A Study on the Impact of New Energy Vehicle Brand Touchpoints on Consumer Purchase Decisions

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Abstract. With the rapid development of China's new energy vehicle (NEV) market, the role of brand touchpoints in consumers' purchasing decisions has become increasingly prominent. This study systematically explores the impact of NEV brand touchpoints on consumer purchasing decisions through literature analysis, questionnaire surveys, and case studies. Based on 367 valid questionnaire responses, the study analyzes consumers' preferences for information acquisition channels and purchasing decision factors. It finds that official websites (33.24%) and social media advertisements (30.52%) are the primary information sources, with range (mean 4.31), charging infrastructure convenience (mean 4.24), and price (mean 4.17) being the most influential factors in purchasing decisions. Differences in touchpoint preferences and decision factors are observed across gender, age, and income groups. Drawing on case studies of brands such as NIO and XPeng, this study proposes strategies to optimize brand touchpoints, including defining core brand values, strengthening store construction, and leveraging brand communities to enhance consumer purchase intention. This paper provides theoretical support and practical guidance for precise marketing by NEV companies and policy formulation.

Keywords: New Energy Vehicles, Consumer Purchasing Decisions, Brand Touchpoints.

1 Introduction

The Chinese new energy vehicle (NEV) market has developed rapidly in recent years, making it one of the largest automotive markets globally. According to data from the China Association of Automobile Manufacturers, NEV sales reached 3.334 million units in 2021, with a penetration rate exceeding 16%. Data from the Passenger Car Association shows that in March 2024, the retail penetration rate of NEVs surpassed that of fuel vehicles for the first time, reaching 54.1%, indicating a significant increase in consumer acceptance of NEVs.

The 2024 New Energy Vehicle Consumption Observation Report notes that while 51.26% of potential car buyers prefer NEVs, far surpassing 36.13% for fuel vehicles, consumers need to compare various information before purchasing, with decision-making time extending from a few days to half a month or even a month. CTR research

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further reveals that 90% of consumers ultimately choose between only 2-3 brands, highlighting the critical role of brand touchpoints in building awareness, sparking interest, and facilitating purchases.

This study employs a literature analysis method to systematically collect domestic and international research materials, reviewing the literature on the relationship between brand touchpoints and consumer behavior to establish a theoretical foundation. Through a questionnaire survey, interactive data on brand touchpoints across different age groups of consumers is collected to analyze their impact on purchase decisions and draw conclusions. Finally, using a case study method, the practices of typical NEV brands are analyzed to propose specific strategies for optimizing brand touchpoints to enhance consumer purchase decisions. This study aims to provide practical recommendations for NEV companies to effectively reach consumers and improve marketing outcomes in a fiercely competitive market, while offering insights for industry policymakers.

2 Literature Review

2.1 Research on Consumer Brand Touchpoint

Brand touchpoints are the various channels and scenarios through which consumers interact with a brand, playing a crucial role in shaping consumer awareness, emotions, and purchasing intentions in the new energy vehicle (NEV) market. These touchpoints encompass digital platforms, offline experiences, and social media communications, among other forms. Some scholars explored marketing strategies for NEVs in the context of the digital economy, noting that companies leverage data technology, cloud computing, the Internet of Things, and artificial intelligence to enhance product competitiveness [1]. Through e-commerce platforms, social media, and digital marketing, companies can not only reduce costs but also effectively boost brand visibility. Some scholars analyzed consumer focus on NEV brand touchpoints based on 2,371 online review data points. The study found that consumers pay particular attention to exterior design, interior design, and spatial layout, especially the style, color, and trendy appeal of the vehicle body and headlights, as well as the technological sophistication and comfort of the dashboard, seats, and materials [2]. Additionally, consumers highly value the practicality of intelligent features such as keyless entry, smart voice systems, and panoramic imaging. Some scholars studied the application of experiential marketing in NEVs, finding that test drives, multi-platform interactions, and self-driving tours strengthen consumer recognition of green, technological, and trendy attributes [3]. Online, immersive experiences are provided through 3D modeling, data comparisons, and personalized customization software, while offline, improved after-sales services, modification activities, and owner-sharing initiatives enhance customer loyalty. These measures effectively alleviate consumer concerns about emerging technologies and reinforce environmental value perceptions.

Some scholars based on social cognitive theory and resource exchange theory, explored the impact of online social support on NEV purchase intentions [4]. Informational support, by providing details on performance and energy-saving benefits, significantly enhances purchase intentions, while emotional support, through encouragement and affirmation, boosts consumer motivation. The interaction of these factors on online

platforms enhances consumers' green self-efficacy, indirectly promoting purchase intentions. Other scholars analyzed brand touchpoints in South Africa's auto insurance market, suggesting that marketing efforts involve personnel, processes, and pricing, while socio-cultural environments and communication channels also significantly influence consumer decisions [5]. Psychological attributes and demographic variables, such as motivation, personality, income, education, and age, play a critical role in decision-making.

2.2 Research on Consumer Buying Behavior

Consumer purchase behavior research focuses on uncovering the driving factors, psychological mechanisms, and market characteristics of new energy vehicle (NEV) purchase decisions, revealing the combined influence of economic, technological, policy, and psychological factors. Some scholars analyzed the consumption status of China's NEV market, identifying the 26–40 age group with high education and middle-to-high income as the primary potential customers, with an acceptable price range of 110,000 to 200,000 yuan [6]. Consumers generally pay attention to policies but have limited understanding. Men tend to focus on brand and power performance, while women prioritize appearance and handling Some scholars studied consumer decisions in Canada's used electric vehicle (EV) market, identifying socioeconomic characteristics, vehicle type, price, performance, and charging infrastructure as key factors. Families with prior EV experience prefer used models, focusing on battery life and performance, while new users prioritize charging convenience [7]. Government subsidies and charging infrastructure expansion have driven market growth. Some scholars based on social information processing theory, analyzed psychological factors in Chinese EV purchases, noting that perceived green value, environmental responsibility, and self-efficacy positively influence purchase intentions, with environmental responsibility enhancing intentions through the mediating roles of self-efficacy and green value. They recommend companies promote environmental values to boost consumer confidence [8].

Some scholars based on a survey of 200 battery EV users in Vietnam, identified factors influencing purchase intentions, finding that performance expectations (e.g., acceleration and range), effort expectations (e.g., ease of use), and facilitating conditions (e.g., infrastructure) significantly affect intentions [9]. Personal environmental norms significantly influence outcomes through consequence awareness and responsibility attribution, while personal innovativeness moderates the relationship between intentions and behavior. Some scholars using structural equation modeling in the Indian market, found six factors, including performance and price, significantly influence EV purchase intentions, with fuel costs and charging infrastructure having less impact [10]. Concerns about oil depletion and environmental degradation promote green purchasing, and governments and companies should use policy incentives and market education to boost EV adoption.

Some scholars from the perspective of non-users in Sri Lanka, applied the Unified Theory of Acceptance and Use of Technology to analyze purchase intentions, finding that performance expectations (e.g., range and battery life), social influence, and facil-

itating conditions significantly affect intentions, while environmental concerns and perceived risks have limited impact [11]. They suggest governments prioritize charging infrastructure to enhance market acceptance. Some scholars analyzed barriers to EV adoption in India, identifying insufficient infrastructure, long charging times, and high prices as constraints. Low-income groups and government employees prefer economical models, with female consumers playing a significant role in environmental awareness [12]. Governments should improve consumer perceptions through subsidies, tax incentives, and charging station development.

Some scholars studied the impact of cost, technology, and macro factors on EV purchase intentions, finding that high vehicle and battery costs positively influence intentions, while technological complexities, such as uncertainties in range and charging time, may reduce intentions [13]. Charging infrastructure and policy support significantly enhances intentions. Some scholars, through regression analysis, confirmed the positive role of brand image and product quality in purchase decisions, with brand loyalty and customer satisfaction having weaker effects. They suggest the automotive industry prioritizes brand image and product quality [14].

Existing literature explores multiple dimensions of NEV brand touchpoints and consumer purchase behavior. Brand touchpoints include digital platforms (e.g., e-commerce and social media), offline experiences (e.g., test drives and after-sales services), and social communications (e.g., online social support). These touchpoints promote purchase intentions by enhancing consumer awareness, trust, and emotional connections. Consumer purchase behavior is influenced by price, performance, charging infrastructure, policy incentives, environmental awareness, and psychological factors. Across markets like China, India, Canada, and Sri Lanka, consumers exhibit diverse preferences and decision-making characteristics.

3 Research Design

3.1 Survey Questionnaire Design

To systematically analyze the impact of touchpoints of new energy vehicle (NEV) brands on consumers' purchasing decisions, this study designed and distributed a structured survey questionnaire through the Wenjuanxing platform. The questionnaire includes the following core sections:

The basic information section includes gender, age group, and annual household income, aiming to understand the demographic characteristics of the respondents and provide a foundation for subsequent group-based analysis.

Respondents were asked to choose the most important channels through which they obtain information about domestic NEV brands. The options included: official websites (such as BYD and NIO), automotive vertical websites (such as AutoHome and Dongchedi), social media advertisements (such as Douyin and WeChat Moments), media placements (such as variety shows and TV dramas), offline display advertisements (such as LED screens in shopping malls and auto shows), and phone or email promotions.

A Likert five-point scale (1=no influence at all, 5=very high influence) was used to evaluate the impact of eight factors on the purchase of domestic NEVs. These factors included price, driving range, convenience of charging facilities, policy subsidies, environmental awareness, sales staff's attitude, recommendations from friends or family, and online reviews.

The questionnaire was distributed online through the Wenjuanxing platform, primarily via WeChat. The target audience consisted of consumers who have purchase intentions or potential interest in NEVs. A total of 367 valid responses were collected.

3.2 Survey Questionnaire Results

Basic Information. A total of 367 valid responses were collected, with the sample characteristics shown in Figure 1, 2, and 3 below.

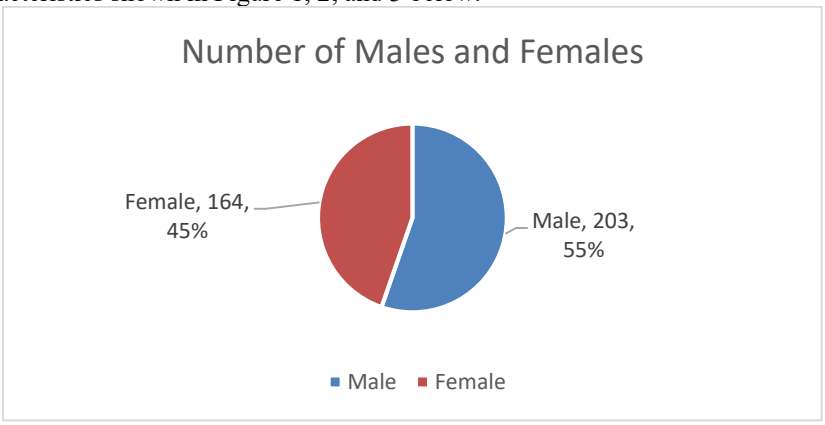

Fig. 1. Proportion of males and females participating in the survey.

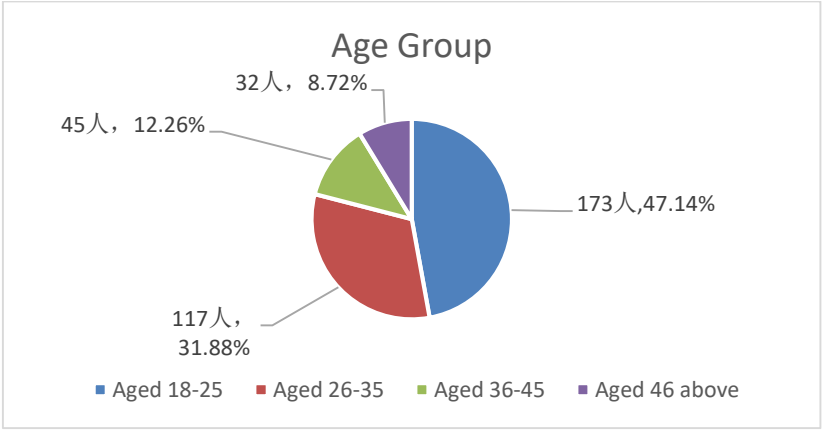

Fig. 2. Proportion of age groups participating in the survey.

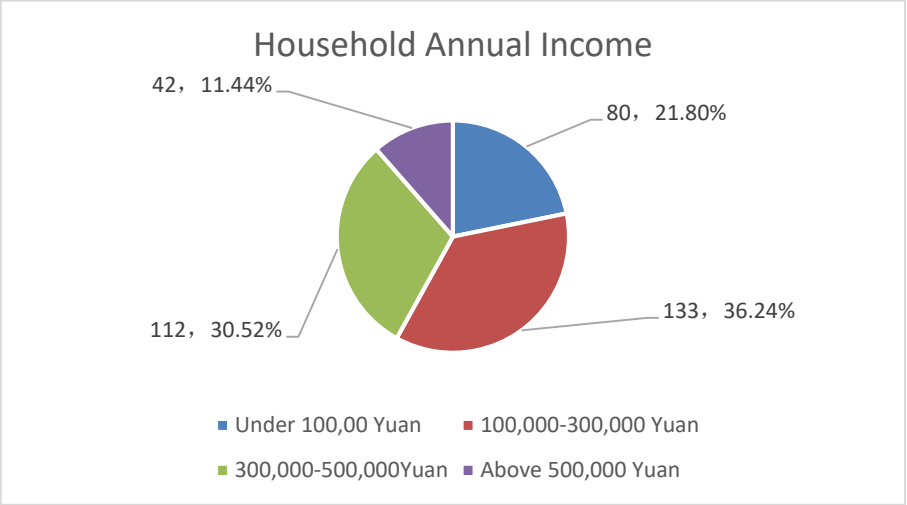

Fig. 3. Proportion of household annual income of survey participants.

Advertising Exposure Factors. The distribution of the most important information sources for consumers is shown in Figure 4 below.

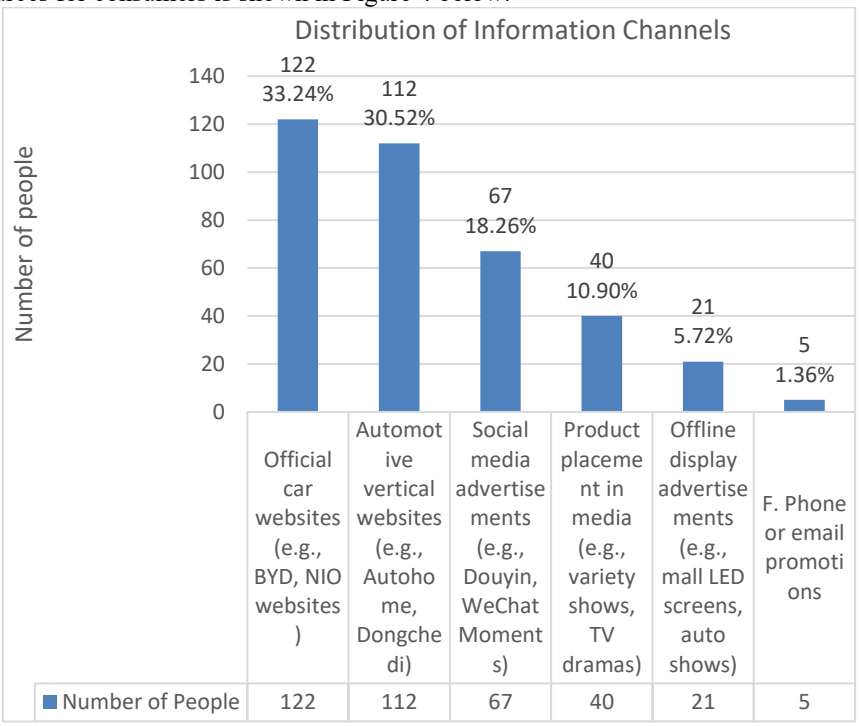

Fig. 4. Distribution of Information Channels.

Purchase Decision Factors. The average scores and standard deviations for the eight purchase decision factors are shown in Table 1 below.

Table 1. Average scores and standard deviations of purchase decision factors.

Factor	Mean	Standard Deviation
Price	4.17	1.17
Driving Range	4.31	1.07
Convenience of charging facilities (e.g., availability and distribution of fast-charging stations)	4.24	1.10
Policy subsidies (e.g., purchase subsidies, tax exemptions)	4.12	1.17
Environmental awareness (e.g., low-carbon emissions, energy-saving features)	3.96	1.27
Service attitude and professionalism of sales staff	3.95	1.25
Recommendations from friends or family	3.97	1.25
Online reviews (e.g., user comments, media reports)	4.11	1.12

3.3 Conclusion and Analysis

Based on the survey results, this study analyzes the impact of touchpoints of new energy vehicle brands on consumer purchase decisions as follows.

As shown in Figure 4, Official websites (33.24%) and social media advertisements (30.52%) are the main channels through which consumers obtain information about new energy vehicles, reflecting consumers' reliance on official brand information and social media communication. Automotive vertical websites (18.26%) also play a significant role in obtaining professional information, while media placements (10.90%), offline display ads (5.72%), and phone or email promotions (1.36%) are less widespread.

As shown in Table 1, Among the factors influencing purchase decisions, battery range (mean 4.31), charging infrastructure convenience (mean 4.24), and price (mean 4.17) are the most important considerations for consumers, indicating that practicality and cost-effectiveness are prioritized when choosing new energy vehicles. Policy subsidies (mean 4.12) and online reviews (mean 4.11) also have a considerable impact, suggesting that external incentives and user feedback play an important role in purchase decisions. In contrast, environmental awareness (mean 3.96), the attitude of sales staff

(mean 3.95), and recommendations from friends or family (mean 3.97) have a lesser influence on consumer decisions.

There are differences in preferences for information touchpoints among various gender and age groups. Women prefer social media advertisements (37.20%) more than men (25.12%), while men are more inclined to obtain information through official websites (38.42%) and automotive vertical websites (22.17%). Consumers aged 18-25 rely more on social media ads (38.15%), while those aged 36 and above prefer official websites (46.15%). In terms of income, high-income groups (annual income over 500,000 RMB) place more importance on battery range (mean 4.50) and charging infrastructure convenience (mean 4.45) compared to low-income groups (annual income below 100,000 RMB), with mean values of 4.10 and 4.00 for these factors, respectively. Women also place greater importance on environmental awareness (mean 4.10) and online reviews (mean 4.20) compared to men (mean 3.84 and 4.03, respectively).

4 Analysis of New Energy Vehicle Brand Touchpoint Communication Strategies

4.1 Clarify Brand Core Values and Highlight Brand Competitiveness

New energy vehicle companies should establish a unique competitive advantage in a highly competitive market by clarifying their brand core values. The brand positioning should focus on the environmental protection, energy efficiency, and intelligent features of the products, precisely aligning with consumers' demand for green travel and high-quality living. Therefore, companies should emphasize the differences between their products and traditional fuel-powered vehicles, such as zero-emission performance, intelligent interactive functions, and low operational costs, in order to create a brand image of green technology. Based on this positioning, the market segmentation strategy needs to deepen the transmission of brand values. For the 26 to 34 age group with middle-to-high income, companies should design fashionable, sporty, and intelligent products to meet their demand for personalization and technological appeal. For highly educated consumers, companies need to provide detailed product information and professional consulting services to cater to their rational decision-making habits. For managerial individuals, the company should incorporate cutting-edge technology and emphasize high-end positioning to cater to their interest in emerging trends. These segmentation strategies ensure that brand values accurately reach different consumer groups, thereby improving market response efficiency and brand influence.

NIO’s brand practice vividly illustrates how to convey core values. Its slogan "BLUE SKY COMING NIO, has arrived" blends the environmental concept with a futuristic vision, strengthening consumer recognition through technological confidence and emotional resonance. NIO’s dynamic commemorative logo changes in the form of the number “10,” reflecting the brand core of technology research and development, product design, service systems, and user communities, highlighting its high-end positioning. The design-driven strategy incorporates sleek car body lines, NOMI intelligent

assistant's voice interaction and emotional recognition features, and NIO House's social spaces, blending innovation, care, and futurism into the consumer experience. NIO also extends its brand values into the lifestyle sector through the NIO Life series, including fashionable home furnishings and life products, deepening emotional connections with consumers. These initiatives effectively respond to consumers' concerns about driving range, intelligent experiences, and safety performance, while occupying a unique position in the market through differentiated visual language and ecosystem service systems.

4.2 Strengthen Store Construction and Provide a Good Environment

As places where consumers directly experience the brand's environmental and intelligent values, stores need to reverse the traditional negative image of the automotive industry's environmental impact through high-end design and scenario-based interaction. Companies should integrate social responsibility into store construction, such as using eco-friendly materials and energy-saving designs to highlight the green travel concept. To achieve this goal, companies need to carefully choose store locations to attract high-income, highly educated consumer groups, reinforcing the brand's high-end positioning. Locations like Wangfujing in Beijing or Qiantan in Shanghai are ideal due to their commercial value. Store designs need to integrate a sense of technology and warmth, using transparent glass structures, wood materials, and warm tones to create an open and comfortable environment. Companies should flexibly adjust their location strategies based on their brand positioning. For high-end brands, flagship stores should be placed in iconic locations to reinforce the immersive experience. For emerging brands, choosing cost-effective commercial streets or industrial parks will balance brand image with operating costs.

Additionally, the store's functions should go beyond traditional displays and sales and incorporate social and cultural elements to deepen consumer interactions. Companies should set up coffee lounges, children's activity zones, and brand culture display areas to meet diverse consumer needs. Smart experiences should also be integrated into store operations, such as interactive screens and virtual test drive systems, to enhance consumers' perceptions of intelligent products. These functions effectively address consumers' concerns about environmental concepts and technological experiences, strengthening brand identity.

Furthermore, companies need to learn from successful cases to optimize their store construction strategies. NIO's NIO House, with its high-back chairs in business areas and sofa-tea table setups in leisure zones, meets consumers' business and social needs and is worth emulating. The Tengshi Xuzhou Yingbin Avenue Center adopts a "friend philosophy" and offers localized services such as warm water reception and exclusive service groups, transforming consumers into brand ambassadors and significantly boosting referral rates, inspiring companies to pay attention to service details. Huawei's Wangfujing flagship store, with its "city living room" concept, integrates smart travel and social functions and serves as a valuable example for companies to learn from its cross-experience approach. Li Auto's Huamao retail center, designed as a family apart-

ment with a children's area, precisely meets family users' needs and encourages companies to optimize store functions for niche groups. Companies should continuously adjust store strategies to ensure alignment with environmentally friendly and intelligent brand values, reinforcing market position.

4.3 Utilize Brand Communities to Expand User Base

New energy vehicle brands should leverage community strategies to integrate users into the brand ecosystem, thereby expanding their user base. Brand strategies can center around users, combining online communities, personalized services, loyalty rewards, and offline experience spaces to create deep interactive networks that effectively increase user loyalty and drive market growth through word-of-mouth.

For instance, NIO creates a multi-dimensional community through its app, integrating content sharing, social interaction, and a lifestyle mall. Users post road trip stories, participate in discussions, or listen to diverse programs via NIO Radio, meeting their social, aesthetic, and knowledge needs. NIO's NIO House and NIO Day events extend the online community to offline spaces, creating a "second home" experience that attracts new middle-class consumers seeking quality lifestyles. NOMI in-car assistant enhances users' sense of companionship through smart interactions, deepening emotional connections with the brand.

Tesla drives community engagement through unique brand culture, using fun items like "edamame" stickers and referral rewards points systems to stimulate user participation. Its GIGA museum and tech-focused activities attract consumers who value technological experiences, with users becoming key promoters of brand awareness through spontaneous sharing and referrals, significantly expanding the brand's market influence.

Li Auto focuses on family scenarios, offering practical products such as child protection gear and camping equipment in its mall, precisely meeting family travel needs. The spacious interior and thoughtful accessories reinforce the "mobile home" concept, enhancing community engagement and attracting users who prioritize family values.

Jeep continues its off-road legacy, encouraging users to share adventure routes via the "Route Book" feature in the app, creating a highly vertical off-road enthusiast community. Events like Camp Jeep and Adventure Academy further strengthen users' sense of belonging to the brand's lifestyle, appealing to consumers who love adventure.

Absolute MINI centers on user co-created content, from "Village Men's Website" to the magazine "THE COOPERS · Little People", encouraging owners to share travel and life stories, forming a strong community atmosphere. This co-creation model brings users closer to the brand, attracting more potential consumers through shared values.

5 Conclusion

This study reveals the critical role of brand touchpoints in shaping consumers' purchasing decisions in the new energy vehicle (NEV) market. Survey results indicate that consumers heavily rely on official websites and social media for information, with range, charging infrastructure convenience, and price being the core factors influencing

purchases. Demographic analysis further shows that women and younger consumers prefer social media, while high-income groups place greater emphasis on range and charging infrastructure. Accordingly, companies should optimize online and offline touchpoints through differentiated product design, intelligent experiences, and the promotion of environmental values; enhance brand image through premium store construction and interactive scenarios; and strengthen user loyalty and word-of-mouth through community operations and incentive programs. Practices from brands like NIO demonstrate that precise positioning and emotional connections can effectively boost market competitiveness. Moving forward, companies must continuously innovate touchpoint strategies, aligning with technological advancements and evolving consumer demands to maintain a competitive edge in the fiercely competitive market.

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