

# Research on Influencing Factors of Consumers' Willingness to Buy New Energy Vehicles under the Background of Technological System Reform of Automobile Industry -- Taking Chengdu, Sichuan as an Example

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**Abstract:** With the transformation and upgrading of the automobile industry, automobile enterprises have combined their advantages and resources to make up for their shortcomings and meet the challenges of market transformation. In order to better provide future development direction and suggestions for new energy automobile enterprises and government departments, and guide enterprises, government and consumers to establish a mutually beneficial and symbiotic coupling relationship, this study will conduct an empirical study on the influencing factors of consumers' willingness to buy new energy vehicles.

**Keywords:** Purchase intention; Perceived value; Product preference; Perceived ease of use

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## 1. Introduction

China's new energy automobile industry is close to the international advanced level in general, but there are also some problems such as lack of core technology and scientific guidance for enterprise transformation. Facing the huge impact brought by the complex changes of domestic and international environment and the adjustment of national policy orientation, new energy vehicles will surely usher in a new historical opportunity. With the transformation and upgrading of the traditional automobile industry, automobile enterprises have combined their advantages and resources to make up for their shortcomings and meet the challenges of market transformation. Based on the analysis of the research status at home and abroad, combined with consumer behavior, this paper analyzes the influencing factors of consumers' willingness to buy new energy vehicles in Sichuan.

## 2. Theoretical basis

### 2.1 Theoretical significance and value

Based on the existing literature, this paper studies the purchase intention of new energy vehicles from the perspectives of perceived value, product preference and perceived ease of use, hoping to help improve the consumption behavior model of green new energy vehicles. In order to expand the empirical basis of the existing research, enrich the relevant research on the purchase intention of new energy vehicles in China and enrich the policy research of new energy vehicles industry in China through the conclusions obtained from the empirical research on the influencing factors of new energy vehicles.

### 2.2 Practical significance and value

Put forward relevant suggestions to the government, such as perfecting financial support policies, improving infrastructure construction, and guiding consumers to enhance their awareness of green consumption, so as to better meet the needs of consumers and make them get tangible benefits; Put forward marketing strategies for automobile enterprises, such as focusing on technological innovation, building product brand reputation and improving after-sales service system, which actively promoted the rapid development and transformation of the automobile market and promoted the healthy and benign development of new energy automobile enterprises in China.

## 3. Theoretical basis

### 3.1 Consumption experience theory

Regarding the definition of consumer experience, scholars Holbrook(1982) and Hirschman(1982) think that it is the expression of the

overall feeling, knowledge and self-awareness that customers get during the purchase process.<sup>[1]</sup> Consumer experience has both perceptual parts and some rational thinking elements, which belong to consumers' subjective evaluation and natural reaction.<sup>[2]</sup>

### **3.2 Theory of planned behavior**

Planned behavior theory (TPB) originated from rational behavior theory (TRA) and was put forward by scholar Ajzen and others (1991) in 1988.<sup>[3]</sup> Based on the rational behavior theory (assuming that the individual can completely control the behavior), the planned behavior theory adds the process of perceptual behavior control, and considers the influence of external factors on the individual.

### **3.3 Responsible environmental behavior theory**

The model of responsible environmental behavior was put forward by Hines et al. in a paper entitled "Analysis and Comprehensive Research of Responsible Environmental Behavior Based on Meta-analysis".<sup>[4]</sup> Hines and others summarized the theory of responsible environmental behavior into the conscious behavior of personal responsibility and values aimed at solving environmental problems by analyzing the relevant literature of environmental behavior theory.

## **4. Research and conceptual framework of research**

### **4.1 Purchase intention**

The process of consumers' purchasing behavior includes five stages: confirming needs, collecting information, evaluating and selecting solutions, making purchasing decisions and evaluating after purchasing. Purchase intention corresponds to the stage when consumers make purchase decisions, and it represents an important motivational factor of whether consumers are willing to make purchases.

### **4.2 Perceived value**

Zeithaml (1988)<sup>[5]</sup>With regard to the summary research on the connotation of customer perceived value, he put forward four connotations of customer perceived value: (1) low price of products; (2) the quality or characteristics of the product or service can meet the needs of customers; (3) The customer has made a trade-off between the monetary cost and the perceived quality; (4) all the benefits that customers get from all their efforts.

### **4.3 Product preference**

Perceived product innovation refers to consumers' subjective evaluation and judgment of product innovation.

## **5. Influencing factors of consumers' willingness to buy new energy vehicles**

### **5.1 User experience**

The research in this paper shows that consumers' willingness to buy new energy vehicles is directly affected by user experience. Therefore, future research should focus on how to improve the user experience of new energy vehicles, including the improvement of charging convenience, vehicle operation convenience and driving comfort.

### **5.2 Infrastructure construction**

This paper finds that the perfection of infrastructure directly affects consumers' perception, ease of use and willingness to buy new energy vehicles. Therefore, future research should pay attention to the present situation and development trend of new energy vehicle infrastructure construction, and put forward improvement measures to promote the development of new energy vehicle market.

### **5.3 Quality of service**

The quality of service also has an important influence on consumers' purchasing intention. Future research can explore how to continuously improve the quality of charging service and after-sales service provided by new energy vehicle manufacturers, so as to improve consumers' recognition and satisfaction with new energy vehicles.

### **5.4 Transmission of social values**

Research shows that consumers' willingness to buy new energy vehicles is influenced by their social values. Future research can further explore how to effectively convey the social value of new energy vehicles, including environmental protection, energy saving and sustainable development, so as to enhance consumers' recognition and willingness to buy new energy vehicles.

## **6. Conclusion**

On the basis of summarizing and sorting out the existing research in the field of new energy vehicles, this study will establish a psychological motivation framework that affects consumers' willingness to buy new energy vehicles according to the theoretical model of planned behavior, design relevant scales and questionnaires, and deeply understand consumers' willingness to buy new energy vehicles in Sichuan by distributing questionnaires among consumers in Sichuan, and explore the factors that affect consumers' purchase of new energy vehicles. This paper analyzes the way and influence of these factors on the purchase intention of new energy vehicles, and explores whether individual

characteristics will have an impact on the purchase intention of new energy vehicles. It is expected to expand the empirical basis of existing research through the conclusions of the empirical research on the influencing factors of new energy vehicles, enrich the relevant research on the purchase intention of new energy vehicles in China, and enrich the policy research on new energy vehicles in China.

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## References

- [1] Holbrook M B, Hirschman E C. The experiential aspects of consumption: Customer fantasy, feelings and fun[J]. *Journal of Consumer Research*, 1982, 9(2):132-140.
- [2] Wang Xinxin, Li Zhen. A review of objective criteria or subjective evaluation and measurement of consumer experience quality [J]. *Foreign Economy and Management*, 2019, 41 (01): 127-140.
- [3] AJZEN I. The theory of planned behavior [J]. *Organizational Behavior and Human Decision Processes*, 1991, 50(2): 179-211.
- [4] HINES J M, HUNGERFORD H R, TOMERA A N. Analysis and Synthesis of Research on Responsible Environmental Behavior: A Meta-Analysis [J]. *The Journal of Environmental Education*, 1987, 18(2): 1-8.
- [5] Zhang Xiaheng. (2024). The influence of page value characteristics of cross-border e-commerce products on consumers' purchase intention. *China West* (01), 65-84.