

Research on the Consumer Perception and Government Policies on Consumers' Purchase Intention of NEV in Sichuan, China

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Abstract: As a breakthrough in solving high carbon emissions from traditional fuel vehicles, new energy vehicles (NEV) showed great potential in reducing greenhouse gas emissions and improving air pollution. They could also be an important opportunity for China's automobile industry to transform its development direction. This study analyzed the Sichuan Government's policy on sales of new energy vehicles. It explored consumer perceived value and perceived risk factors related to new energy vehicle purchase intention. The results showed the government policy, all perceived values, and most perceived risks having significant impacts on buying intention on new energy vehicle, except time risk due to the expectation of development process of new energy vehicle for taking more extended time in the automobile industry.

Keywords: New Energy Vehicle; Purchase Intention; Government Policy

1. Introduction

Low-carbon development requirements under global climate change are urgent matters nowadays. Studies have shown that the high concentration of carbon dioxide in the air is the leading cause of the greenhouse effect. The importance of promoting new energy vehicles can be one of the considerations. Compared with traditional vehicles, new energy vehicles have the following advantages. First, new energy vehicles can reduce high dependence on energy; second, NEV can solve the problem of carbon dioxide emissions with low pollution; third, optimize the structure of China's automobile industry and accelerate the upgrading of the automobile industry.

2. Theoretical Basis

2.1 Consumer Behavior Model (Acevedo 2018)^[1]

Motivation - including basic needs, safety needs, social needs, respective needs, and self-actualized needs

Perception - the process by which individuals choose, organize, and perceive information to reach meaningful conclusions.

Learning - relying on skills, knowledge, and intentions; skills are cultivated through practice, while expertise and preferences are acquired through experience.

Attitudes and beliefs - reacting to a given product precisely and constituting a brand image that affects consumers' buying behavior.

2.2 Theory of Planned Behavior (Aditami and Soepatini 2016)^[2]

Attitude - a combination of consumers' (1) beliefs, (2) feelings, (3) and behavioral intentions of particular objects in the context of marketing.

Subjective norm - referring to beliefs about whether most people agree or disagree with the behavior. It is related to a person's thoughts, whether their peers and those important to him should participate in the behavior.

Perceived behavioral control - referring to people's perception of their capability to perform specific behaviors. An analogy to the expected value model of attitudes such as the act of conduct, assuming that perceived behavioral control is determined by the aggregate set of accessible control beliefs.

2.3 Model of Risk Perception (Slovic. 2016)^[3]

Cognitive factors - referring to the characteristics of consumers that affect performance and learning from certain situations. These factors are used to adjust performance to be improved or decreased in what they act. Affective factors - referring to emotional factors that affect learning. It can have negative or positive effects on what information consumers receive. Contextual factors refer to access, motivation, ability, design, training, and other factors affecting perceptions about ease of learning and influencing acceptance and rejection of technology. Individual factors - determining buying intention- are identified, including attitudes, knowledge, skills, genetics, and personal characteristics.

3. Understanding of Influence Mechanism of Consumer Perception on the Purchase Intention of NEV

3.1 Analyze the Sichuan government's policy on new energy vehicles for improving the concerns of the green environment:

The Sichuan government intends to encourage NEV sales coping with the national policy for improving the environment. But suitable policies will have significant substantial effects on consumers who may have concerns about vehicle safety and value over the environmental issue.

3.2 Explore the influence factors of consumer perception on purchase intention through perceived value and perceived risk:

Purchase intention is a customer's willingness to purchase a particular product or a specific service. Purchase intention is a dependent variable, which depends on several external and internal factors. Purchase intention measures respondents' attitudes towards purchasing products or using services.

3.3 Explore the perspective of automakers and consumers and provide suggestions for improving the promotion and awareness of buying new energy vehicles:

The customer perceived value of family vehicles divided its driving characteristics into price, service, brand, product quality, and green attribute perceived value, and proposed that consumption value should be increased in different strategic planning.

4. The Conceptual Framework for the Research Study

First Four different levels: the relationship between influencing factors of perceived value and perceived risk, and purchase intention; the relationship between influencing factors of emotional value and quality value, and perceived value; the relationship between influencing factors of functional risk, service risk, financial risk, and time risk, and perceived risk; the relationship between government policy and purchase intention.

second Using regression analysis testing, all influencing factors are significantly correlated with purchase intention, perceived value, and perceived risk, respectively, except time risk. This phenomenon may refer to consumers understanding that NEV will take time to develop in taking over the traditional version.

5. The Countermeasures for the Improvement of Purchase Intention on NEV

(1)Government policy. The government's preferential vehicle purchase subsidies, technical research and development support, and supporting facilities construction measures implemented by the government for new energy vehicles can directly provide consumers with economic subsidies and reduce the purchase price and subsequent use costs of new energy vehicles to a large extent (Chen 2020).^[4] (2)Perceived value and perceived risk. The higher the consumer's perceived value of new energy vehicles, the higher its willingness to buy.5.3 Reducing turnover intention. Therefore, automobile manufacturers and the government must strive to improve the overall competitiveness of their products and enhance customers' perceived value from different dimensions of customer perceived value to promote consumers' purchasing behavior (Wang 2019).^[5] (3)Emotional value and quality value. Emotional value - the more substantial the consumer's awareness of environmental protection, the more consumers preference NEV. Quality value - the key differentiators of NEV will be intelligent and connected functions and human-oriented design that improve the quality value over traditional fuel consumption vehicles (He 2018).^[6] (4)Consumer preference. NEVs are the product of the latest technology era, and users inevitably demand intelligent technology and connectivity. The features such as intelligent safety functions and multipurpose layouts will improve the interest of consumers in using NEV. (5)Demographic concern. Although this research found no significant difference between genders, ages, education background, and monthly income with the purchase intention of NEV, the above four measurements could serve as the improvement to general consumers in Sichuan to increase their confidence and buying intention as long as policy, value and risk, emotional and quality value, and consumer preference are working well as the influencing factors.

6. Conclusion

The promotion of new products is to understand consumer psychology. Internal influences on consumer behavior include personal perception, memory, learning, motivation, personality, emotions, and attitudes. In addition, the interpretation of the meaning of motivation varies from person to person and is influenced by individual biases, experiences, and needs. For marketers to effectively convey their brand information or products to consumers, they need to understand the nature of perception. Information processing is the process of visualizing the catalyst, transforming it into useful information, and then storing it. Motivation opportunities affect people's feelings, feelings, and behaviors, so it takes millions of dollars to buy many different goods and services. In addition, the purchase decision depends on the relationship between consumer behavior and decision-making behavior, including all psychological factors such as motivation, cognition, and learning.

References :

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- [1] Acevedo, A. (2018). A Personalistic Appraisal of Maslow's Needs Theory of Motivation: From "Humanistic" Psychology to Integral Humanism. *Journal of Business Ethics*. Vol 148, p.741-763.
 - [2] Aditami, S. and Soepatini, S. (2016). The Analysis of Halal Product Purchase Intention Using Theory Of Planned Behavior (TPB): An Application on Bakery Product Consumption. *Journal of Business*. Vol 33, p.112-128.
 - [3] Slovic, P. (2016). Understanding Perceived Risk. *Environment: Science and Policy for Sustainable Development*. Vol 58, p.25-29.
 - [4] Chen, Y. et al. (2020). The Chinese automobile industry and government policy. *Research in Transportation Economics*. Vol 84, p.88-97.
 - [5] Wang, Y. et al. (2019). Understanding consumers' willingness to use ride-sharing services: The roles of perceived value and perceived risk. *Transportation Research Part C: Emerging Technologies*. Vol 105, p.504-519.
 - [6] He, X. et al. (2018). Consumer purchase intention of electric vehicles in China: The roles of perception and personality. *Journal of Cleaner Production*. Vol 204, p.1060-1069.