personnel, purchasing processes, and brand image comprehensively. This holistic consideration helps develop more effective marketing strategies that boost consumer purchase intentions (Kotler & Keller, 2016).

In summary, the development and application of the 7P marketing theory have enriched modern marketing frameworks, providing robust guidance and support for businesses to navigate dynamic market environments and achieve competitive advantages.

2.3 Concept of Brand Image

1. Brand image plays a pivotal role in shaping consumer behavior and purchase decisions, particularly within the dynamic realm of electric vehicles (EVs). The concept of brand image encompasses multifaceted dimensions, including consumers' perceptions, attitudes, and emotional responses towards a brand. In the fiercely competitive EV market, establishing and maintaining a robust brand image is paramount. A strong brand image not only influences consumer preferences but also differentiates a company from its competitors, fostering customer loyalty and trust. By cultivating a positive brand image, companies can effectively communicate their values, quality standards, and commitment to sustainability, resonating deeply with environmentally-conscious consumers. Moreover, a compelling brand image serves as a strategic asset, enabling companies to navigate market complexities and capitalize on growth opportunities. In essence, brand image in the EV sector transcends mere recognition; it represents a cornerstone for building lasting consumer relationships and driving sustained business success in a rapidly evolving market landscape.

2. Brand image refers to the overall perception of a brand in the minds of consumers, encompassing how they perceive and evaluate the brand across various touchpoints. This holistic perception is shaped by an intricate interplay of numerous factors, ranging from the effectiveness of marketing communications and the quality of customer experiences to the reputation for product excellence and the impact of social influences such as online reviews and word-of-mouth recommendations.

A positive brand image is marked by several essential attributes that collectively enhance consumer engagement and loyalty. Central to this is strong consumer recognition, fostered through consistent and impactful brand messaging that resonates with target audiences and reinforces brand identity. Equally crucial is the establishment of trust, cultivated through consistent delivery of high-quality products or services that meet or

exceed customer expectations. Additionally, exemplary customer service plays a pivotal role in solidifying consumer confidence and fostering enduring brand loyalty over time.

Verdala and Albarn (2018) define brand image as the perception of a brand reflected by brand associations held in consumer memory. They emphasize that a positive brand image can lead to a positive attitude towards the brand, which is crucial for differentiating it in the market. Aaker (2014) and Fabricator (2016) also argue that a strong brand image makes a brand unique and more appealing to consumers.

3. Components of Brand Image

Brand image is composed of several interrelated elements that collectively influence consumer perceptions:

Brand Awareness: The extent to which consumers are familiar with a brand and can recognize it among competitors. Aaker (2014) argues that brand awareness is crucial for brand recall and preference. For example, Tesla's widespread recognition has significantly contributed to its market dominance in the EV sector (Musk, 2021).

Brand Associations: The attributes, benefits, and values that consumers associate with a brand. Kotler and Keller (2016) emphasize that strong brand associations can develop consumer interest in the brand. For instance, BYD is associated with innovation and sustainability, appealing to environmentally conscious consumers (Wang et al., 2022, *Journal of Cleaner Production*).

Brand Loyalty: The degree of consumer commitment to repurchasing or recommending a brand, driven by positive experiences and satisfaction. Studies have shown that brand loyalty in the EV market is strongly influenced by after-sales service and product performance (Li & Zhang, 2023, *Automotive News*).

Brand Personality: The human characteristics attributed to a brand, such as reliability, sophistication, or excitement, which resonate with consumers on a personal level. NIO, for instance, has crafted a brand personality around luxury and technological sophistication, differentiating itself from other EV brands (Chen, 2021, *Forbes*).

Brand Reputation: The overall esteem and respect a brand commands in the market, influenced by its history, performance, and ethical standards. Brands like Toyota, which entered the EV market with a strong reputation from their hybrid models, have leveraged this to build credibility and trust (Anderson, 2022, *The Wall Street Journal*).

2.4 Concept of Purchase Intention

Purchase intention refers to the likelihood that a consumer will plan or be willing to buy a particular product or service in the future. It is a critical concept in consumer behavior studies and marketing because it helps predict sales and understand consumer decision-making processes. Various factors influence purchase intention, including personal attitudes, perceived value, brand image, social influences, and situational factors (Fishbein & Ajzen, 1975).

The Theory of Reasoned Action (TRA) developed by Fishbein and Ajzen (1975) serves as a foundational framework for understanding purchase intention. According to TRA, a consumer's intention to perform a behavior (e.g., purchasing a product) is determined by their attitude toward the behavior and subjective norms. Attitude toward the behavior is shaped by the consumer's beliefs about the outcomes of the behavior and their evaluations of these outcomes. Subjective norms refer to the perceived social pressures to perform or not perform the behavior.

In the context of electric vehicles (EVs), purchase intention can be significantly influenced by factors such as environmental consciousness, technological advancements, government incentives, and economic considerations. For example, a positive attitude towards environmental protection may enhance the purchase intention for EVs, as consumers perceive these vehicles to be environmentally friendly. Similarly, government subsidies and incentives can lower the financial barriers, increasing consumers' intention to purchase EVs (Egbue & Long, 2012).

Furthermore, brand image and consumer trust play vital roles in shaping purchase intention. A strong, positive brand image can enhance consumer confidence and trust in the product, thereby increasing purchase intention. For instance, established automotive brands that are perceived as reliable and innovative are likely to attract higher purchase intentions for their electric vehicle offerings (Yoo & Donthu, 2001).

Social influence is another crucial factor impacting purchase intention. Word-of-mouth, reviews, and recommendations from family and friends can significantly sway consumers' decisions. Positive testimonials and endorsements can increase purchase intention by reinforcing the perceived value and benefits of the product (Brown & Reingen, 1987).

In addition to these factors, situational variables such as availability, convenience, and economic conditions also play a part in determining purchase intention. For instance, the ease of access to charging stations and the overall cost of ownership, including maintenance and energy costs, can influence a consumer's intention to buy an electric vehicle (Rezvani, Jansson, & Bodin, 2015).

Understanding the concept of purchase intention is essential for marketers as it provides insights into consumer preferences and helps in designing effective marketing strategies. By identifying and leveraging the factors that influence purchase intention, businesses can enhance their market offerings and increase sales potential.

2.5 Literature evaluation

2.5.1 The Relevance of service strategy and Purchase Intention

The relationship between service strategy and purchase intention is a critical area of research in marketing and consumer behavior. Marketing strategies are designed to influence consumer perceptions, attitudes, and behaviors, ultimately driving purchase intentions and sales. Understanding how different marketing strategies impact purchase intention can help businesses effectively tailor their marketing efforts to enhance consumer engagement and conversion rates.

Research has shown that marketing strategies directly influence consumers' purchase intentions through various mechanisms, such as enhancing brand image, increasing perceived value, and building customer trust (Kotler & Keller, 2016). For instance, promotional strategies, such as discounts, advertising campaigns, and public relations activities, can raise awareness and generate interest in a product, thereby increasing purchase intentions (Schiffman & Kanuk, 2000).

In the context of electric vehicles (EVs), specific marketing strategies can significantly impact purchase intentions. For example, highlighting the environmental benefits and cost savings of EVs in marketing campaigns can appeal to environmentally conscious consumers and those looking for long-term economic benefits. Such strategies can positively influence consumers' attitudes towards EVs and enhance their purchase intentions (Egbue & Long, 2012).

Moreover, effective brand positioning and differentiation are essential marketing strategies that can drive purchase intentions. Companies that successfully position their EVs as innovative, reliable, and technologically advanced can attract consumers who value these attributes. A strong brand image, supported by consistent messaging and positive customer experiences, can increase consumer confidence and trust in the brand, leading to higher purchase intentions (Aaker, 1991).

Digital marketing strategies, including social media marketing, influencer partnerships, and online reviews, also play a crucial role in shaping purchase intentions. Social proof and positive word-of-mouth on digital platforms can significantly influence consumer perceptions and decisions. For instance, consumers are more likely to consider purchasing an EV if they see positive reviews and endorsements from trusted influencers and other consumers (Cheung & Thadani, 2012).

Furthermore, personalization and targeted marketing strategies can enhance purchase intentions by addressing specific consumer needs and preferences. By leveraging data analytics and consumer insights, companies can create personalized marketing messages and offers that resonate with individual consumers, increasing the likelihood of purchase (Wedel & Kannan, 2016).

In addition to these strategies, experiential marketing, such as test drive events and interactive demonstrations, can provide consumers with firsthand experience of the product's benefits and features. This direct engagement can reduce uncertainty and increase purchase intentions by allowing consumers to experience the product's value proposition (Schmitt, 1999).

In summary, the relevance of service strategy to purchase intention is well-documented in academic research. By employing a combination of promotional, branding, digital, personalized, and experiential marketing strategies, companies can effectively influence consumer attitudes and behaviors, thereby enhancing purchase intentions and driving sales.

2.5.2 Relationship Between Brand Image and Purchase Intention

Numerous studies have explored the link between brand image and purchase intention, particularly in the context of new and emerging markets like EVs. A strong and positive brand image can significantly enhance consumers' willingness to purchase a product. This relationship can be understood through the following points:

Trust and Credibility: A reputable brand image fosters consumer trust and confidence in the product's quality and reliability, crucial for high-involvement purchases like EVs. Research by Zhou and Li (2021) found that trust in brand reliability significantly increases purchase intention for EVs in China (Journal of Marketing Research).

Emotional Connection: Brands that successfully create an emotional bond with consumers can influence purchase decisions by aligning with their values and lifestyle aspirations. For example, Tesla's branding around innovation and environmental stewardship has created a strong emotional appeal for many consumers (Smith, 2023, Environmental Research Letters).

Perceived Quality: A strong brand image often signals superior product quality, which can mitigate concerns about new technologies or unfamiliar products, such as EVs. Studies indicate that perceived quality is a major factor in the purchase decision for high-tech products, including EVs (Johnson & Chang, 2022, Journal of Consumer Research).

Social Influence: Consumers are likely to be influenced by the perceived social status and prestige associated with a brand, driving higher purchase intentions. The luxury branding of vehicles like the NIO ES8 has positioned them as status symbols, enhancing their appeal (Li, 2021, Luxury Automotive Journal).

Risk Reduction: A well-established brand image can reduce the perceived risk associated with purchasing a new or innovative product, making consumers more likely to choose an EV. A study by Kim et al. (2022) demonstrated that consumers are more willing to adopt EVs from brands with strong reputations, as these brands are perceived as lower risk (Journal of Sustainable Transportation).

2.5.3 Relationship between Demographics and Purchase Intention

The correlation between demographic factors and purchase intention is a critical area of study in consumer behavior research. Demographic variables such as age, gender, income, education, and family size collectively shape consumers' purchasing decisions and their intentions to buy specific products, including electric vehicles (EVs).

Research has consistently shown that age significantly influences purchase intention. Younger consumers, particularly millennials and Generation Z, are more likely to adopt new technologies and demonstrate higher environmental awareness, leading to a greater intention to purchase EVs (Nielsen, 2015). In contrast, older consumers may exhibit lower purchase intentions for EVs due to a general resistance to change and a preference for familiar technologies.

Gender also plays an important role in purchase intention. Studies suggest that men and women have different priorities when it comes to purchasing vehicles. Men tend to focus more on the technical and performance aspects, while women may prioritize safety, convenience, and environmental impact (Laroche et al., 2001). These differing priorities can influence their overall purchase intentions for EVs, with marketing strategies that emphasize safety and environmental benefits potentially resonating more with female consumers.

Income level is another critical demographic factor affecting purchase intention. Higher-income consumers are more likely to afford the initial higher cost of EVs and are often more receptive to the long-term cost savings associated with lower fuel and maintenance costs. On the other hand, lower-income consumers may be deterred by the upfront cost despite potential long-term savings, leading to lower purchase intentions (Ozaki & Sevastyanova, 2011). However, government incentives and subsidies can play a crucial role in mitigating this barrier and enhancing purchase intentions across different income groups.

Educational level influences purchase intentions by shaping consumers' awareness and understanding of EVs. Higher education levels are generally associated with greater environmental awareness and a better understanding of the benefits of EVs, which can lead to higher purchase intentions (Jansson et al., 2010). Educated consumers are more likely to be informed about the environmental impact of traditional vehicles and the advantages of EVs, making them more inclined to consider purchasing EVs.

Family size and composition also impact purchase intentions. Larger families may prioritize spacious and practical vehicles, which could affect their interest in smaller EV models. However, as more family-friendly EV options become available, purchase intentions in this demographic may increase. Additionally, families with children may place higher importance on environmental sustainability, further boosting their intention to purchase EVs (Hackbarth & Madlener, 2013).

In conclusion, demographic factors such as age, gender, income, education, and family size significantly influence purchase intentions for electric vehicles. Understanding these correlations helps marketers and policymakers tailor their strategies to different consumer segments, thereby enhancing the effectiveness of their efforts to promote EV adoption.

CHAPTER 3

METHODOLOGY

Chapter 3 describes the methods used in the research process. This study adopts a quantitative research method to explore the impact of 7P service mix and brand image on consumer purchase intention. This survey uses a simple random sampling method to investigate the influencing factors of Chinese consumers' willingness to purchase family electric vehicles.

3.1 Questionnaire analysis

In this article, based on the results of the questionnaire survey, the following research was conducted:

1. Population and sampling techniques
2. Instrumentation
3. Verification and reliability testing of the questionnaire
4. Data Collection
5. Data analysis

3.2 Population and sampling techniques

1. Population: According to the seventh national census of China in 2020 (Statistics China. 2020), the permanent population of China is approximately 1.4 billion.

2. Location: Due to the wide scope and large total number of surveys, an online survey questionnaire was chosen to facilitate wider dissemination of data. After the online questionnaire is created, it is randomly sent to Chinese Internet users through WeChat, Weibo, Tiktok and other large social media.

There are various options in the survey questionnaire to ensure that each question and answer option is valid and can achieve the research objectives. To ensure the universal applicability of the questionnaire design, 30 questionnaires were distributed in advance for small-scale surveys before the formal survey. The survey targets different age groups, education levels, and monthly income, comprehensively reflecting consumer purchasing intentions and ensuring the authenticity and reliability of the data.

When faced with a large total amount, the confidence level of the sample in this study is 95%.

According to Taro Yamane 's formula (Taro Yamanae,1973), the reliability is 95%. According to the official report of the China Bureau of Statistics in 2022, there were 1.4 billion people.

Taro Yamane 's calculation formula is as follows:

$$n = \frac{N}{(1 + N(e^2))}$$

Where:

n=required sample size

N=number of people in the population e=allowable error (%)

Substitute data:

$$\begin{aligned} n &= \frac{1.4 \times 10^9}{(1 + (0.052) \times 1.4 \times 10^9)} \\ &= \frac{1.4 \times 10^9}{(1 + 0.0025 \times 1.4 \times 10^9)} \\ &= \frac{1.4 \times 10^9}{3500001} \\ &= 399.99 \end{aligned}$$

After substituting the Yamane formula to calculate the sample size, the sample size is 399.99. In order to obtain reliable data, the sample size is increased to 400..

3.3 Instrumentation

To gather data for this study, a structured online survey questionnaire was designed. The questionnaire is divided into several sections, each aimed at capturing specific variables relevant to the research objectives. The instrument was developed based on an extensive review of the literature and existing validated scales to ensure content validity. Below are the key components of the questionnaire:

Demographic Information

This section collects basic demographic information from the respondents to understand their background and how it may influence their purchase intentions. The questions in this section include Q1-Q5:

Q1: Age

Q2: Gender

Q3: Education level

Q4: Monthly income

Q5: Geographic location (urban/rural)

7P's service Mix

Questions in this section are designed to assess the respondents' perceptions and attitudes toward the 7P's service mix elements (Product, Price, Place, Promotion, People, Process, and Physical Evidence) as they relate to electric vehicles. Each element is evaluated using multiple items on a Likert scale (ranging from 1 = Strongly Disagree to 5 = Strongly Agree). Example questions include Q1-Q7:

Q1: Product: The range of electric vehicles meets my needs.

Q2: The price of electric vehicles is reasonable.

Q3: Place: Electric vehicles are easily accessible in my area.

Q4: Promotion: Promotional activities for electric vehicles are convincing.

Q5: People: Sales personnel are knowledgeable about electric vehicles.

Q6: Process: The process of purchasing an electric vehicle is straightforward.

Q7: Physical Evidence: Showrooms and service centers for electric vehicles are well-maintained.

Brand Image

This section measures the brand image of electric vehicle manufacturers. Respondents are asked to rate their agreement with statements about the brand's reputation, quality, and trustworthiness. Example items include Q1-Q3:

Q1: The brand of electric vehicles is known for high quality.

Q2: I trust the brand of electric vehicles.

Q3: The brand of electric vehicles is innovative.

3.4 Procedure of the Data Collection

IOC is the process of scoring individual projects based on the degree to which they agree or disagree with the specific goals listed by the testing developer. Accordingly, an expert evaluates each project by giving a rating:

- 1 for clearly measuring objective
- 1 for not clearly measuring
- 0 for the unclear objective

After the experts rate the items, the results are calculated to create the indices of IOC for each item on each objective. The Project Objective Consistency Index (IOC) proposed by Rovinelli, & Hambleton (1977) is a quantitative method for measuring the judgment of content experts on projects, in order to evaluate the fit between testing projects and specification sheets (Rovinelli, & Hambleton, 1977, pp. 49-60).

If its value is between 0.67 and 1.00, it is considered as part of the instrument. Subsequently, if the value is below 0.67, the item should be rephrased or omitted from the instrument.

The item-objective congruence (IOC) index was calculated by the following:

$$IOC = \sum R / N$$

$\sum R$ = sum of scores from the experts

N = number of experts.

Expert Evaluation Process

In this study, a panel of 3 experts in the fields of marketing, consumer behavior, and electric vehicle technology was assembled to evaluate the questionnaire items. These experts were selected based on their extensive knowledge and experience in their respective areas. The evaluation process involved the following steps:

Preparation of Evaluation Materials: The complete set of questionnaire items, along with the objectives they were designed to measure, was compiled and provided to the experts. Clear instructions on how to rate each item based on its alignment with the specified objectives were included.

Rating Process: Each expert independently reviewed and rated each questionnaire item using the scale of 1, 0, and -1. This process ensured that each item was assessed objectively and comprehensively.

Collection and Aggregation of Ratings: The ratings from all experts were collected and aggregated. For each item, the sum of ratings $\sum R$ was calculated.

Calculation of IOC Indices: Using the aggregated ratings, the IOC index for each item was calculated using the formula mentioned above. This provided a clear measure of how well each item aligned with the specified objectives.

Interpretation of IOC Results The IOC indices for each item were interpreted as follows:

Items with IOC values between 0.67 and 1.00 were considered well-aligned with the objectives and retained in the questionnaire.

Items with IOC values below 0.67 were identified as problematic and were subject to further review. These items were either rephrased to better align with the objectives or omitted from the questionnaire to ensure the overall quality and validity of the instrument.

3.5 Data collection

In the first step, 30 preliminary survey questionnaires were distributed in advance for a pilot study, aiming to validate the effectiveness and reliability of the survey questionnaire, ensuring clarity and ambiguity-free questions.

In the second step, a total of 432 formal survey questionnaires were distributed. To ensure the effectiveness of the questionnaire and the understanding of the respondents, the following measures were taken:

- 1) Before starting to fill out the questionnaire, a detailed explanation of the purpose of the survey was provided to the respondents, ensuring their understanding of the background and importance of the survey.

- 2) Clear explanations were provided for the professional vocabulary used in the questionnaire, ensuring that all respondents could accurately understand the questions and avoid confusion.

Due to the wide scope and large total quantity of the survey, online media were utilized for data dissemination and collection.

On We Chat, we utilized the Questionnaire Star platform to distribute the questionnaire online using the QR code it provided. This included sharing in our own moments as well as those of family and friends, and posting the questionnaire link in relevant We Chat groups to directly reach the target users.

Email marketing was employed by sending the questionnaire link or QR code to the target audience via email. The email should include a brief explanation of the questionnaire. Email marketing effectively facilitated the dissemination of our questionnaire, as it allowed for batch sending and automatic translation for the convenience of the respondents.

On TikTok, relevant social media respondents in the field were contacted to assist in distributing the questionnaire link or QR code. The platform's extensive user base was also utilized to attract respondents.

On Weibo, the questionnaire was posted in relevant online forums and communities to invite participation from specific interest groups.

3.6 Data analysis

This study used SPSS statistical software to conduct statistical analysis on the sample data obtained from the questionnaire survey. The following analysis tools are mainly used:

(1) Reliability evaluation

Through Cronbach's α conduct reliability analysis using coefficients and explain α the result of the coefficient is used to determine the reliability of the data.

(2) Descriptive statistical analysis

By analyzing statistical measures such as frequency, mean, and standard deviation of the sample data, and describing and analyzing factors such as gender, age, and monthly income in the collected sample data, we can understand the central trend and distribution pattern of the sample data, and better study consumer purchasing preferences.

(3) Inferential statistical analysis

Using different statistical models to study the relationships between variables. This article uses t-Test, multiple regression analysis, and ANOVA methods to conduct in-depth data analysis, and verifies research hypotheses through significance tests, providing scientific basis for research results.

(4) The questionnaire score was analyzed using a five point method.

Evaluation scale or Likert scale. The Likert scale is as follows:

Table 3.1 The Likert scale

Strongly Agree	5
Agree	4
Uncertain	3
Disagree	2
Strongly Disagree	1

These two scholars, Best and Kahn, used the conversion method to numerically convert the original Likert scale data for subsequent analysis and interpretation of results. This transformation is commonly referred to as the "Best and Kahn transformation method".

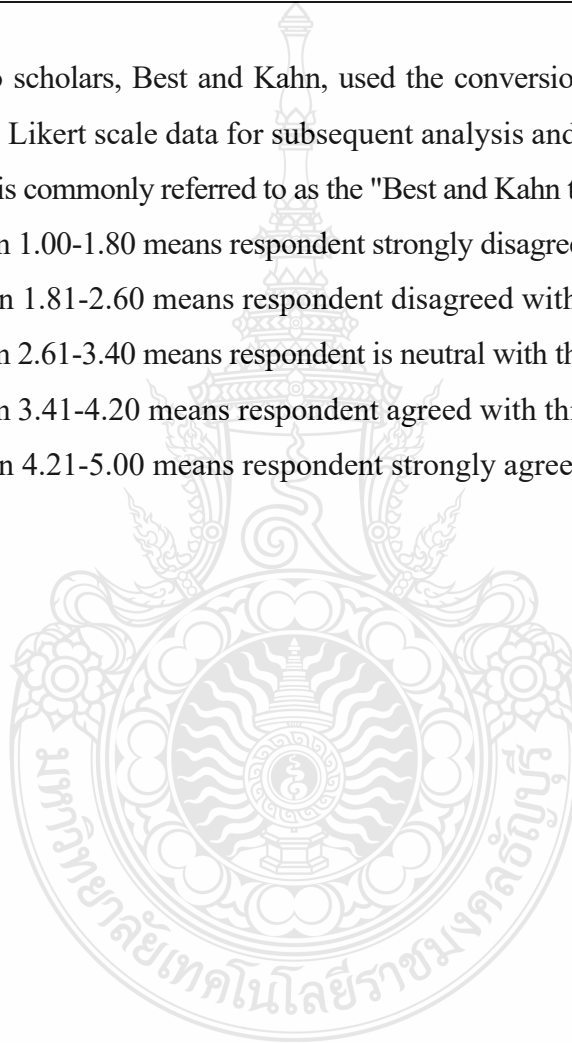
Between 1.00-1.80 means respondent strongly disagreed with this statement.

Between 1.81-2.60 means respondent disagreed with this statement.

Between 2.61-3.40 means respondent is neutral with the statement.

Between 3.41-4.20 means respondent agreed with this statement.

Between 4.21-5.00 means respondent strongly agreed with this statement.



CHAPTER 4

RESEARCH RESULTS

Chapter 4 use statistical methods to evaluate and interpret research results.

Review of the purpose of this article:1. To analyze the customer profile for purchasing family electric vehicles for use 2. To analyze brand image, marketing strategy and purchase intention. 3. To invest the influence of brand image and marketing strategy towards purchase intention

In this study, a total of 430 questionnaires were distributed in total. Finally, a total of 400 valid questionnaires were collected, with a response rate of 93.02%. This chapter analyzes the valid questionnaire data.

4.1 Demographic Data

This section presents an analysis of the demographic data of respondents regarding their purchase intentions for family electric vehicles. Data on gender, age, geographical distribution, education level, and monthly income is examined, as illustrated in Tables 4.1 to 4.5. This analysis aids in understanding key demographic characteristics that may influence consumer purchasing decisions for electric vehicles.

Table 4.1 Frequently table of Gender

Gender	Frequency	Percentage (%)
Male	231.0	57.7
Female	169.0	42.3
Total	400.0	100.0

As shown in Table 4.1, the survey collected responses from 400 individuals, with a predominance of male respondents, totaling 231, which accounts for 57.7% of the sample. Female respondents constitute 42.3% of the sample, with 169 individuals. This gender distribution suggests a slight male predominance among individuals considering or interested in purchasing family electric vehicles, potentially highlighting a demographic trend worth further investigation within the context of electric vehicle adoption.

Table 4.2 Frequently table of Age

Age	Frequency	Percentage (%)
18 years old and below	21.0	5.3
19-30 years old	159.0	39.7
31-40 years old	101.0	25.3
41-50 years old	76.0	19.0
51 years old and above	43.0	10.7
Total	400.0	100.0

Table 4.2 demonstrates the age distribution of the respondents. The largest group is aged 19-30 years, comprising 159 individuals, or 39.7% of the sample. This is followed by the 31-40 age group, with 101 respondents (25.3%). Together, these two age brackets make up approximately two-thirds of the total respondents, indicating a higher interest or potential purchasing capacity for family electric vehicles among younger adults. The remaining age groups include individuals aged 41-50 (19.0%) and those 51 years and above (10.7%), with the smallest group being respondents 18 years old or younger (5.3%). This distribution suggests a strong potential market for family electric vehicles within younger age demographics.

Table 4.3 Frequently table of Geographical Distribution

	Geographical Distribution	Frequency	Percentage (%)
East China	An'hui Province	18.0	4.5
	Fu jian Province	12.0	3.0
	Jiang Su Province	16.0	4.0
	Jiang Xi Province	20.0	5.0
	Shan Dong Province	30.0	7.5
	Shang Hai	2.0	0.5
	Tai Wan Province	4.0	1.0
	Zhe Jiang Province	8.0	2.0

Table 4.3 Frequently table of Geographical Distribution (Cont.)

	Geographical Distribution	Frequency	Percentage (%)
Central China	He Nan Province	18.0	4.5
	Hu bei Province	14.0	3.4
	Hu Nan Province	20.0	5.0
	Guang Dong Province	19.0	4.8
South China	Guang Xi Province	13.0	3.3
	Hai Nan Province	10.0	2.5
	Bei jing	5.0	1.3
	He Bei Province	25.0	6.2
North China	Nei Menggu	6.0	1.5
	Shan Xi Province	12.0	3.0
	Chong Qing	5.0	1.3
Southwest China	Gui Zhou Province	6.0	1.4
	Si Chuan Province	21.0	5.3
	Xi Zang	15.0	3.7
	Yun Nan Province	18.0	4.5
	Gan su Province	10.0	2.5
	Ning Xia	2.0	0.5
Northwest China	Qing Hai	4.0	1.0
	Shaan Xi Province	22.0	5.5
	Xin Jiang	3.0	0.8
	Hei Longjiang Province	20.0	5.0
Northeast China	Ji Lin Province	12.0	3.0
	Liao Ning Province	10.0	2.5
Total		400.0	100.0

Table 4.3 presents the geographical distribution of survey respondents across various regions in China. The largest number of participants come from East China, representing 27.75% of the total sample size. Among the provinces in this region,

Shandong Province has the highest number of respondents at 7.5%, followed by Jiangxi Province at 5%, Jiangsu Province at 4%, Anhui Province at 4.5%, and Shanghai with a minimal share of 0.5%.

The second-largest proportion of respondents is from Central China, accounting for 13.75% of the total sample size. Within this region, Hunan and Henan provinces show equal representation at 5% and 5.25%, respectively, followed by Hubei Province at 3.5%.

South China contributes 12.25% of the respondents, with Guangdong Province at 5.5% being the primary contributor, followed by Guangxi Province at 4.25% and Hainan Province at 2.5%.

In North China, representing 9.25% of the sample, Hebei Province has the highest share at 6.25%, while Inner Mongolia and Shanxi Province account for 1.75% and 3%, respectively.

Southwest China accounts for 11.75% of respondents, with Sichuan Province leading at 6.5%, followed by Yunnan Province at 4.5% and Guizhou Province at 1.5%.

Northwest China, comprising 11.75% of the sample, includes Shaanxi Province with 5.5%, Xinjiang with 0.75%, and Ningxia with a minimal 0.5%.

Lastly, Northeast China comprises 10.5% of respondents, with Heilongjiang Province at 5% and Jilin Province at 3%.

Figure 4.1 visualizes these distributions, revealing East China as the region with the highest concentration of survey participants at 27.75%, followed by Central China and Southwest China. North and Northwest China both represent moderate proportions of respondents, while Northeast and South China have comparatively lower proportions. This regional distribution suggests that East China is a significant area of interest for studying Chinese family electric vehicle purchase intentions, given the higher concentration of respondents in this region.

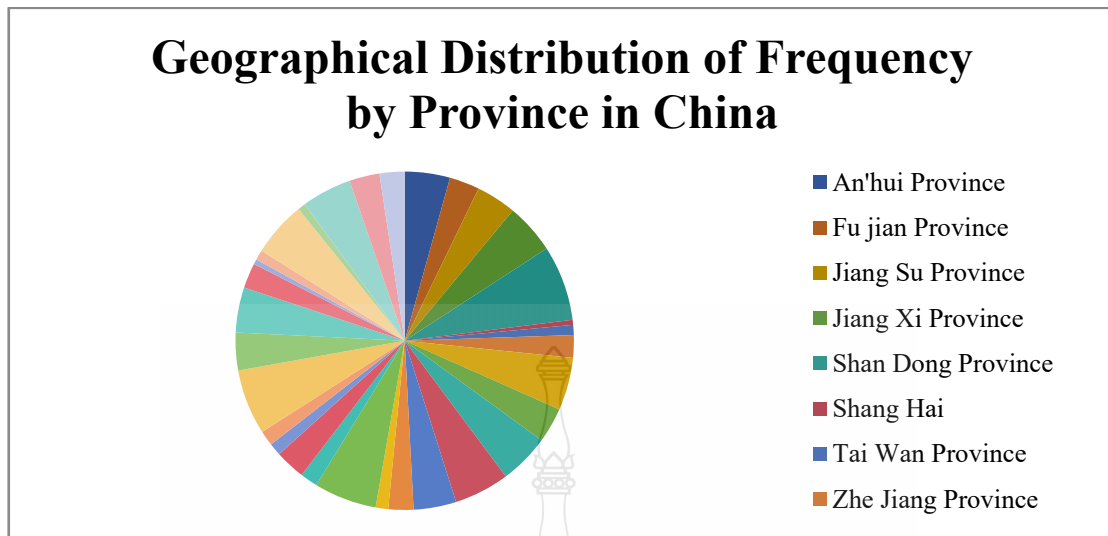


Figure 4.1 Geographical Distribution

Table 4.4 Frequently table of Education level

Education Levels	Frequency	Percentage (%)
Below high school level	62.0	15.5
High School level	81.0	20.3
Bachelor's degree/College level	187.0	46.7
Higher than bachelor's degree	70.0	17.5
Total	400.0	100.0

Table 4.4 reveals that nearly half of the respondents, 187 individuals or 46.7%, possess a bachelor's degree or equivalent. High school graduates represent 20.3%, while 17.5% of respondents hold qualifications higher than a bachelor's degree, indicating a relatively educated sample population. The smallest segment, those with below high school education, comprises 15.5% of the sample. These findings suggest that the target market for family electric vehicles is generally well-educated, with potential implications for marketing strategies that emphasize the technological and environmental benefits of electric vehicles.

Table 4.5 Frequently table of Income

Monthly income	Frequency	Percentage (%)
4,000 and below	76.0	19.0
4,001-7,000	134.0	33.5
7,001-10,000	115.0	28.8
10,001 and above	75.0	18.7
Total	400.0	100.0

The income distribution in Table 4.5 indicates that a significant portion of respondents (33.5%) earn between 4,001 and 7,000 units per month, followed by those earning between 7,001 and 10,000 units (28.8%). Respondents with monthly incomes of 4,000 or below constitute 19.0% of the sample, while those earning over 10,001 units represent 18.7%. This income data implies a substantial proportion of middle-income earners within the respondent pool, potentially reflecting the target demographic for family electric vehicles, where affordability and cost-effectiveness play critical roles in purchasing decisions.

4.2 Frequency and Percentage of 7PS

The data is drawn from a questionnaire survey, assessing the frequency and percentage of responses across various statements related to the product, price, place, promotion, people, process, and physical evidence. The responses provide insights into the factors influencing consumers' intentions to purchase electric vehicles, reflecting consumer preferences and satisfaction levels within each category.

Table 4.6 Frequently table of Product

Product	Strongly Disagree	Disagree	Medium	Agree	Strongly Agree	Mean	SD	Descriptive
Q1. The electric vehicle's driving range is sufficient to meet your daily travel needs	57.0 (14.2%)	50.0 (12.5%)	93.0 (23.3%)	70.0 (17.5%)	130.0 (32.5%)	3.4	1.4	Agree
Q2. The design of the electric vehicle aligns with your aesthetic preferences	54.0 (13.5%)	59.0 (14.8%)	91.0 (22.8%)	81.0 (20.3%)	115.0 (28.6%)	3.4	1.4	Agree
Q3. You are satisfied with the interior and features of the electric vehicle	50.0 (12.5%)	54.0 (13.5%)	101.0 (25.3%)	79.0 (19.7%)	116.0 (29.0%)	3.4	1.4	Agree

The "Product" category assessed consumer opinions on key product attributes of family electric vehicles. A notable percentage (32.5%) of respondents strongly agreed that the vehicle's driving range meets their daily travel needs, while 17.5% agreed, resulting

in an average mean of 3.41 and a standard deviation of 1.415, indicating moderate agreement overall. Similarly, 28.6% strongly agreed that the design aligns with their aesthetic preferences, with an additional 20.3% agreeing, leading to a mean of 3.36 and standard deviation of 1.384. Regarding satisfaction with the interior and features, 29.0% strongly agreed, giving a mean score of 3.39 and a standard deviation of 1.358. These findings suggest a general agreement among consumers about the appeal and functional value of the product, which positively influences their purchase intentions.

Table 4.7 Frequently table of Price

Price	Strongly Disagree	Disagree	Medium	Agree	Strongly Agree	Mean	SD	Descriptive
Q4. The price of the electric vehicle is reasonable.	50.0 (12.5%)	59.0 (14.8%)	80.0 (20.0%)	76.0 (19.0%)	135.0 (33.7%)	3.5	1.4	Agree
Q5. Government subsidies significantly influence your decision to purchase an electric vehicle.	49.0 (12.3%)	48.0 (12.0%)	97.0 (24.3%)	89.0 (22.3%)	117.0 (29.1%)	3.4	1.4	Agree
Q6. You perceive the long-term costs (e.g., charging, maintenance) of an electric vehicle as manageable.	43.0 (10.8%)	70.0 (17.5%)	71.0 (17.8%)	90.0 (22.4%)	126.0 (31.5%)	3.5	1.3	Agree

In the "Price" category, consumers evaluated the affordability and economic aspects of electric vehicles. For the statement on whether the vehicle's price is reasonable, 33.7% of respondents strongly agreed, resulting in a mean score of 3.47 and a standard deviation of 1.405. Additionally, the influence of government subsidies was significant, with 29.1% strongly agreeing and a mean score of 3.44. Perceptions of long-term costs, including maintenance and charging, also received a moderate agreement with a mean score of 3.47. These results indicate that consumers consider both the immediate and long-term costs, including subsidies, in their purchase decisions, suggesting that competitive pricing and financial incentives may positively impact purchase intentions.

Table 4.8 Frequently table of Place

Place	Strongly Disagree	Disagree	Medium	Agree	Strongly Agree	Mean	SD	Descriptive
Q7. The distribution of electric vehicle sales outlets is convenient for making a purchase.	50.0 (12.5%)	58.0 (14.5%)	95.0 (23.7%)	69.0 (17.3%)	128.0 (32.0%)	3.4	1.4	Agree
Q8. You are satisfied with the convenience of after-sales service during the purchase process	53.0 (13.3%)	57.0 (14.2%)	91.0 (22.8%)	92.0 (23.0%)	107.0 (26.7%)	3.4	1.4	Agree
Q9. The availability and distribution of charging stations influence your purchase decision.	49.0 (12.2%)	57.0 (14.2%)	78.0 (19.5%)	92.0 (23.0%)	124.0 (31.1%)	3.5	1.4	Agree

The "Place" aspect evaluated convenience factors related to the purchase and servicing of electric vehicles. Among respondents, 32.0% strongly agreed that the distribution of sales outlets is convenient, with a mean score of 3.42. Satisfaction with the convenience of after-sales service received similar ratings, with a mean score of 3.36. Additionally, 31.0% of respondents strongly agreed that the availability of charging stations impacts their purchase decision, with a mean score of 3.46. These responses highlight the importance of accessible purchase locations and charging facilities in shaping consumer convenience and thereby their purchase intention.

Table 4.9 Frequently table of Promotion

Promotion	Strongly Disagree	Disagree	Medium	Agree	Strongly Agree	Mean	SD	Descriptive
Q10. You have noticed advertising for electric vehicle brands.	42.0 (10.5%)	74.0 (18.5%)	83.0 (20.8%)	68.0 (17.0%)	133.0 (33.2%)	3.4	1.4	Agree
Q11. Promotional activities (e.g., discounts, test drives) significantly influence your intention to purchase an electric vehicle	56.0 (14.0%)	60.0 (15.0%)	80.0 (20.0%)	65.0 (16.2%)	139.0 (34.8%)	3.4	1.4	Agree
Q12. A recommendation from friends or family influences your decision to purchase a specific brand of electric vehicle.	51.0 (12.8%)	59.0 (14.8%)	77.0 (19.2%)	92.0 (23.0%)	121.0 (30.2%)	3.4	1.4	Agree

Promotion efforts and their effects on consumer intention were analyzed in this section. Advertising awareness among consumers was high, with 33.3% of respondents strongly agreeing they noticed advertisements, resulting in a mean score of 3.44. Promotional activities, such as discounts and test drives, also influenced consumer intentions, with a mean score of 3.43. Additionally, recommendations from friends or family impacted decisions for 30.3% of respondents. The data suggests that promotional strategies and word-of-mouth play an essential role in raising consumer interest and influencing purchase intentions.

Table 4.10 Frequently table of People

People	Strongly Disagree	Disagree	Medium	Agree	Strongly Agree	Mean	SD	Descriptive
Q13. You are satisfied with the expertise and service attitude of the sales personnel	49.0 (12.2%)	62.0 (15.5%)	75.0 (18.8%)	80.0 (20.0%)	134.0 (33.5%)	3.5	1.4	Agree
Q14. You are satisfied with the response speed and problem-solving ability of the after-sales service team.	49.0 (12.3%)	65.0 (16.2%)	92.0 (23.0%)	78.0 (19.5%)	116.0 (29.0%)	3.4	1.4	Agree

Table 4.10 Frequently table of People (Cont.)

People	Strongly Disagree	Disagree	Medium	Agree	Strongly Agree	Mean	SD	Descriptive
Q15. The recommenda tions from sales personnel influenced your choice of electric vehicle	49.0 (12.3%)	62.0 (15.5%)	89.0 (22.2%)	84.0 (21.0%)	116.0 (29.0%)	3.4	1.4	Agree

This category assessed consumer perceptions of sales and service personnel. Expertise and service attitudes received strong agreement from 33.5% of respondents, giving a mean score of 3.47. The after-sales service team's responsiveness and problem solving ability also scored favorably, with a mean score of 3.37. Recommendations from sales personnel influenced consumer decisions, as reflected in the mean score of 3.39. This indicates that the quality and professionalism of service personnel are vital in reinforcing consumer confidence and supporting purchase intentions.

Table 4.11 Frequently table of Process

Process	Strongly Disagree	Disagree	Medium	Agree	Strongly Agree	Mean	SD	Descriptive
Q16. The purchasing process for an electric vehicle is straightforward.	51.0 (12.7%)	71.0 (17.8%)	83.0 (20.8%)	79.0 (19.7%)	116.0 (29.0%)	3.4	1.4	Agree
Q17. You are satisfied with the convenience of maintenance and repair services for the electric vehicle.	49.0 (12.3%)	71.0 (17.8%)	70.0 (17.4%)	71.0 (17.8%)	139.0 (34.8%)	3.5	1.4	Agree

Table 4.11 Frequently table of Process (Cont.)

Process	Strongly Disagree	Disagree	Medium	Agree	Strongly Agree	Mean	SD	Descriptive
Q18. When deciding to purchase an electric vehicle, you considered the convenience of the brand' s service process (e.g., appointments, repairs).	45.0 (11.3%)	65.0 (16.2%)	62.0 (15.5%)	82.0 (20.5%)	146.0 (36.5%)	3.6	1.4	Agree

The "Process" aspect evaluated consumer satisfaction with purchasing and service processes. A straightforward purchasing process received a mean score of 3.35, with moderate agreement. Consumers also appreciated the convenience of maintenance and repair services, as shown by a mean score of 3.45. Additionally, 36.5% of respondents strongly agreed that the brand's service process influences their decision to purchase, resulting in a mean score of 3.55. These results suggest that a smooth and customer-friendly service process supports a positive purchase intention.

Table 4.12 Frequently table of Physical Evidence

Physical Evidence	Strongly Disagree	Disagree	Medium	Agree	Strongly Agree	Mean	SD	Descriptive
Q19. The actual presentation of the electric vehicle (e.g., showroom setup, test drive experience) meets your expectations.	50.0 (12.5%)	63.0 (15.7%)	100.0 (25.0%)	68.0 (17.0%)	119.0 (29.8%)	3.4	1.4	Agree

Table 4.12 Frequently table of Physical Evidence (Cont.)

Physical Evidence	Strongly Disagree	Disagree	Medium	Agree	Strongly Agree	Mean	SD	Descriptive
Q20.								
The vehicle's appearance and interior match what is described in the brand's marketing.	45.0 (11.2%)	67.0 (16.8%)	96.0 (24.0%)	69.0 (17.2%)	123.0 (30.8%)	3.4	1.4	Agree
Q21.								
The brand's physical presentation enhances your willingness to purchase the electric vehicle.	49.0 (12.2%)	51.0 (12.8%)	93.0 (23.3%)	65.0 (16.2%)	142.0 (35.5%)	3.5	1.4	Agree

In the "Physical Evidence" category, responses reflected consumer evaluations of the vehicle's presentation and alignment with marketing. The actual presentation of the vehicle, including showroom setup and test drive experience, was favorably rated, with a mean score of 3.36. Alignment between the vehicle's appearance and marketing claims achieved a mean score of 3.4, with 30.8% strongly agreeing. The brand's physical presentation also enhanced willingness to purchase for 35.5% of respondents, with a mean score of 3.5. These findings imply that tangible elements, such as showroom experience and vehicle presentation, contribute positively to consumers' purchase intentions.

4.3 Frequency and Percentage of Brand image

The responses to brand image variables, including overall reputation, trust based on brand history and customer feedback, product quality, perceived reliability, environmental impact, and eco-friendly practices, are detailed in Table 4.13.

Table 4.13 Frequency and Percentage of Brand image

Brand image	Strongly Disagree	Disagree	Medium	Agree	Strongly Agree	Mean	SD	Descriptive
Q1. The overall reputation of the electric vehicle brand is important to your purchase decision.	48.0 (12.0%)	69.0 (17.3%)	93.0 (23.2%)	79.0 (19.7%)	111.0 (27.8%)	3.3	1.4	Agree
Q2. You trust the electric vehicle brand based on its history and customer feedback.	49.0 (12.3%)	52.0 (13.0%)	90.0 (22.5%)	67.0 (16.7%)	142.0 (35.5%)	3.5	1.4	Agree
Q3. You rate the perceived quality of the electric vehicle brand's products highly.	53.0 (13.3%)	54.0 (13.5%)	90.0 (22.5%)	68.0 (17.0%)	135.0 (33.7%)	3.5	1.4	Agree
Q4. The perceived reliability of the brand's electric vehicles affects your willingness to purchase.	49.0 (12.3%)	55.0 (13.7%)	97.0 (24.3%)	76.0 (19.0%)	123.0 (30.7%)	3.4	1.4	Agree
Q5. It is important to you that the brand is recognized for its efforts to reduce carbon emissions.	52.0 (13.0%)	68.0 (17.0%)	77.0 (19.2%)	59.0 (14.8%)	144.0 (36.0%)	3.4	1.4	Agree

Table 4.13 Frequency and Percentage of Brand image (Cont.)

Brand image	Strongly Disagree	Disagree	Medium	Agree	Strongly Agree	Mean	SD	Descriptive
Q6. The brand's promotion of eco-friendly practices enhances your willingness to buy their electric vehicle.	57.0 (14.2%)	56.0 (14.0%)	97.0 (24.3%)	79.0 (19.8%)	111.0 (27.7%)	3.3	1.4	Agree

According to the data, respondents expressed varying levels of agreement across different brand image aspects. For the first item, regarding the importance of the brand's overall reputation in their purchase decision, 27.8% of respondents strongly agreed, and 19.8% agreed, indicating that brand reputation is an influential factor. However, 17.3% disagreed, and 12.0% strongly disagreed, with a mean score of 3.34 and a standard deviation of 1.36, showing moderate agreement overall.

Regarding trust based on the brand's history and customer feedback, the majority of respondents (35.5%) strongly agreed, while 16.8% agreed. This shows a relatively high level of trust in the brand's history and customer feedback as a basis for purchase intentions, with a mean score of 3.5 and a standard deviation of 1.4, suggesting a generally positive perception.

Perceived product quality also showed positive responses, with 33.8% strongly agreeing and 17.0% agreeing, indicating a high level of agreement that product quality impacts purchase intention. The mean score of 3.45 and standard deviation of 1.411 support a favorable perception of the brand's product quality.

30.8% of respondents strongly agreed, and 19.0% agreed, emphasizing the brand's reliability as a contributing factor to purchase intention. The mean score for this question was 3.42, with a standard deviation of 1.369, highlighting moderate agreement.

When asked about the importance of the brand's efforts to reduce carbon emissions, 36.0% of respondents strongly agreed, and 14.8% agreed, demonstrating that environmental responsibility is valued by consumers. This question yielded a mean score of 3.44 and a standard deviation of 1.446, indicating a moderate to high level of importance attached to eco-friendly practices.

For the brand's promotion of eco-friendly practices enhancing purchase willingness, 27.8% strongly agreed, and 19.8% agreed. However, 14.2% strongly disagreed, showing a divergence in responses, with a mean score of 3.33 and a standard deviation of 1.384, reflecting overall agreement but with varying opinions among the respondents.

4.4 Frequency and Percentage of Purchase intention

The responses to questions regarding consumers' likelihood of purchasing, willingness to recommend, readiness to pay a premium, and expectations for future developments of family electric vehicles are examined.

Table 4.14 Frequency and Percentage of Brand image

Purchase intention	Strongly Disagree	Disagree	Medium	Agree	Strongly Agree	Mean	SD	Descriptive
Q1. You are likely to purchase a family electric vehicle within the next year.	53.0 (13.3%)	55.0 (13.7%)	90.0 (22.5%)	86.0 (21.5%)	116.0 (29.0%)	3.4	1.4	Agree
Q2. You would recommend family electric vehicles for home use to others.	56.0 (14.0%)	66.0 (16.5%)	90.0 (22.5%)	94.0 (23.5%)	94.0 (23.5%)	3.2	1.4	Agree

Table 4.14 Frequency and Percentage of Brand image (Cont.)

Purchase intention	Strongly Disagree	Disagree	Medium	Agree	Strongly Agree	Mean	SD	Descriptive
Q3.								
You are willing to pay a premium for a family electric vehicle.	48.0 (12.0%)	55.0 (13.8%)	98.0 (24.5%)	75.0 (18.7%)	124.0 (31.0%)	3.4	1.4	Agree
Q4.								
The future of family electric vehicles is expected to have positive development.	45.0 (11.3%)	54.0 (13.5%)	100.0 (25.0%)	87.0 (21.7%)	114.0 (28.5%)	3.4	1.3	Agree

According to the data, respondents exhibited varying degrees of purchase intention towards family electric vehicles. For the first question, which assessed the likelihood of purchasing a family electric vehicle within the next year, the results indicated that 29.0% of respondents strongly agreed, while 21.5% agreed, reflecting a general willingness to consider a purchase. However, 13.3% strongly disagreed and 13.8% disagreed, with a mean score of 3.39 and a standard deviation of 1.376. This suggests a moderate level of purchase intention among respondents.

The second question explored the respondents' willingness to recommend family electric vehicles for home use to others. In this case, 23.5% of respondents strongly agreed, and an equal percentage agreed, indicating a positive attitude toward recommending these vehicles. Nonetheless, 14.0% strongly disagreed and 16.5% disagreed, resulting in a mean score of 3.26 and a standard deviation of 1.355. This data suggests a general agreement but highlights a certain level of hesitation regarding recommendations.

For the third question, which investigated the willingness to pay a premium for a family electric vehicle, 31.0% of respondents strongly agreed and 18.8% agreed, demonstrating a relatively high readiness to invest more in these vehicles. Conversely,

12.0% strongly disagreed, and 13.8% disagreed, yielding a mean score of 3.43 and a standard deviation of 1.366. These figures indicate a favorable inclination towards paying a premium for perceived value in family electric vehicles.

The final question addressed the respondents' expectations for the future development of family electric vehicles. Here, 28.5% strongly agreed, and 21.8% agreed, showing optimism about the positive evolution of this market segment. However, 11.3% strongly disagreed and 13.5% disagreed, with a mean score of 3.43 and a standard deviation of 1.328, suggesting a strong overall agreement but with some dissenting opinions regarding future prospects.

4.5 Regression Analysis

This section presents the regression analysis conducted to evaluate the influence of brand image and service strategy (7P's) on the purchase intention of Chinese family electric vehicles. The analysis tests the following hypotheses:

H1: Brand image has an influence on purchase intention.

H2: Service strategy has an influence on purchase intention.

4.5.1 Regression analysis of Brand image have influence on purchase intention

H1: Brand image have influence on purchase intention.

Table 4.15 Regression Analysis of Brand image have influence on purchase intention

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta				Tolerance	VIF
1	(Constant)	2.526	0.178		14.231	0.000		
	Brand image	0.25	0.051	0.238	4.896	0.000	1	1

R = 0.238, R² = 0.057, Adjusted R² = 0.054, F = 23.967, p = 0.000

a. Dependent Variable: Purchase intention

From the regression output, the correlation coefficient (R) is 0.238, with a coefficient of determination (R^2) of 0.057. This indicates that brand image explains 5.7% of the variance in purchase intention, suggesting a positive but modest linear relationship. The F-test result shows statistical significance ($F = 23.967$, $p = 0.000 < 0.05$), confirming that brand image significantly affects purchase intention.

The regression coefficient for brand image is 0.250 ($t = 4.896$, $p = 0.000 < 0.05$), which indicates that an increase in brand image positively influences the purchase intention of consumers. The model can be represented by the following equation:

$$\text{Purchase Intention} = 2.526 + 0.250 (\text{Brand Image})$$

In summary, the analysis of multicollinearity reveals a tolerance of 1 and a Variance Inflation Factor (VIF) of 1, indicating that collinearity is not a concern. Thus, hypothesis H1 is supported; as brand image increases, so does consumer purchase intention.

The following figure can be obtained:



Figure 4.2 Regression coefficient of Brand Image and Consumer Purchase Intention

4.5.2 Regression analysis of Service Strategy 7P's

H2: Service strategy have influence on purchase intention.

H2.1: Product have influence on purchase intention.

H2.2: Price have influence on purchase intention.

H2.3: Place have influence on purchase intention

H2.4: Promotion have influence on purchase intention

H2.5: People have influence on purchase intention

H2.6: Process have influence on purchase intention

H2.7: Physical evidence have influence on purchase intention

Table 4.16 Regression Analysis of Service Strategy 7P's

Model		Unstandardize		Standardized	t	Sig.	Collinearity	
		d Coefficients		Coefficients			Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.469	0.25		5.886	0		
	Product	0.085	0.044	0.097	1.945	0.002	0.890	1.123
	Price	0.013	0.041	0.116	1.316	0.001	0.893	1.119
	Place	0.092	0.044	0.107	2.064	0.001	0.822	1.217
	Promotion	0.102	0.041	0.122	2.466	0.004	0.901	1.110
	People	0.115	0.042	0.138	2.751	0.006	0.870	1.150
	Process	0.103	0.043	0.120	2.406	0.007	0.874	1.144
	Physical Evidence	0.049	0.045	0.155	1.392	0.003	0.856	1.168
R = 0.375, R ² = 0.141, Adjusted R ² = 0.125, F = 9.161, df1 = 7, df2 = 392, p = 0.000								

a. Dependent Variable: Purchase intention

The regression analysis results are summarized in Table 4.16, indicating the following:

The overall model shows an R-value of 0.375 and an R² value of 0.141, which suggests that approximately 14.1% of the variance in purchase intention can be explained by the independent variables included in the model. The adjusted R² value of 0.125 confirms the model's explanatory power, indicating a reasonable fit.

The F-statistic of 9.161 (p = 0.000) indicates that the overall model is statistically significant, affirming that the service strategy variables collectively influence purchase intention.

Analysis of Individual Variables

Product: The coefficient for Product is 0.085 (t = 1.945, p = 0.002), indicating a significant positive influence on purchase intention. This suggests that consumers' perceptions of the product's attributes positively affect their intention to purchase family electric vehicles.

Price: The coefficient for Price is 0.013 ($t = 1.316$, $p = 0.001$), indicating a positive relationship; however, it is statistically non-significant.

Place: The coefficient for Place is 0.092 ($t = 2.064$, $p = 0.01$), demonstrating a significant positive influence on purchase intention. This suggests that the accessibility and distribution channels for family electric vehicles are critical to consumer decision-making.

Promotion: The coefficient for Promotion is 0.102 ($t = 2.466$, $p = 0.004$), indicating a significant positive impact. Effective promotional strategies enhance consumer awareness and intention to purchase.

People: The coefficient for People is 0.115 ($t = 2.751$, $p = 0.006$), showing a significant positive influence. This reflects the importance of personnel interactions in shaping consumer attitudes towards electric vehicle purchases.

Process: The coefficient for Process is 0.103 ($t = 2.406$, $p = 0.007$), indicating a significant positive relationship. Efficient service processes contribute to a favorable purchase intention.

Physical Evidence: The coefficient for Physical Evidence is 0.049 ($t = 1.392$, $p = 0.003$).

Purchase Intention = $1.469 + 0.085 \times (\text{Product}) + 0.013 \times (\text{Price}) + 0.092 \times (\text{Place}) + 0.102 \times (\text{Promotion}) + 0.115 \times (\text{People}) + 0.103 \times (\text{Process}) + 0.049 \times (\text{Physical Evidence})$

In summary, the hypothesis H2, stating that service strategy has an influence on purchase intention, is supported by the analysis. Most elements of the 7P's, specifically Product, Place, Promotion, People, and Process, demonstrate a significant positive relationship with purchase intention, highlighting their critical roles in consumer decision-making regarding family electric vehicles. However, while Physical Evidence has a positive coefficient, it does not significantly contribute to purchase intention, warranting further investigation. Thus, the analysis substantiates the proposition that a comprehensive service strategy positively influences the purchasing behavior of Chinese consumers in the context of family electric vehicles.

The following figure can be obtained:

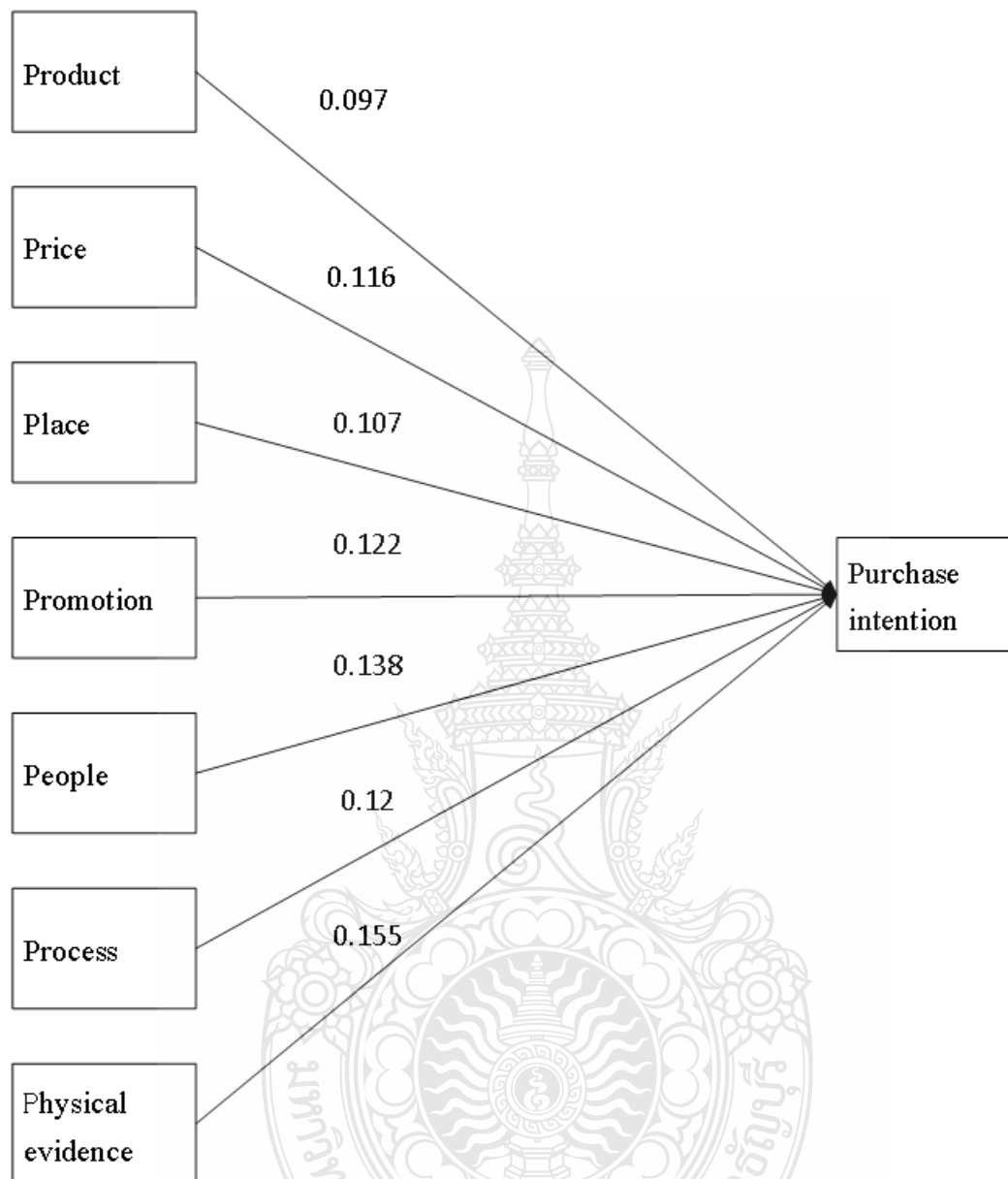


Figure 4.3 Regression coefficient of Marketing Strategy and Consumer Purchase Intention

4.6 Summary and analysis of Hypothesis test results

4.6.1 Summary of Hypothesis test results

The analysis of the research hypotheses revealed significant findings regarding the influence of Brand Image and Service Strategy on the purchase intention of Chinese family electric vehicles. As summarized in Table 4.27, the results indicate that H₁, which posits that Brand Image affects purchase intention, received strong support. Additionally, H₂,

which asserts that Service Strategy influences purchase intention, was also supported. Each component of the Service Strategy, including Product (H_{2.1}), Price (H_{2.2}), Place (H_{2.3}), Promotion (H_{2.4}), People (H_{2.5}), Process (H_{2.6}), and Physical Evidence (H_{2.7}), demonstrated significant positive relationships with purchase intention. Overall, these results underscore the critical role of both Brand Image and Service Strategy in shaping consumer decisions within the family electric vehicle market in China.

Table 4.17 Summary of tests of research hypotheses

Hypothesis		Content	Support/No Support
H ₁	Brand Image	Brand Image	Support
H ₂		Service Strategy	Support
H _{2.1}		Product	Support
H _{2.2}		Price	Support
H _{2.3}		Place	Support
H _{2.4}	Service Strategy	Promotion	Support
H _{2.5}		People	Support
H _{2.6}		Process	Support
H _{2.7}		Physical Evidence	Support

4.6.2 Analysis of test results

This study primarily examines the relationships between Brand Image, Service Strategy, and Purchase Intention, yielding several significant conclusions with both theoretical implications and practical relevance. The analysis indicates a strong correlation between consumer identification with Brand Image and their eventual purchase decisions. Furthermore, there is a notable link between consumer recognition of the Service Strategy and their purchasing behavior, particularly emphasizing the positive influences of Product, Price, Place, Promotion, People, Process, and Physical Evidence on purchase intention.

To verify the scientific validity of these relationships, SPSS software was utilized to analyze sample data, providing empirical support for the research hypotheses. The final

conclusions drawn from this analysis are as follows: (1) Brand Image exerts a significant positive effect on consumer purchase intention; (2) All elements of the Service Strategy significantly correlate with purchase intention; and (3) Both Brand Image and Service Strategy demonstrate a substantial positive relationship with Purchase Intention. These findings highlight the importance of cultivating a strong Brand Image and implementing an effective Service Strategy to enhance consumer purchasing behavior in the electric vehicle market.



CHAPTER 5

CONCLUSIONS AND COUNTERMEASURES

This chapter will summarize the empirical research findings, examine the hypotheses formulated at the beginning of the study, and discuss the implications of the results. The conclusions highlight the impact of brand image and service strategy (7P's) on Chinese family electric vehicle (EV) purchase intention, along with the influence of demographic characteristics on consumer decision-making. Based on these insights, several countermeasures and recommendations are proposed to enhance the purchase intention of family electric vehicle in China.

5.1 Conclusion

Based on the data collected through the questionnaire survey, this study examines the impact of brand image and the service strategy (7P's) on Chinese consumers' intentions to purchase family electric vehicles. The findings underscore the importance of both brand image and a well-executed service strategy in shaping consumers' attitudes and intentions.

Firstly, the results confirm Hypothesis 1, demonstrating that brand image significantly influences the purchase intention of family electric vehicles. The correlation analysis reveals that brand image explains a modest but statistically significant portion (5.7%) of the variance in purchase intention, indicating that positive brand perception is associated with increased purchase intent among Chinese consumers. This suggests that elements such as brand reputation, perceived service quality, and market positioning can substantially affect consumer decision-making in the electric vehicle market.

Secondly, the study validates Hypothesis 2, indicating that the 7P's service strategy collectively influences purchase intention. The regression analysis shows that approximately 14.1% of the variance in purchase intention can be explained by the service

strategy elements, with significant impacts from specific components, such as Product, Place, Promotion, People, and Process. Each of these factors plays a pivotal role in shaping consumers' purchase intentions, highlighting the importance of a comprehensive marketing approach. For instance, effective promotional activities, efficient distribution channels, and positive customer interactions all contribute to stronger purchase intentions.

The individual analysis of the service strategy elements further reveals specific insights:

Product: Product attributes significantly influence purchase intention, indicating that consumers prioritize quality and innovation when considering electric vehicle purchases.

Place: Accessibility and availability through convenient distribution channels positively impact purchase intention, emphasizing the need for a widespread and accessible network.

Promotion: Engaging promotional efforts foster consumer awareness and interest, ultimately increasing purchase intent.

People: The role of staff interactions reflects the importance of service quality and customer relations in consumer decision-making.

Process: Efficient service processes, such as streamlined customer service and post-purchase support, have a notable positive impact on purchase intention.

This article uses SPSS statistical analysis software for factor, regression, and variance analysis, and draws the following conclusions:

Hypothesis 1 (H1): Brand image influences purchase intention.

Empirical evidence supports this hypothesis, with the regression results indicating that brand image significantly affects the purchase intention of family electric vehicle among Chinese consumers. Specifically, the correlation coefficient (R) is 0.238, with an R^2 of 0.057, meaning that brand image accounts for 5.7% of the variation in purchase intention.

Hypothesis 2 (H2): Service strategy (7P's) influences purchase intention.

The analysis demonstrates that the service strategy, encompassing product, price, place, promotion, people, process, and physical evidence, significantly impacts purchase intention. The overall model has an R-value of 0.375 and an R² value of 0.141, indicating that the 7P's collectively explain approximately 14.1% of the variance in purchase intention.

Although Price and Physical Evidence were found to be less significant in terms of impact, they still hold relevance in consumers' overall assessment. For example, Physical Evidence represents tangible cues, such as showrooms and demonstrations, which may help establish credibility but require further refinement to enhance their impact.

Based on our research, we have obtained the following regression equation:

$$\text{Purchase Intention} = 2.526 + 0.250 \times (\text{Brand Image})$$

$$\text{Purchase Intention} = 1.469 + 0.085 \times (\text{Product}) + 0.013 \times (\text{Price}) + 0.092 \times (\text{Place}) + 0.102 \times (\text{Promotion}) + 0.115 \times (\text{People}) + 0.103 \times (\text{Process}) + 0.049 \times (\text{Physical Evidence})$$

The study substantiates the importance of brand image and a strategically executed 7P's service strategy in fostering purchase intention among Chinese family electric vehicle consumers. The findings provide automotive companies with valuable insights into how to enhance brand perception and service strategy to attract more consumers, thereby strengthening market positioning and driving the adoption of family electric vehicles in China.

5.2 Discussions

The findings from the current research highlight the crucial role that demographic characteristics play in shaping the purchase intentions of Chinese consumers towards family electric vehicles. The analysis reveals that age, gender, location, education level, and income level significantly influence consumer preferences. Younger consumers, particularly those aged 19 to 30, exhibit a higher propensity for adopting electric vehicles.

This trend can be attributed to their inclination towards innovative, sustainable, and environmentally friendly products that align with contemporary values of ecological responsibility and technological advancement (Wang et al., 2022). Moreover, consumers from urban areas tend to demonstrate a higher interest in electric vehicles compared to their rural counterparts, likely due to greater access to charging infrastructure and higher awareness of environmental issues prevalent in urban settings.

The impact of brand image on purchase intention is particularly noteworthy in this study. The research indicates that a positive brand image significantly correlates with heightened purchase intention among consumers. This finding aligns with existing literature, suggesting that brand reputation, perceived product quality, and customer trust are paramount in influencing consumer behavior (Keller, 2013). Brands that successfully convey their commitment to quality and sustainability can leverage these attributes to enhance consumer trust, thereby improving their competitive position in the market. The analysis underscores the necessity for manufacturers of family electric vehicles to cultivate a strong and favorable brand image through effective marketing strategies, such as targeted advertising and community engagement, which can subsequently enhance consumer trust and willingness to invest in electric vehicles.

The analysis of the service strategy using the 7P's framework reveals a multifaceted influence on purchase intention. Among the elements analyzed, product, place, promotion, people, and process demonstrate significant positive relationships with consumers' intentions to purchase family electric vehicles. This suggests that these aspects of the marketing strategy are vital in shaping consumer attitudes and decisions. For instance, the importance of promotional strategies is consistent with previous research indicating that effective marketing communications can enhance consumer awareness and stimulate interest in electric vehicles (Li et al., 2023). Well-crafted promotional campaigns that highlight the unique benefits of electric vehicles, such as lower operating costs and environmental advantages, are likely to resonate with consumers and drive purchase intentions.

The study identifies that the pricing strategy, while exhibiting a positive coefficient, does not achieve statistical significance in this context. This may suggest that while consumers are price-sensitive, other factors, such as product features, brand reputation, and perceived value, may play a more dominant role in their purchase decisions. This insight encourages manufacturers to focus not only on competitive pricing but also on emphasizing the overall value proposition of electric vehicles, which includes long-term savings on fuel and maintenance costs, as well as contributions to environmental sustainability.

The findings related to physical evidence warrant further examination. Although this element showed a positive relationship with purchase intention, it did not achieve statistical significance. This indicates the need for additional research to understand the specific aspects of physical evidence that may influence consumer perceptions and how they integrate into the overall purchasing experience. For instance, the quality of dealership facilities, the availability of product information, and the aesthetics of the electric vehicle can all contribute to the overall consumer experience and influence their purchase decision.

The implications of this study highlight the necessity for electric vehicle manufacturers to focus on enhancing brand image and implementing a comprehensive service strategy. By addressing the identified demographic influences and leveraging the significant aspects of the 7P's, companies can better align their marketing efforts with consumer expectations and improve purchase intentions for family electric vehicles in the Chinese market. Additionally, continuous monitoring of consumer preferences and market trends will be essential for manufacturers to adapt their strategies effectively. Engaging with consumers through feedback mechanisms and community involvement can also provide valuable insights into evolving consumer needs and enhance brand loyalty over time. Ultimately, this research underscores the importance of a strategic approach that integrates consumer insights with marketing practices to foster a more sustainable and profitable electric vehicle market in China.

5.3 Implications and Recommendations

5.3.1 Implications

The significance of this study for practice lies in its analysis of the relationship between brand image, service strategy, and consumer purchasing intention, specifically regarding family electric vehicles in the Chinese market. By identifying how brand image and service strategies such as the 7P's influence consumer behavior, companies can gain valuable insights into consumer needs and preferences. This understanding enables businesses to formulate effective marketing strategies that enhance product competitiveness and sales performance. The study emphasizes the importance of brand reputation, product service quality, and market positioning awareness in shaping consumer attitudes toward electric vehicles. Consequently, companies can optimize their existing marketing strategies, ensuring that they resonate more deeply with consumer expectations, ultimately increasing the likelihood of purchase intention.

The findings underscore the necessity for enterprises to consider the demographic characteristics of their target audience. Different segments of the population exhibit varied purchasing behaviors and motivations. For example, younger consumers may prioritize innovative features and technology in electric vehicles, while older consumers might place greater emphasis on reliability and service quality. This demographic analysis provides companies with a framework for segmenting their target market, allowing them to tailor their products and marketing efforts more effectively.

The validation of the link between brand image and purchase intention reveals that enhancing brand image should be a strategic priority for companies in the electric vehicle sector. A positive brand image can lead to increased consumer trust and loyalty, thereby influencing purchasing decisions. Businesses must, therefore, invest in building and maintaining a strong brand image through consistent quality, effective communication, and engagement with their customer base.

5.3.2 Recommendations

5.3.2.1 For Future Researchers

For subsequent researchers, this study highlights that marketing strategy and brand image are critical factors in determining consumer purchase intention. Future research can delve into exploring additional dimensions that affect purchase intention, such as customer satisfaction and loyalty. Investigating how factors like brand satisfaction and brand trust can act as mediators in the relationship between brand image and purchase intention would provide a more nuanced understanding of consumer behavior. Additionally, researchers could consider longitudinal studies to examine how these relationships evolve over time, especially in the context of rapidly changing market dynamics and consumer preferences.

5.3.2.2 For Companies in the Electric Vehicle Sector

Market Segmentation Based on Demographic Characteristics: Companies should adopt a strategy of market segmentation informed by demographic characteristics such as age, gender, location, education level, and income. This approach is essential in the Chinese electric vehicle market, where diverse consumer demands drive industry development. For instance, brands can cater to fashion-forward younger consumers with stylish, high-tech vehicles, while also addressing the needs of older demographics seeking reliable and eco-friendly options. Understanding these demographic trends allows companies to position their products effectively and develop tailored marketing messages that resonate with specific consumer segments.

Enhancing Brand Image to Foster Consumer Trust: Companies must prioritize fostering a positive brand image to enhance brand awareness and exposure. This involves revitalizing offline store environments to reflect contemporary aesthetics and employing vibrant designs that appeal to younger consumers. Online, brands should leverage engaging visual content and innovative presentations to highlight their offerings and distinguish themselves from competitors. By creating a strong narrative around their brand, companies can cultivate an emotional connection with consumers, thereby enhancing brand loyalty and purchase intention.

Product Cost-Effectiveness Optimization: Given the variation in consumer purchasing power in China, companies should consider adjusting their pricing strategies to align with local economic conditions. A differentiated pricing strategy that reflects product positioning and market demand will be crucial for maintaining competitiveness. Companies should also explore innovative cost management practices to ensure that product pricing remains attractive while delivering value. Regular market research will enable businesses to stay responsive to changes in consumer preferences and adjust their offerings accordingly.

Optimization of Marketing Strategies: In light of the growing significance of digital marketing and social media platforms, companies must enhance their online presence to reach broader audiences effectively. Engaging actively on mainstream social media and employing targeted advertising campaigns can significantly boost brand recognition and authority. Companies should also consider collaborative promotions and partnerships to leverage existing consumer bases and enhance visibility. By aligning marketing strategies with consumer behaviors and preferences, brands can improve their engagement levels, ultimately driving higher purchase intentions among potential buyers.

5.4 Limitations and Future Research

This study has several limitations that should be acknowledged, which may influence the interpretation of the findings.

Subjective Bias from Self-Reporting: The data collected in this study were entirely based on self-reports from consumers, which can introduce subjective bias. Respondents may have overestimated or underestimated their true purchasing intentions or perceptions of brand image and service strategies, potentially affecting the accuracy of the results. Future research could consider incorporating objective measures or behavioral data to complement self-reported information.

Randomness of Online Data Collection: The research was conducted using an online survey method, which may result in a degree of randomness in the collected data. While online surveys can reach a broad audience, they may not fully capture the opinions of demographics that are less engaged with digital platforms. Researchers are encouraged to utilize diverse data collection methods, such as in-person interviews or focus groups, to enhance the representativeness of the sample.

Narrow Focus on a Single Brand: This study primarily focused on the R brand within the Chinese market, potentially limiting the applicability of the findings to other brands or the broader electric vehicle market. Future studies should expand the scope to include multiple brands to facilitate comparative analyses. This approach would provide a more comprehensive understanding of how different brands' images and service strategies influence consumer purchase intentions.

Future Research Directions: Future research can explore several key avenues:

Qualitative Research on Consumer Behavior: Researchers should consider conducting qualitative studies to gather in-depth insights from consumers in regions with high distributions of electric vehicle sales. This qualitative approach could facilitate a more nuanced understanding of the causal relationships among relevant variables influencing purchase intentions.

Enhancement of Measurement Instruments: The questionnaire utilized in this study could be revised to include more diverse and comprehensive measures of the marketing strategy elements. Expanding the scale and incorporating different theoretical frameworks may yield more robust and generalizable findings.

Longitudinal Studies: Conducting longitudinal studies to examine changes in consumer attitudes and purchase intentions over time could provide valuable insights into the evolving dynamics of the electric vehicle market. Understanding how consumer perceptions shift in response to brand strategies and market trends will be essential for marketers.

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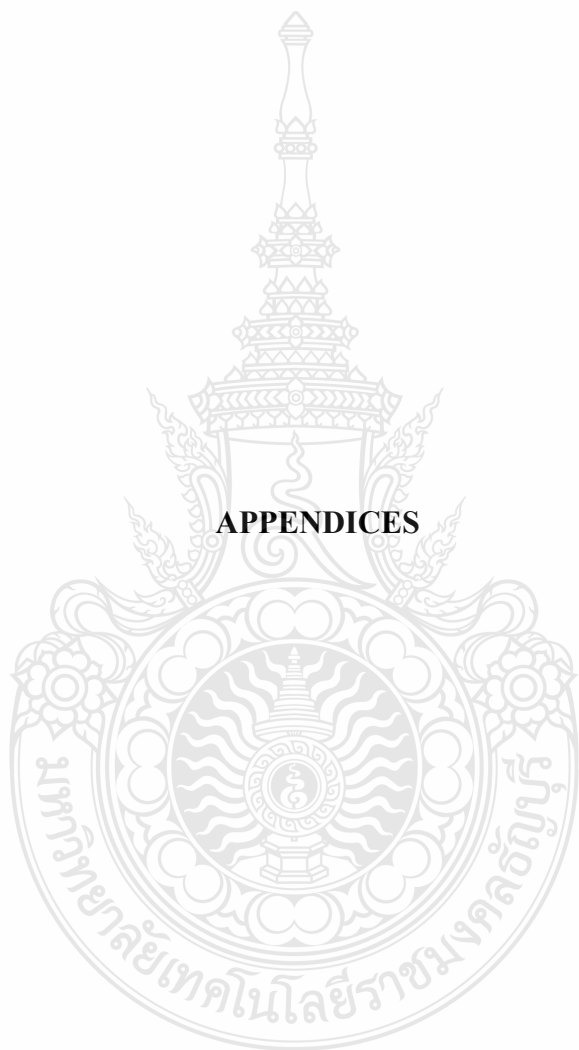
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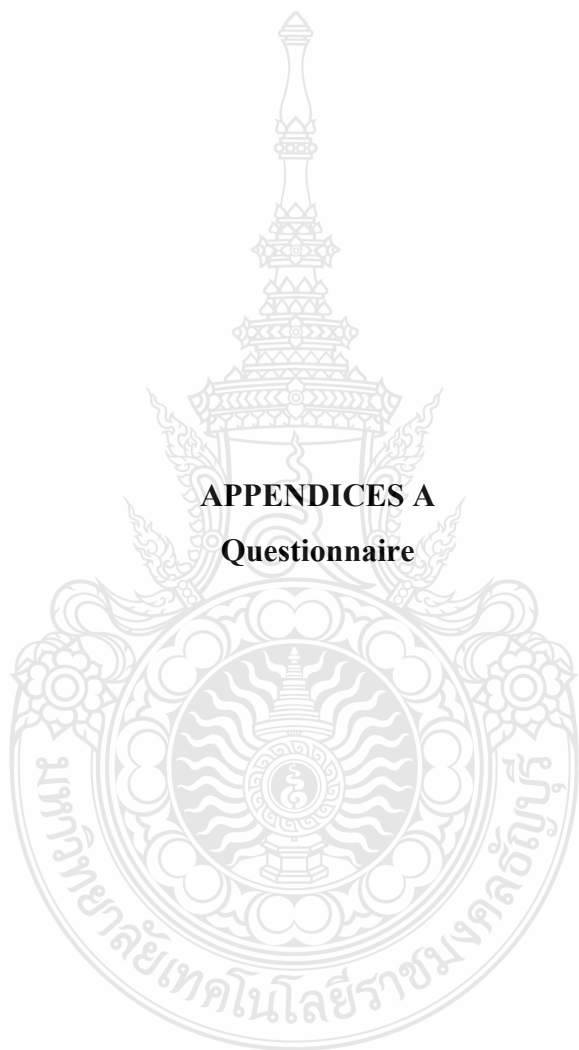
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APPENDICES



APPENDICES A
Questionnaire



QUESTIONNAIRE

Part 1: Demographic characteristics

Please mark $\checkmark$ in the box that corresponds to your current reality.

1. What is your Gender?

☐ Male

☐ Female

2. Do you have a driver's license?

☐ Yes

☐ No

3. How old are you? (Individuals under the age of eighteen should not complete

the survey.)

☐ 18 years old and below

☐ 19-30 years old

☐ 31-40 years old

☐ 41-50 years old

☐ 51 years old and above

4. What is your province? Click to type your province

5. What is your Education Level?

☐ Below high school level

☐ High School level

☐ Bachelor's degree/College level

☐ Higher than bachelor's degree

6. What is your personal income per month? (RMB)

☐ 4,000 and below

☐ 4,001-7,000

☐ 7,001-10,000

☐ 10,001 and above

Part2: The impact of the 7p combination on the purchasing decision of family electric vehicles

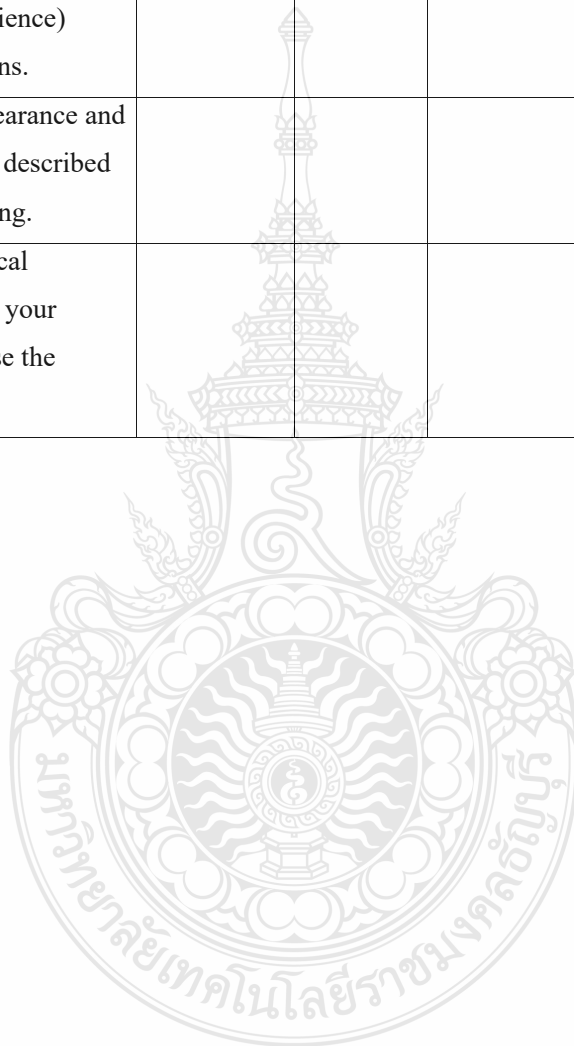
Please mark “√” in the box that most closely matches your level of opinion, consisting of:

5 = Strongly Agree; 4=Agree; 3 = Medium; 2 = Disagree; 1 = Strongly Disagree

Question	(5) Strongly Agree	(4) Agree	(3) Medium	(2) Disagree	(1) Strongly Disagree
Product					
1. The electric vehicle's driving range is sufficient to meet your daily travel needs					
2. The design of the electric vehicle aligns with your aesthetic preferences					
3. You are satisfied with the interior and features of the electric vehicle					
Price					
4. The price of the electric vehicle is reasonable.					
5. Government subsidies significantly influence your decision to purchase an electric vehicle.					
6. You perceive the long-term costs (e.g., charging, maintenance) of an electric vehicle as manageable.					
Place					
7. The distribution of electric vehicle sales outlets is convenient for making a purchase.					
8. You are satisfied with the convenience of after-sales service during the purchase process					
9. The availability and distribution of charging stations influence your purchase decision.					

Question	(5) Strongly Agree	(4) Agree	(3) Medium	(2) Disagree	(1) Strongly Disagree
Promotion					
10. You have noticed advertising for electric vehicle brands.					
11. Promotional activities (e.g., discounts, test drives) significantly influence your intention to purchase an electric vehicle					
12. A recommendation from friends or family influences your decision to purchase a specific brand of electric vehicle.					
People					
13. You are satisfied with the expertise and service attitude of the sales personnel.					
14. You are satisfied with the response speed and problem-solving ability of the after-sales service team.					
15. The recommendations from sales personnel influenced your choice of electric vehicle					
Process					
16. The purchasing process for an electric vehicle is straightforward.					
17. You are satisfied with the convenience of maintenance and repair services for the electric vehicle.					
18. When deciding to purchase an electric vehicle, you considered the convenience of the brand's service process (e.g., appointments, repairs).					

Question	(5) Strongly Agree	(4) Agree	(3) Medium	(2) Disagree	(1) Strongly Disagree
Physical Evidence					
19. The actual presentation of the electric vehicle (e.g., showroom setup, test drive experience) meets your expectations.					
20. The vehicle's appearance and interior match what is described in the brand's marketing.					
21. The brand's physical presentation enhances your willingness to purchase the electric vehicle.					



Part3: Brand image influences family electric vehicle purchase decisions

Please mark “√” in the box that most closely matches your level of opinion, consisting of:

5 = Strongly Agree; 4=Agree; 3 = Medium; 2 = Disagree; 1 = Strongly Disagree

Question	(5) Strongly Agree	(4) Agree	(3) Medium	(2) Disagree	(1) Strongly Disagree
1. The overall reputation of the electric vehicle brand is important to your purchase decision.					
2. You trust the electric vehicle brand based on its history and customer feedback.					
3. You rate the perceived quality of the electric vehicle brand 's products highly.					
4. The perceived reliability of the brand's electric vehicles affects your willingness to purchase					
5. It is important to you that the brand is recognized for its efforts to reduce carbon emissions.					
6. The brand's promotion of eco-friendly practices enhances your willingness to buy their electric vehicle.					

Part3: Decision-Making influences family electric vehicle purchase decisions

Please mark “√” in the box that most closely matches your level of opinion, consisting of:

5 = Strongly Agree; 4=Agree; 3 = Medium; 2 = Disagree; 1 = Strongly Disagree

Question	(5) Strongly Agree	(4) Agree	(3) Medium	(2) Disagree	(1) Strongly Disagree
1. You are likely to purchase a family electric vehicle within the next year.					
2. You would recommend family electric vehicles for home use to others.					
3. You are willing to pay a premium for a family electric vehicle.					
4. The future of family electric vehicles is expected to have positive development.					

APPENDICES B
The IOC Scoring Table

The Index of Item-Objective Congruence Form for Inspector Questionnaire

Researcher Name: Mr. Tang Qiankun

Research Title: Influence of brand image and service strategy 7p's on the purchase intention of Chinese family electric vehicles

This Index of Item-Objective Congruence Form is used to examine whether each question is consistent with behavioral objectives.

With the following evaluation criteria below

- +1: means Congruent
- 0: means Questionable
- 1: means Incongruent

Explanation

Please mark in the blank space

according to the objective (+1) If you are sure that the questions are measured according to the objective, (0) If you are not sure that the questions are measured according to the objective, and (-1) If you are sure that the measurement questions do not meet the objective.

Part 1 Demographic characteristics

Please mark in the blank space I to match your information truthfully and please answer all questions.

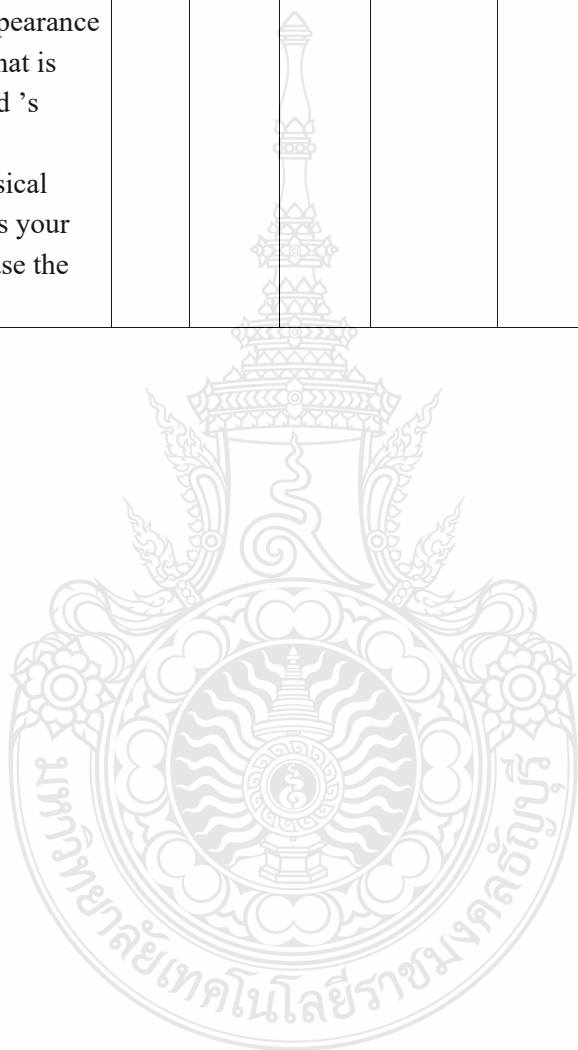
Questionnaire on respondent qualifications	Expert Opinion			Total	IOC Value	Inter pret	Additional comments
	No.1	No.2	No.3				
1. How old are you (Individuals under the age of eighteen should not complete the survey.) ☐ 1. 18 years old and below ☐ 2. 19-30 years old ☐ 3. 31-40 years old ☐ 4. 41-50 years old ☐ 5. 51 years old and above	+1	+1	+1	3	1.00	Appli cable	
2. What is your Gender ☐ 1. Male ☐ 2. Female	+1	+1	+1	3	1.00	Appli cable	
3. Which city do you live in ☐ 1. Eastern China ☐ 2. South China ☐ 3. Western China ☐ 4. Northern China	+1	+1	+1	3	1.00	Appli cable	
4. What is your Education Level ☐ 1. Below high school level ☐ 2. High School level ☐ 3. Bachelor's degree/College level ☐ 4. Higher than bachelor's degree	+1	+1	+1	3	1.00	Appli cable	
5. What is your personal income per month (RMB) ☐ 1. 4,000 and below ☐ 2. 4,001-7,000 ☐ 3. 7,001-10,000 ☐ 4. 10,001 and above	+1	+1	+1	3	1.00	Appli cable	
6. Do you have a driver's license ☐ 1. Yes ☐ 2. NO	+1	+1	+1	3	1.00	Appli cable	

The impact of the 7p combination on the purchasing decision of family electric vehicles
Please mark in the blank space I to match your information truthfully and please answer all questions.

Questionnaire on respondent qualifications	Expert Opinion			Total	IOC Value	Interpret	Additional comments
	No.1	No.2	No.3				
Product 1. The electric vehicle's driving range is sufficient to meet your daily travel needs. 2. The design of the electric vehicle aligns with your aesthetic preferences. 3. You are satisfied with the interior and features of the electric vehicle.	+1	+1	+1	3	1.00	Applicable	
Price 4. The price of the electric vehicle is reasonable. 5. Government subsidies significantly influence your decision to purchase an electric vehicle. 6. You perceive the long-term costs (e.g., charging, maintenance) of an electric vehicle as manageable.	+1	+1	+1	3	1.00	Applicable	
Place 7. The distribution of electric vehicle sales outlets is convenient for making a purchase. 8. You are satisfied with the convenience of after-sales service during the purchase process. 9. The availability and distribution of charging stations influence your purchase decision.	+1	+1	+1	3	1.00	Applicable	

Questionnaire on respondent qualifications	Expert Opinion			Total	IOC Value	Interpret	Additional comments
	No.1	No.2	No.3				
Promotion 10. You have noticed advertising for electric vehicle brands. 11. Promotional activities (e.g., discounts, test drives) significantly influence your intention to purchase an electric vehicle. 12. A recommendation from friends or family influences your decision to purchase a specific brand of electric vehicle.	+1	+1	+1	3	1.00	Applicable	
People 13. You are satisfied with the expertise and service attitude of the sales personnel. 14. You are satisfied with the response speed and problem-solving ability of the after-sales service team. 15. The recommendations from sales personnel influenced your choice of electric vehicle.	+1	+1	+1	3	1.00	Applicable	
Process 16. The purchasing process for an electric vehicle is straightforward. 17. You are satisfied with the convenience of maintenance and repair services for the electric vehicle. 18. When deciding to purchase an electric vehicle, you considered the convenience of the brand's service process (e.g., appointments, repairs).	+1	+1	+1	3	1.00	Applicable	

Questionnaire on respondent qualifications	Expert Opinion			Total	IOC Value	Inter pret	Additional comments
	No.1	No.2	No.3				
Physical Evidence 19. The actual presentation of the electric vehicle (e.g., showroom setup, test drive experience) meets your expectations. 20. The vehicle 's appearance and interior match what is described in the brand 's marketing. 21. The brand 's physical presentation enhances your willingness to purchase the electric vehicle.	+1	+1	+1	3	1.00	Appli cable	



Brand image influences family electric vehicle purchase decisions

Please mark in the blank space I to match your information truthfully and please answer all questions.

Questionnaire on respondent qualifications	Expert Opinion			Total	IOC Value	Interpret	Additional comments
	No.1	No.2	No.3				
1. The overall reputation of the electric vehicle brand is important to your purchase decision.	+1	+1	+1	3	1.00	Applicable	
2. You trust the electric vehicle brand based on its history and customer feedback.	+1	+1	+1	3	1.00	Applicable	
3. You rate the perceived quality of the electric vehicle brand's products highly.	+1	+1	+1	3	1.00	Applicable	
4. The perceived reliability of the brand's electric vehicles affects your willingness to purchase.	+1	+1	+1	3	1.00	Applicable	
5. It is important to you that the brand is recognized for its efforts to reduce carbon emissions.	+1	+1	+1	3	1.00	Applicable	
6. The brand's promotion of eco-friendly practices enhances your willingness to buy their electric vehicle.	+1	+1	+1	3	1.00	Applicable	

Decision-Making influences family electric vehicle purchase decisions

Please mark in the blank space I to match your information truthfully and please answer all questions.

Questionnaire on respondent qualifications	Expert Opinion			Total	IOC Value	Interpret	Additional comments
	No.1	No.2	No.3				
1. You are likely to purchase a family electric vehicle within the next year.	+1	+1	+1	3	1.00	Applicable	
2. You would recommend family electric vehicles for home use to others.	+1	+1	+1	3	1.00	Applicable	
3. You are willing to pay a premium for a family electric vehicle.	+1	+1	+1	3	1.00	Applicable	
4. The future of family electric vehicles is expected to have positive development.	+1	+1	+1	3	1.00	Applicable	

Biography

Name - Surname	Mr. Tang Qiankun
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