



**THE INFLUENCING FACTORS OF THE COMPETITIVE  
ADVANTAGE OF WULING HONGGUANG AUTOMOBILE IN  
THE NEW ENERGY VEHICLE MARKET**

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**AN INDEPENDENT STUDY SUBMITTED IN PARTIAL FULFILLMENT  
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This Independent Study Has been Approved as a Partial Fulfillment of the  
Requirements for the Degree of Master of Business Administration

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### ABSTRACT

This study examined the factors influencing the competitive advantage of Wuling Hongguang Automobile in the new energy vehicle market. It constructed a structural model of the influencing factors of market competitive advantage and validated the research hypotheses and the model. Based on Resource-Based View (RBV) and Disruptive Innovation Theory, the study examined the impacts of cost-effectiveness advantage, precise market positioning, policy adaptability innovation, and service network coverage on market competitive advantage, and proposed targeted strategic suggestions. This research adopted a quantitative research method, distributing 400 questionnaires and obtaining 345 valid ones, with an effective rate of 86.25%. The research results indicate that cost-effectiveness advantage, precise market positioning, policy adaptability innovation, and service network coverage all have significant impacts on market competitive advantage. Based on the results, this study puts forward strategic suggestions to enhance the market competitive advantage of Wuling Hongguang Automobile: (1) Strengthen cost-effectiveness advantage; (2) Optimize precise market positioning; (3) Strengthen policy adaptability and innovation; (4) Improve service network coverage.

**Keywords:** Resource-Based View, Disruptive Innovation Theory, Wuling Hongguang Automobile, new energy vehicle, competitive advantage

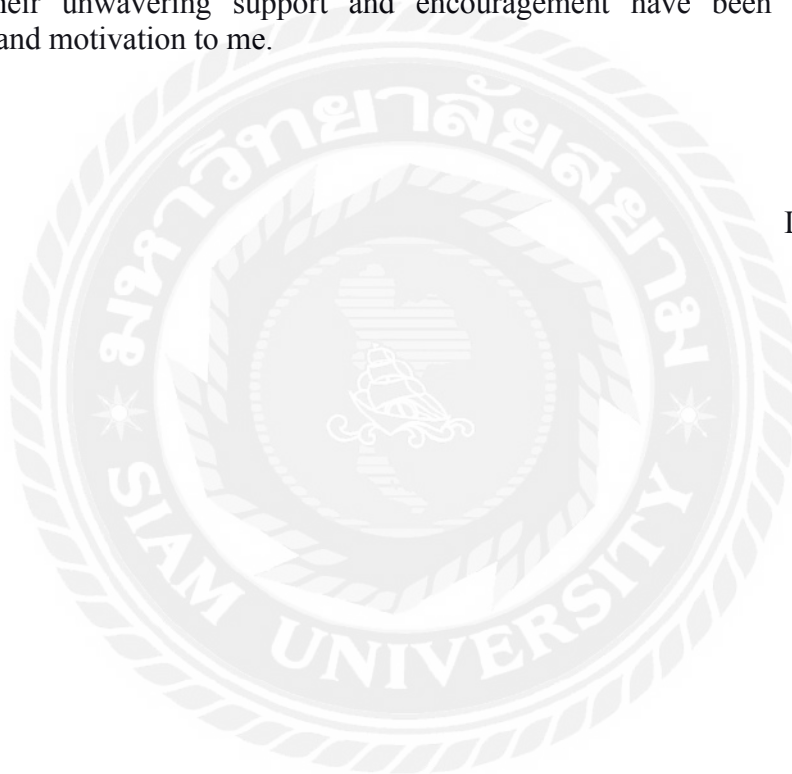
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LU QINGHE



## DECLARATION

I, *Lu Qinghe*, hereby certify that the work embodied in this independent study entitled "*The Influencing Factors of the Competitive Advantage of Wuling Hongguang Automobile in the New Energy Vehicle Market*" is result of original research and has not been submitted for a higher degree to any other university or institution.

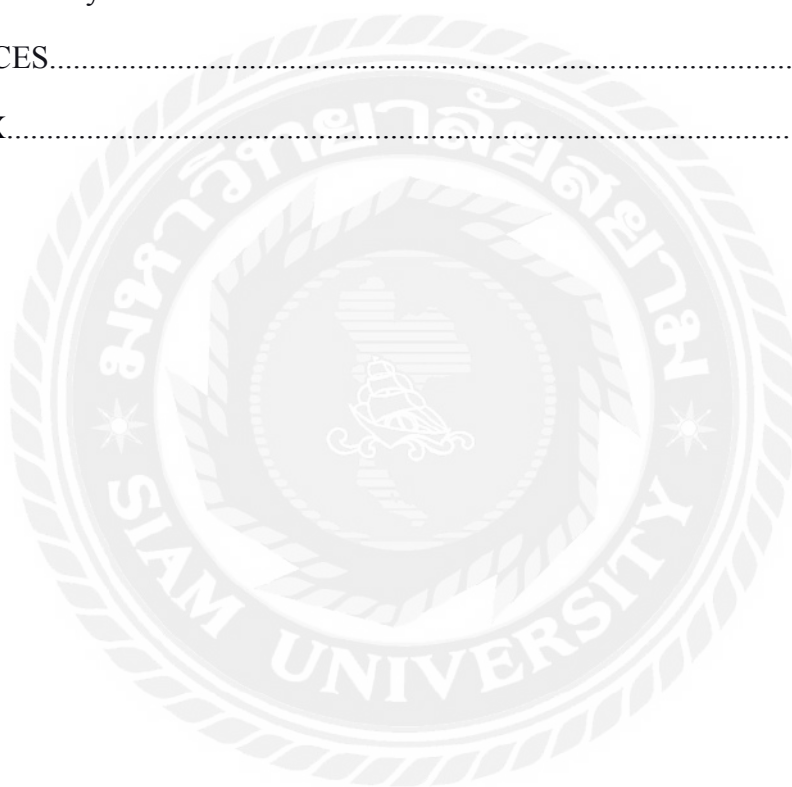
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# CONTENTS

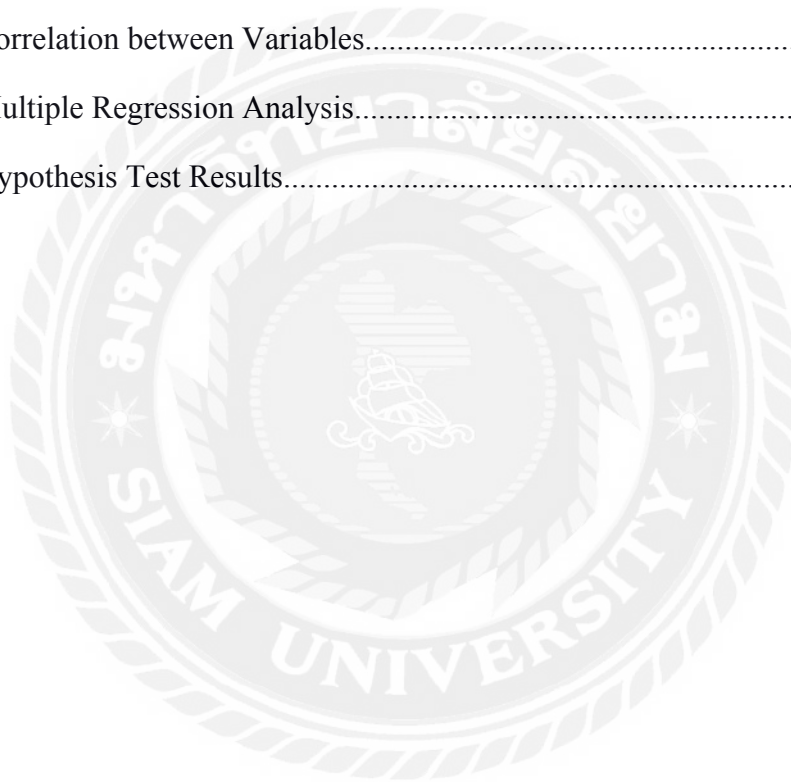
|                                                         |     |
|---------------------------------------------------------|-----|
| ABSTRACT.....                                           | I   |
| ACKNOWLEDGEMENT.....                                    | II  |
| DECLARATION.....                                        | III |
| CONTENTS.....                                           | IV  |
| LIST OF TABLES.....                                     | VI  |
| LIST OF FIGURES.....                                    | VII |
| CHAPTER 1 INTRODUCTION.....                             | 1   |
| 1.1 Background of the Study.....                        | 1   |
| 1.2 Questions of the Study.....                         | 2   |
| 1.3 Objectives of the Study.....                        | 2   |
| 1.4 Scope of the Study.....                             | 3   |
| 1.5 Significance of the Study.....                      | 4   |
| 1.6 Definition of Key Terms.....                        | 6   |
| CHAPTER 2 LITERATURE REVIEW.....                        | 7   |
| 2.1 Introduction.....                                   | 7   |
| 2.2 Literature Review.....                              | 7   |
| 2.3 Introduction to Wuling Hongguang Automobile.....    | 17  |
| 2.4 Conceptual Framework.....                           | 18  |
| CHAPTER 3 RESEARCH METHODOLOGY.....                     | 20  |
| 3.1 Research Design.....                                | 20  |
| 3.2 Population and Sample.....                          | 20  |
| 3.3 Hypothesis.....                                     | 22  |
| 3.4 Research Instrument.....                            | 23  |
| 3.5 Reliability and Validity Analysis of the Scale..... | 26  |
| 3.6 Data Collection.....                                | 28  |

|                                              |    |
|----------------------------------------------|----|
| 3.7 Data Analysis.....                       | 29 |
| CHAPTER 4 FINDINGS AND DISCUSSION.....       | 31 |
| 4.1 Findings.....                            | 31 |
| 4.2 Discussion.....                          | 35 |
| CHAPTER 5 CONCLUSION AND RECOMMENDATION..... | 40 |
| 5.1 Conclusion.....                          | 40 |
| 5.2 Recommendation.....                      | 41 |
| 5.3 Further Study.....                       | 45 |
| REFERENCES.....                              | 46 |
| APPENDIX.....                                | 49 |



## LIST OF TABLES

|                                                                |    |
|----------------------------------------------------------------|----|
| Table 3.1 Measurement Items.....                               | 24 |
| Table 3.2 Reliability Evaluation Criteria.....                 | 26 |
| Table 3.3 Variable Reliability Test.....                       | 27 |
| Table 3.4 KMO and Bartlett's Test.....                         | 27 |
| Table 4.1 Descriptive Statistical Analysis of Respondents..... | 31 |
| Table 4.2 Correlation between Variables.....                   | 32 |
| Table 4.3 Multiple Regression Analysis.....                    | 33 |
| Table 4.4 Hypothesis Test Results.....                         | 39 |





## LIST OF FIGURES

|                                      |    |
|--------------------------------------|----|
| Figure 2.1 Conceptual Framework..... | 19 |
| Figure 3.1 Hypotheses.....           | 23 |



# Chapter 1 Introduction

## 1.1 Background of the Study

Against the backdrop of global advocacy for green development and vigorous promotion of energy conservation and emission reduction, the new energy vehicle (NEV) industry, as a pivotal direction for the transformation and upgrading of the automotive sector, is experiencing a phase of rapid development. Countries around the world have successively introduced stringent carbon emission regulations and incentive policies to accelerate the transition from traditional fuel vehicles to NEVs. This has created a broad development space for the NEV market, with continuous expansion in market size, rapid technological innovation, and a proliferation of various NEV models (He & Hao, 2022).

As the largest automotive market globally, China has demonstrated formidable development momentum and a leading position in the NEV sector (Chen et al., 2024). The government has effectively propelled the popularization and application of NEVs in China through a series of measures, including subsidy policies, tax incentives, and plans for charging infrastructure construction. The enhancement of consumers' environmental awareness, along with their increasing awareness and acceptance of NEVs, has also led to a year-on-year increase in NEV sales, intensifying market competition (Kuncoro & Suriani, 2018). Numerous automotive enterprises have ramped up their R&D investment in the NEV field, launching distinctive products in an attempt to secure a foothold in this market brimming with opportunities.

Wuling Hongguang, a highly renowned and influential brand in the Chinese automotive market, has achieved significant accomplishments in the traditional fuel vehicle segment through precise market positioning, cost-effective products, and an extensive sales network. The Wuling Hongguang models have garnered praise and are deeply loved by consumers (Sun, 2013). Faced with the immense allure and challenges of the NEV market, Wuling Hongguang has proactively made strategic arrangements and swiftly introduced a series of NEV products. These models have rapidly emerged as phenomenal products in the NEV market, attracting widespread market attention and enthusiastic pursuit from consumers, thanks to their unique exterior design, affordable prices, and convenient travel characteristics.

However, the competition in the NEV market is characterized by complexity and variability. With an increasing number of enterprises entering this field, market competition has become fiercer, and product homogenization has gradually emerged. To sustain its leading position and consolidate and expand its competitive advantages in the fiercely competitive NEV market, Wuling Hongguang needs to conduct an in-depth analysis of the various factors influencing its competitive advantages. This will not only assist Wuling Hongguang in optimizing its product strategies and enhancing its market competitiveness but also provide valuable references and

insights for other automotive enterprises in their development within the NEV market. Therefore, research on the influencing factors of Wuling Hongguang's competitive advantages in the NEV market holds significant practical and theoretical value.

## **1.2 Questions of the Study**

The competitive advantages of Wuling Hongguang vehicles in the market are influenced by multiple factors. This study focuses on the influencing factors of Wuling Hongguang's competitive advantage in the NEV market. The cost-effectiveness advantage has always been a key selling point of Wuling Hongguang vehicles. Thus, the specific impact degree of cost-effectiveness on enhancing market competitive advantages becomes a crucial aspect. Precise market positioning has helped Wuling Hongguang vehicles target consumer groups. Additionally, the impact of policy adaptability innovation on the NEV market is also a concern. A well-established service network coverage can enhance consumers' vehicle purchase and usage experiences, and its influence on Wuling Hongguang's market competitive advantages is also noteworthy.

Do cost-effectiveness advantage, precise market positioning, policy adaptability innovation, and service network coverage collectively influence Wuling Hongguang's competitive advantage in the NEV market? Based on a clear understanding of the influence of each factor, the key issues that this study needs to resolve are how to propose targeted and actionable strategic suggestions to enhance Wuling Hongguang's competitive advantage in the NEV market, achieve sustainable development, and expand its market share. The specific research questions are as follows:

1. Does cost-effectiveness advantage affect market competitive advantage?
2. Does precise market positioning affect market competitive advantage?
3. Does policy adaptability innovation affect market competitive advantage?
4. Does service network coverage affect market competitive advantage?

## **1.3 Objectives of the Study**

By comprehensively applying Resource-Based View (RBV) and Disruptive Innovation Theory, this study conducts an in-depth analysis of cost-effectiveness advantage, precise market positioning, policy adaptability innovation, and service network coverage to clarify whether each factor has an impact on Wuling Hongguang's market competitive advantage. Subsequently, a structural model of the influencing factors of market competitive advantage was constructed, providing a

clear theoretical framework for subsequent research and practice.

Based on the constructed structural model of the influencing factors, this study proposes a series of research hypotheses regarding the relationships between each factor and Wuling Hongguang's market competitive advantage. By adopting the quantitative research method, distributing questionnaires to collect data, and employing statistical analysis tools for in-depth data analysis, this study aims to verify the validity of the research hypotheses. Through rigorous empirical research, this study aims to reveal the intrinsic connections between each factor and market competitive advantage, providing robust data support for the theoretical model and ensuring the scientific rigor and reliability of the research findings.

The ultimate objective of this study is to propose targeted and actionable strategic suggestions for enhancing Wuling Hongguang's market competitive advantage, based on the research results. By considering the impact of each factor on competitive advantage and the interactions among factors, specific strategic measures are formulated. These strategic suggestions will assist Wuling Hongguang in its strengths, addressing its weaknesses, and achieving continuous improvement in market competitive advantage and sustainable development in the fiercely competitive NEV market.

1. To explore the impact of cost-effectiveness advantage on market competitive advantage.
2. To explore the impact of precise market positioning on market competitive advantage.
3. To explore the impact of policy adaptability innovation on market competitive advantage.
4. To explore the impact of service network coverage on market competitive advantage.

## **1.4 Scope of the Study**

**Geographical Scope:** This study focuses on the Chinese market of Wuling Hongguang vehicles. China boasts a vast consumer base, a well-established industrial chain, and a diverse policy environment. Wuling Hongguang vehicles have an extensive sales network across China, with variations in market demand, policy support, and consumer preferences across different regions. By conducting a comprehensive study of the Chinese market, this research provides a holistic understanding of the influencing factors of Wuling Hongguang's competitive

advantage and offers references for the enterprise's nationwide market layout and strategy formulation.

**Research Sample Scope:** This study encompassed all consumers of in-sale NEV products under the Wuling Hongguang brand. These consumers are direct participants in the Wuling Hongguang NEV market, and their purchase decisions, usage experiences, and satisfaction influence Wuling Hongguang's market performance and competitive advantages. Different consumer groups have distinct characteristics and needs. For instance, factors such as age, gender, income level, and occupation can lead to differences in consumers' vehicle purchase budgets, performance requirements, and brand preferences. Through in-depth research on consumers of Wuling Hongguang NEV products, this study analyses their consumption behaviors, preference patterns, and purchase motivations, their perceptions and evaluations of cost-effectiveness advantage, precise market positioning, policy adaptability innovation, and service network coverage, and thus provides targeted suggestions for Wuling Hongguang to optimize its product strategies, enhance service quality, and strengthen market competitiveness.

**Influencing Factor Scope:** Based on Resource-Based View and Disruptive Innovation Theory, this study primarily investigates the impacts of cost-effectiveness advantage, precise market positioning, policy adaptability innovation, and service network coverage on Wuling Hongguang's competitive advantage in the NEV market. These four factors are interrelated and mutually influential, collectively forming the core factor system influencing Wuling Hongguang's market competitive advantages.

**Research Method Scope:** This study adopted a quantitative research approach, collecting data through a questionnaire and processing and analyzing the data using statistical analysis software. The questionnaire design revolved around the core research questions and influencing factors to ensure the accurate acquisition of required information. In terms of data analysis, correlation analysis and regression analysis were employed to verify the relationships between each factor and market competitive advantage, construct a structural model of the influencing factors, and test the research hypotheses. Meanwhile, this study strictly adhered to scientific research norms and academic ethics to ensure the objectivity, accuracy, and reliability of the research results.

## **1.5 Significance of the Study**

### **1.5.1 Theoretical Significance**

At the theoretical level, this study, grounded in Resource-Based View and Disruptive Innovation Theory, conducts an in-depth analysis of the influencing factors of Wuling Hongguang's competitive advantages in the NEV market, providing new



empirical cases and expansion directions for relevant theoretical research. Resource-Based View emphasizes that a firm's unique internal resources and capabilities are key to achieving competitive advantages, while Disruptive Innovation Theory focuses on how firms can disrupt existing market structures through innovation. By organically integrating these two theories and applying them to the specific field of NEVs and the enterprise of Wuling Hongguang, this study contributes to a deeper understanding of how firms can integrate internal resources and implement innovative strategies to build and sustain a competitive advantage in the NEV market. By constructing a structural model of the influencing factors of market competitive advantages and verifying the relationships among these factors, this study enriches the existing theoretical system on firm competitive advantages, offering a theoretical framework and reference basis for subsequent scholars' research in similar contexts and promoting the development and refinement of relevant disciplines such as business management and marketing.

### **1.5.2 Practical Significance**

For Wuling Hongguang, this study holds direct practical guiding value. By clearly identifying the significant impacts of cost-effectiveness advantage, precise market positioning, policy adaptability innovation, and service network coverage on market competitive advantages, the enterprise can optimize its strategies accordingly.

From an industry perspective, this study provides valuable references and insights for other enterprises in the NEV industry. Although different enterprises vary in scale, resources, and technology, they can all draw inspiration from Wuling Hongguang's successful experiences and tailor development strategies based on their own actual situations by referencing its practices in cost-effectiveness, market positioning, policy response, and service network. This will contribute to the healthy and orderly development of the entire NEV industry, encourage enterprises within the industry to continuously enhance their competitiveness, jointly tackle market challenges, and promote the advancement and popularization of NEV technologies.

At the consumer level, this study is conducive to safeguarding consumers' rights and interests and enhancing their consumption experiences. As Wuling Hongguang and other enterprises optimize their products and services based on the research findings, consumers will be able to purchase NEV products with higher cost-effectiveness and better alignment with their needs, as well as enjoy more comprehensive and convenient pre-sales, in-sales, and after-sales services. Moreover, the healthy competition among enterprises will drive continuous improvements in product quality and service levels across the entire NEV market, creating a better consumption environment for consumers and promoting consumption upgrading and sustainable development in the NEV market.

## **1.6 Definition of Key Terms**

Cost-effectiveness advantage refers to a more prominent advantage in the ratio between a product's or service's comprehensive performance, quality, functionality, etc., and its price compared to competitors.

Precise market positioning refers to the process by which an enterprise conducts detailed market research and analysis to clarify the characteristics, needs, preferences, and consumption behaviors of its target customer groups and then tailors its products or services to precisely meet the demands of this specific target market.

Policy adaptability innovation refers to an enterprise's ability to be keenly aware of and seize policy orientations when faced with relevant policies and regulations formulated by national or local governments. Through technological innovation, product innovation, management innovation, or business model innovation, the enterprise aligns its production and operation activities with policy requirements and leverages policy opportunities to achieve its own development and enhance its competitive advantages.

Service network coverage refers to the distribution range and service capabilities of the pre-sales, in-sales, and after-sales service outlets established by an enterprise for its products or services.

Market competitive advantage refers to the unique capabilities or conditions that an enterprise possesses in a specific market environment, enabling it to attract consumers, capture a larger market share, and achieve higher profits compared to its competitors in terms of products, prices, brands, services, technologies, etc.

## **Chapter 2 Literature Review**

### **2.1 Introduction**

This study conducts a systematic review of the core literature related to Resource-Based View (RBV), Disruptive Innovation Theory, and the influencing factors of market competitive advantage. This lays the foundation for defining the relationships between variables and formulating research hypotheses in this study, ensuring its scientific rigor and validity.

The literature review primarily focuses on the key components that influence market competitive advantage, specifically including cost-effectiveness advantage, precise market positioning, policy adaptability, innovation, and service network coverage. Through a comprehensive analysis of existing literature, this chapter not only provides a solid theoretical underpinning for each variable in the research model but also helps clarify the intrinsic connections among these variables, thereby offering a reliable basis for subsequent hypothesis testing.

### **2.2 Literature Review**

#### **2.2.1 Resource-Based View**

Wernerfelt, in his 1984 paper "A Resource-Based View of the Firm," introduced the concept of Resource-Based View (RBV). According to this view, a firm is an aggregation of a series of resources, encompassing physical, human, and organizational resources. Barney further developed the RBV in 1991, explicitly positing that the root of a firm's competitive advantage lies in its possession of heterogeneous resources. These resources exhibit the characteristics of value, rarity, inimitability, and non-substitutability (Lähtinen, 2020). Resources that satisfy these four attributes can confer a sustained competitive advantage upon a firm.

Numerous scholars have conducted extensive research on the relationship between resources and a firm's competitive advantage. Porter (1980) constructed a competitive strategy analysis framework based on the RBV, emphasizing that firms can achieve rents and competitive advantage by protecting their heterogeneous resources through isolation mechanisms. Factors such as the imperfect mobility of resources, pre-emption of competition, and post-entry maintenance of competitive differences are pivotal in transforming resources into competitive advantage. Christensen (1995) demonstrated through extensive case analyses that firms that effectively identify, cultivate, and leverage their core resources can secure a favorable position in the market and achieve performance superior to their competitors. Their research further corroborates the effectiveness of the RBV in explaining firm



competitive advantage.

As market environments rapidly evolve, the static RBV gradually fails to meet research demands, giving rise to Dynamic Resource-Based View (DRBV). He and Hao (2022) argued that in dynamic environments, firms need to possess the capability to integrate, build, and reconfigure internal and external resources to adapt to environmental changes and create new competitive advantages. They emphasized that dynamic capabilities are a crucial source of sustained competitive advantage for firms, addressing the limitations of the traditional RBV in dynamic contexts. Chen et al. (2023) highlighted that firms should not only focus on the value of existing resources but also emphasize the dynamic evolution and innovation of resources, continuously updating and upgrading them to maintain a competitive advantage.

RBV has been widely applied and validated across various industries. In the manufacturing sector, Mathews' (2019) research indicates that manufacturing firms can enhance production efficiency and reduce costs by possessing advanced production technologies, efficient supply chain management, and high-quality raw materials, thereby gaining a competitive advantage. In the service sector, Li et al. (2022) pointed out that the core resources of service firms lie in their employees' knowledge and skills, customer relationship management capabilities, and unique service processes, which can provide customers with differentiated service experiences and enhance market competitiveness. In the high-technology industry, Zhang et al. (2024) underscored the importance of firms' R&D capabilities and technological innovation capabilities as key resources. Firms with strong R&D strength and an innovative culture can introduce new products and technologies more rapidly, leading industry development trends.

Strategic alliances, as an important means for firms to acquire external resources and enhance competitiveness, are closely related to the RBV. Liu et al. (2024) argued that firms can obtain complementary resources from partners through strategic alliances, achieving optimal resource allocation and sharing, thereby enhancing their competitive advantage. They note that factors such as alliance partner selection, alliance structure design, and alliance management influence the effectiveness of resource integration and alliance stability. Okamuro et al. (2018) analyzed how firms can protect their core resources while acquiring external resources in strategic alliances to achieve mutually beneficial outcomes. Their research shows that reasonable resource protection and sharing mechanisms are key to the success of strategic alliances.

Despite its significant achievements in the field of firm competitive advantage research, the RBV has also faced criticism from some scholars. Wang et al. (2024) pointed out that the RBV overemphasizes the heterogeneity of resources while neglecting the roles of market demand and firm strategy, potentially leading firms to focus excessively on internal resources and overlook external market opportunities. Future research can further integrate the RBV with other theoretical perspectives,

such as market demand theory and institutional theory, to provide a more comprehensive explanation of the sources of firm competitive advantage. With the advent of the digital age, the importance of new types of resources, such as data and information resources, is increasingly prominent. How to incorporate these new resources into the research framework of the RBV is also an important direction for future research.

### **2.2.2 Disruptive Innovation Theory**

Christensen (1995) first formally proposed the Disruptive Innovation Theory in his book "Disruptive Technologies: Catching the Wave," opening up a new perspective for research on firm innovation and competition. He posited that disruptive innovation disrupts existing market structures and industry rules by offering new performance combinations or entirely new value propositions. Using the disk drive industry as an example, Christensen elaborated in detail how incumbent firms, by focusing on sustaining innovations, overlook the potential threats of disruptive technologies and are eventually replaced by emerging firms, laying a solid foundation for subsequent theoretical development. Subsequently, in his 1997 book "The Innovator's Dilemma," Christensen further systematically elaborated on the theory, deeply analyzing the dilemmas faced by incumbent firms when confronted with disruptive innovation and their coping strategies, sparking widespread attention in academia and industry.

Numerous scholars have conducted in-depth research on the types and characteristics of disruptive innovation. Lee et al. (2020) classified disruptive innovation into low-end disruption and new-market disruption. Low-end disruption occurs when emerging firms enter the market with lower-priced, lower-performance products, satisfying the needs of price-sensitive customers with relatively low performance requirements, gradually eroding the market share of incumbent firms. New market disruption involves creating entirely new markets and value networks, attracting customers not served by traditional markets. Zhao et al. (2024) noted that disruptive innovation typically features simple technology, low cost, initially low performance, but rapid improvement speed, enabling it to enter the market from the periphery and gradually pose a threat to mainstream markets (Corsi & Minin, 2020).

Regarding the driving factors of disruptive innovation, scholars have explored them from various perspectives. Xiong et al. (2022) emphasized the role of open innovation in promoting disruptive innovation, arguing that firms can accelerate the R&D and commercialization processes of disruptive technologies by collaborating with external innovation entities to acquire more technologies, knowledge, and resources. Huang et al. (2023) considered changes in market demand as an important driver of disruptive innovation. When existing markets fail to meet consumers' new or potential needs, emerging firms have the opportunity to provide entirely new solutions

through disruptive innovation. Additionally, factors such as government policies and socio-cultural elements also influence innovation. For example, government support policies for the new energy industry have promoted disruptive innovation development in the new energy vehicle sector.

In the context of disruptive innovation, the strategic choices of incumbent and emerging firms are a key focus of research. Ye et al. (2025) pointed out that incumbent firms often fall into the "innovator's dilemma" when faced with disruptive innovation threats, worrying that disruptive technologies may affect the profits of existing businesses while also fearing the loss of new market opportunities. They propose that incumbent firms can adopt strategies such as establishing independent business units or collaborating with emerging firms to cope with disruptive innovation. Liu et al. (2024) suggested that emerging firms should focus on the R&D and market cultivation of disruptive technologies, avoiding direct competition with incumbent firms in mainstream markets, and gradually accumulate resources and capabilities to achieve a transition from the periphery to the mainstream. Through case studies of firms, He and Hao (2022) found that flexible organizational structures and rapid market response capabilities are key factors for the success of emerging firms in disruptive innovation.

As research progresses, Disruptive Innovation Theory continues to be expanded and applied. Zeng et al. (2023) combined business model innovation with disruptive innovation, proposing the concept of disruptive business models and emphasizing the creation of new value delivery methods and profit models through innovative business models to achieve disruptive innovation. In the healthcare industry, Peng et al. (2022) applied Disruptive Innovation Theory to analyze the industry's transformation trends, pointing out that digital healthcare, telemedicine, and other disruptive innovations will change traditional healthcare service models, improving the efficiency and quality of healthcare services. Furthermore, Disruptive Innovation Theory has been applied to multiple fields, such as education and finance, providing theoretical guidance and practical references for innovation and development in these industries.

### **2.2.3 Market Competitive Advantage**

Porter (1980), in his book "Competitive Strategy," laid the foundation for research on market competitive advantage. He proposes three basic strategies for firms to gain a competitive advantage: cost leadership, differentiation, and focus. The cost leadership strategy enables firms to offer products or services at lower costs than competitors, thereby gaining an advantage in price competition. The differentiation strategy emphasizes satisfying consumers' special needs by providing unique product or service features, forming a differentiation advantage. The focus strategy centers on specific market segments, offering specialized products or services to those markets. From the perspective of the RBV, Kuncoro & Suriani (2018) argued that a firm's

competitive advantage stems from its possession of heterogeneous resources with the characteristics of value, rarity, inimitability, and non-substitutability, enabling the firm to stand out in market competition by effectively utilizing these resources.

Featherman et al. (2021) emphasized that firms need to possess the capability to integrate, build, and reconfigure internal and external resources to maintain and enhance competitive advantage in dynamically changing market environments. They note that the increasing uncertainty, complexity, and ambiguity of market environments make it difficult for firms to rely solely on static resource advantages to maintain long-term competitiveness. Lhtinen (2020) argued that a firm's competitive advantage will change with alterations in market structure, technological progress, and consumer demand. Firms must continuously innovate and adjust strategies to adapt to market dynamics; otherwise, they will diminish.

The research shows that technological innovation is an important driver for firms to gain a market-competitive advantage (Sun et al., 2023). Through technological innovation, firms can develop new products, improve production processes, enhance product quality, and reduce production costs, thereby obtaining advantages in price, quality, and functionality in the market. Apple Inc., through continuous technological innovation, has introduced innovative smartphone products, led the global smartphone market and occupied a significant share of the high-end market (Huang et al., 2023). Xiong et al. (2022) believed that technological innovation includes not only product technological innovation but also management innovation, business model innovation, and other forms that synergistically build competitive advantage for firms.

Ye et al. (2025) considered brand an important source of a firm's market competitive advantage. A strong brand can establish a unique image and perception in consumers' minds, enhancing consumers' loyalty and preference for the brand, thereby bringing premium revenue and stable market share growth to the firm. The research emphasizes the importance of brand identity systems (Liu et al., 2024). They argue that firms can enhance brand recognition and competitiveness by constructing a clear and consistent brand identity. Brand building can also expand brand influence and enhance market competitive advantage through strategies such as brand extension and brand alliance.

Many scholars have devoted themselves to research on measurement and evaluation methods for market competitive advantage. Kaplan and Norton's (1992) Balanced Scorecard provided a comprehensive framework for firms to evaluate market competitive advantage. The Balanced Scorecard assesses a firm's performance and competitive advantage from four dimensions: finance, customers, internal business processes, and learning and growth. Additionally, some scholars use indicators such as market share, profit margin, and customer satisfaction to measure a firm's market competitive advantage. However, these indicators have certain limitations, as a single indicator cannot comprehensively reflect a firm's competitive



advantage status. Therefore, employing multiple indicators and methods for comprehensive evaluation can more accurately grasp a firm's market competitive advantage.

#### **2.2.4 Cost-Effectiveness Advantage**

Cost-effectiveness advantage refers to a more prominent advantage in the ratio between the comprehensive value (including performance, quality, functionality, etc.) of a product or service and its price compared to competitors. Kotler (2000) pointed out in 2000 that cost-effectiveness is one of the important factors' consumers consider in the purchase decision-making process, as consumers generally hope to obtain higher value at a lower price. Cost-effectiveness advantage not only focuses on the price of the product but also emphasizes the overall value it can provide, including basic functions, additional functions, quality, reliability, and after-sales service. By offering high-cost-effective products or services, firms can attract more value-conscious consumers and increase market share.

From a cost perspective, firms can reduce product costs by optimizing production processes, lowering procurement costs, and improving production efficiency, thereby lowering product prices while maintaining product performance and quality to form a cost-effectiveness advantage. Firms can achieve effective cost control by optimizing and integrating various links in the value chain. From a value creation perspective, firms can enhance product cost-effectiveness by improving product performance and quality and increasing added value through technological innovation and product differentiation (Ling et al., 2023).

In the purchase decision-making process, consumers often comprehensively consider product cost-effectiveness. Wielage et al. (2016) argued that consumers' perception of cost-effectiveness is influenced by multiple factors, including personal income level, consumption concept, and product knowledge. Consumers with lower income levels pay more attention to product prices and have higher requirements for cost-effectiveness, while consumers with higher income levels focus more on product performance and quality, but also choose products with lower prices among those with equivalent performance and quality. Consumers' consumption concepts also affect their judgment of cost-effectiveness, with practical consumers more inclined to choose high cost-effectiveness products. Firms need to deeply understand consumers' needs and preferences and formulate corresponding cost-effectiveness strategies based on the characteristics of different consumer groups.

In the manufacturing sector, cost-effectiveness advantage is particularly important. In the automotive industry, some domestic brands have attracted a large

number of consumers by improving product quality and technological levels while controlling costs, launching models with high cost-effectiveness. For example, Geely Auto has significantly improved its product performance and quality through continuous technological innovation and brand upgrading, while offering more competitive prices compared to joint venture brands, thus occupying a certain market share (Mathews, 2019). In the service sector, cost-effectiveness advantage is also crucial. In the online education industry, some platforms attract a large number of students and parents by providing high-quality course content, personalized learning services, and reasonable prices. These platforms reduce costs and ensure teaching quality by optimizing teaching resource allocation and improving teaching efficiency, achieving high-cost-effective services.

With intensifying market competition and continuous technological progress, firms face numerous challenges in maintaining a cost-effectiveness advantage. On the one hand, competitors may launch more cost-effective products through imitation or innovation, seizing market share. On the other hand, factors such as rising raw material prices and increasing labor costs may lead to higher firm costs, affecting product cost-effectiveness (Peng et al., 2022). To maintain a cost-effectiveness advantage, firms need to innovate and optimize. Firms can increase R&D investment, improve production automation levels, and reduce production costs; strengthen market research, promptly understand changes in consumer demand, and continuously improve product performance and quality to enhance product added value. Additionally, firms can also enhance their competitiveness and consolidate cost-effectiveness advantage by optimizing supply chain management and strengthening brand building (Xiong et al., 2022).

### **2.2.5 Precise Market Positioning**

Dudhat and Mariyanti (2022) defined market positioning as the process by which a firm shapes a specific image and status for its product or service in the minds of target customers, distinguishing it from competitors' products or services. Precise market positioning is the foundation for firms to formulate marketing strategies, enabling them to concentrate resources, meet the needs of specific target customer groups, and improve marketing efficiency and effectiveness. Through precise market positioning, firms can better understand the needs, preferences, and purchasing behaviors of target customers, thereby developing products or services that better meet market demand and improving customer satisfaction and loyalty.

Kotler and Keller (2006) proposed the STP marketing strategy model, which included three steps: market segmentation, target market selection, and market positioning. Market segmentation involves dividing the market into several segments based on consumers' needs, behaviors, and characteristics (Zhao et al., 2024). Target market selection is the process by which firms choose one or more segments from the



segmented markets as target markets. Market positioning is the process by which firms determine a unique market position for the selected target markets. The core of precise market positioning is to meet consumer needs. Maslow's (1943) Hierarchy of Needs Theory divided human needs into five levels: physiological needs, safety needs, social needs, esteem needs, and self-actualization needs. When conducting market positioning, firms need to deeply understand the characteristics of target customers and develop products or services that can meet their specific needs. High-end luxury brands primarily meet consumers' esteem and self-actualization needs by providing high-quality, uniquely designed products and premium shopping experiences, shaping a high-end and luxurious brand image. In contrast, some mass-market consumer brands focus more on meeting consumers' physiological and safety needs, offering cost-effective products.

In different market environments, precise market positioning strategies and methods vary. In mature markets with competition and relatively stable consumer demand, firms should adopt differentiated positioning strategies to highlight their advantages (Featherman et al., 2021). In the smartphone market, Apple positions itself as high-end and innovative, offering quality products and experiences, while Xiaomi positions itself as high-cost-effective, meeting the needs of price-sensitive consumers who pursue performance (Kumar, 2015). In emerging markets where consumer demand has not yet fully formed, firms can adopt a first-mover positioning strategy to seize market share. Some new energy vehicle enterprises, in the early stages of market development, attracted a large number of consumers concerned about environmental protection and technology by positioning themselves as environmentally friendly and technologically advanced brands.

Market environments and consumer needs are constantly changing, and firms need to adjust their market positioning promptly based on these changes. Firms can achieve adjustment of market positioning through strategies such as market penetration, market development, product development, and diversification. When market demand changes, firms can adjust product functions or launch new products to meet new market needs. When competitors launch new products or services, firms can re-examine their market positioning and seek differentiated competitive advantages.

## **2.2.6 Policy Adaptability Innovation**

Policy adaptability innovation refers to the process by which firms, in response to relevant policies and regulations issued by national or local governments, keenly capture policy orientations and enable their production and operation activities to comply with policy requirements through technological innovation, product innovation, management innovation, or business model innovation, thereby achieving self-development and enhancing competitive advantage by leveraging policy opportunities (Sun 2013; Wang et al., 2024). With economic development and social

progress, governments issue a series of policies and regulations to achieve macroeconomic regulation, industrial upgrading, environmental protection, and other objectives, which have a significant impact on firms' production and operation activities. Firms should implement policy changes and engage in innovative transformation (Okamuro et al., 2018).

Government policies are external drivers of policy adaptability and innovation. Governments guide firms' development directions through formulating industrial policies, environmental policies, and technological policies. For example, to promote the development of the new energy vehicle industry, governments have introduced policies such as purchase subsidies, tax incentives, and license plate registration, encouraging firms to increase R&D and production investment in new energy vehicles. When faced with these policies, firms need to actively respond by engaging in technological innovation and product innovation to develop new energy vehicle products that meet policy requirements (Dudhat & Mariyanti, 2021; Kuncoro & Suriani, 2018). Government regulatory policies also prompt firms to engage in management innovation and compliant operations, improving operational efficiency and management levels.

Policy adaptability innovation can be classified into various types, including technology-oriented, product-oriented, management-oriented, and business model-oriented innovations. Technology-oriented innovation involves firms developing new technologies to meet policy-mandated technical standards. For example, in the context of increasingly stringent environmental policies, steel firms have increased R&D investment in energy-saving and emission-reduction technologies to reduce pollutant emissions (Zhang et al., 2024; Sun et al., 2023). Product-oriented innovation involves firms developing new products or improving existing products according to policy requirements. For example, home appliance firms have launched energy-efficient home appliance products that meet energy efficiency standards. Management-oriented innovation involves firms optimizing internal management processes to improve management efficiency and comply with policy and regulatory requirements (Han & Sun, 2024). Business model-oriented innovation involves firms creating new value delivery methods and profit models through innovative business models to achieve a win-win situation between policy objectives and firm interests. For example, shared bicycle firms have solved the "last-mile" problem of urban travel through a shared economy model while also complying with government-advocated green travel policies.

Firms face numerous obstacles in the process of policy innovation. In terms of technological obstacles, the lack of key technology R&D capital and talent makes it difficult to prompt technologies and prod that that meet policy requirements. In terms of financial obstacles, policy adaptability innovation often requires significant financial investment, and some small and medium-sized enterprises may face financial shortages. In terms of market obstacles, consumers may have insufficient

awareness and low acceptance of new products or services promoted by policies (Lee et al., 2020). To overcome these obstacles, firms can strengthen cooperation with universities and research institutions to introduce external technologies and talents. Firms should actively seek government financial support and policy preferences. Firms need to strengthen market promotion and publicity to improve consumers' awareness and acceptance of policy-related products and services.

With the continuous improvement of policies and changes in the market environment, policy adaptability innovation will present some new trends. On the one hand, policies will place greater emphasis on guiding firms to engage in green and sustainable development innovation, promoting industrial upgrading and transformation. For example, governments may introduce stricter environmental policies to encourage firms to increase R&D and the application of environmental protection technologies. On the other hand, policies will encourage firms to engage in cross-domain and cross-industry innovation cooperation to achieve resource sharing and complementary advantages. For example, in the field of smart city construction, governments may introduce policies to encourage information technology firms to cooperate with traditional industry firms to jointly promote the intelligent development of cities. Additionally, with the development of digital technologies, policy adaptability innovation will increasingly rely on big data, artificial intelligence, and other technological means to improve innovation efficiency and precision.

### **2.2.7 Service Network Coverage**

Service network coverage refers to the distribution range and service capabilities of the pre-sales, in-sales, and after-sales service outlets established by firms for their products or services. Extensive and well-established service network coverage can provide consumers with convenient services, solve various problems consumers encounter during the car purchase and usage processes, and improve consumer satisfaction and loyalty (Ling et al., 2023). For firms, a good service network coverage can enhance brand image, improve market competitiveness, and promote product sales and market share expansion. If an automotive firm has established a wide range of service outlets across the country, consumers will be more confident when purchasing cars, knowing that they can receive timely vehicle maintenance and repair services when problems arise.

When constructing service network coverage, firms need to consider multiple factors. Firms should reasonably plan the layout of service outlets based on the distribution of target markets and consumer demand characteristics. In densely populated areas with strong consumer demand, the number of service outlets can be appropriately increased (Zhao et al., 2024). In remote areas, firms can expand service coverage by establishing mobile service stations or cooperating with local maintenance firms. Firms should focus on the service quality and service capabilities

of service outlets. They can improve the service level of service outlets by training service personnel, introducing advanced maintenance equipment, and technologies. Firms can also use information technology to establish a service network management system for real-time monitoring and scheduling of service outlets to improve service efficiency.

Service network coverage is closely related to consumer satisfaction. Dudhat & Mariyanti's (2022) argued that the gap between consumers' perception of service quality and their expectations affects consumer satisfaction. Extensive service network coverage can reduce the time and energy costs for services, improve service timeliness and convenience, thereby narrowing the gap between consumer expectations and perceptions, and improving consumer satisfaction. For example, express delivery firms can deliver packages to consumers by establishing a wide range of service outlets and an efficient distribution system, improving consumer satisfaction with express delivery services.

### **2.3 Introduction to Wuling Hongguang Automobile**

Wuling Automobile, a well-known Chinese car brand, has consistently focused on meeting the diverse travel and cargo-carrying needs of consumers. With market insight and precise positioning, Wuling has firmly rooted itself in the mass-consumer market, especially achieving remarkable success in the commercial and family car segments. Renowned for its high effectiveness, reliability, durability, and strong practicality, the brand has amassed a vast user base and earned a favorable market reputation.

As the star model of the Wuling brand, Wuling Hongguang has shouldered the responsibility of satisfying the varied travel and cargo-carrying demands of the consumer group since its inception, becoming a household "national iconic car." This profound brand heritage provides robust brand support for Wuling Hongguang's foray into the new energy vehicle (NEV) market. The trust and recognition consumers have for the brand will facilitate the rapid market penetration of Wuling Hongguang NEVs, reducing the difficulty and cost of market promotion.

The body structure of Wuling Hongguang automobiles is meticulously designed, featuring a spacious interior. The powertrain system equipped in its traditional fuel-powered models is mature and reliable, boasting powerful performance and excellent fuel economy. When driving on urban roads, where frequent starts and stops place high demands on engine response speed and power output, the engine of Wuling Hongguang can react promptly, delivering sufficient power for easy starts and smooth acceleration. On rural roads or in mountainous areas, facing complex road conditions such as climbing hills and traversing ridges, it can effortlessly overcome various challenges with its strong torque output, ensuring stable vehicle operation. In the field



of NEVs, Wuling Hongguang is expected to continue to have precise control over power performance. Based on the characteristics of NEV models, it will develop power systems suitable for road conditions and driving scenarios, providing users with stable and reliable power support.

Wuling Hongguang automobiles have always been precisely positioned as models catering to the needs of the vast consumer group, with affordable prices and extremely high effectiveness. In the NEV market, Wuling Hongguang has adhered to a market positioning strategy, targeting consumers who are price-sensitive and prioritize practicality. This market positioning holds enormous potential. With the continuous development of NEV technology and the gradual reduction in costs, the NEV market is experiencing rapid growth. Leveraging its brand advantages, product characteristics, and price advantages, Wuling Hongguang can swiftly secure a place in this niche market and differentiate itself from competitors.

Wuling Automobile boasts an extensive and well-established sales and service network, which is a significant advantage in market competition. Wuling's sales outlets are spread across the country, allowing consumers to easily find Wuling dealers in both large cities and remote towns. This widespread sales network enables consumers to conveniently learn about and purchase Wuling Hongguang NEVs, enhancing the product's market coverage. Meanwhile, Wuling has also established a comprehensive after-sales service system, providing timely and efficient after-sales service to consumers. From vehicle maintenance and repair to spare parts supply, Wuling can offer all-around support to users, eliminating their worries. In the NEV market, a well-developed sales and service network is equally crucial, as it can enhance consumers' confidence in the brand and promote product sales and dissemination.

Wuling Automobile demonstrates strong innovation and adaptability, enabling it to keep pace with market trends and changes in consumer demand, and promptly adjust its product strategies and technological research and development directions. In the NEV field, Wuling has actively invested research and development resources, continuously exploring the application of new technologies and materials to improve the performance and quality of NEVs. For example, Wuling has made certain progress in battery technology and intelligent connectivity technology, providing technical support for the development of Wuling Hongguang NEVs. Additionally, Wuling emphasizes cooperation with upstream and downstream enterprises to jointly promote the development of the NEV industry chain and enhance its market competitiveness. This innovation and adaptability will help Wuling Hongguang maintain a leading position in the NEV market and achieve sustainable development.



## 2.4 Conceptual Framework

This study integrates Resource-Based View, Disruptive Innovation Theory, and research on factors influencing market competitive advantage. Based on the analysis of relevant research findings, this study proposes a model of factors influencing market competitive advantage. This model divides the factors influencing market competitive advantage into four dimensions: cost-effectiveness advantage, precise market positioning, policy adaptability innovation, and service network coverage. The model is shown in Figure 2.1.

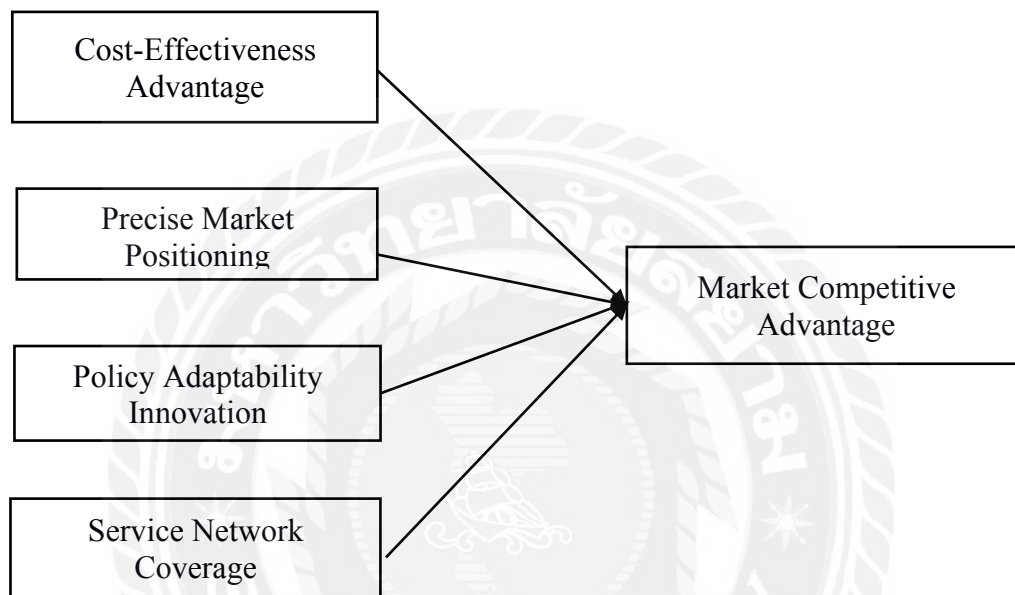


Figure 2.1 Conceptual Framework

## **Chapter 3 Research Methodology**

### **3.1 Research Design**

This study employed a quantitative research methodology. Its primary objective was to explore the factors influencing the competitive advantage of Wuling Hongguang automobiles in the new-energy vehicle (NEV) market. The research utilized a questionnaire survey approach, focusing on examining the relationships between cost-effectiveness advantage, precise market positioning, policy adaptability innovation, service network coverage, and market competitive advantage.

Data collection was conducted through a structured questionnaire using a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). Descriptive statistics were calculated, including measures such as the mean and standard deviation, to present the demographic characteristics of the sample and the distribution patterns of each core variable. Correlation analysis was carried out using the Pearson correlation coefficient to test the strength of associations between variables. Multiple regression analysis was performed by constructing a regression model to evaluate the effects of cost-effectiveness advantage, precise market positioning, policy adaptability innovation, and service network coverage on the factors influencing market competitive advantage.

To ensure the scientific rigor of the research methodology, SPSS software was used to conduct reliability and validity tests on the questionnaire, thereby guaranteeing the reliability of the measurement instruments. The research design emphasized the objective revelation of the influence mechanism of market competitive advantage through systematic verification.

### **3.2 Population and Sample**

The research population defined in this study consisted of consumers of Wuling Hongguang automobiles. The research focused on the consumer group that has awareness of and purchasing behavior towards Wuling Hongguang automotive products. The selection of this group held significant importance from multiple perspectives. These consumers are not only direct witnesses to the market performance of Wuling Hongguang automobiles but also actual experiencers and feedback providers of its competitive advantage in the end market.

From the cognitive perspective, these consumers have varying degrees of understanding of aspects such as the brand image, product characteristics, and technological advantages of Wuling Hongguang automobiles. They acquire information through multiple channels, including advertising campaigns, recommendations from friends, online reviews, and offline test-drive experiences. The

formation process of this cognition reflects the effectiveness of Wuling Hongguang automobiles in market promotion and brand building, while also providing a rich source of information for an in-depth exploration of the factors influencing its competitive advantage.

In terms of purchasing behavior, these consumers make purchasing decisions based on their own needs, budgets, and their cognition of Wuling Hongguang automobiles. Their decision-making process is influenced by a combination of factors, encompassing product price, cost-effectiveness, after-sales service, and brand reputation. By studying the purchasing behavior of these consumers, it is possible to clearly identify the key factors that attract consumers to Wuling Hongguang automobiles in the market competition and how these factors interact to form its unique competitive advantage.

Focusing on this specific consumer group also enables an in-depth exploration of their satisfaction and loyalty levels during the use of Wuling Hongguang NEVs. Consumer satisfaction with a product depends not only on the product's performance and quality but also on factors such as after-sales service and brand image. Loyalty, on the other hand, reflects consumers' long-term recognition and continuous purchasing intention towards Wuling Hongguang automobiles, serving as an important indicator for measuring the sustainability of a company's competitive advantage. By studying this group, key factors influencing consumer satisfaction and loyalty were identified, thereby providing targeted suggestions and strategies for Wuling Hongguang automobiles to enhance its competitive advantage and consolidate its market position.

The size of the research population in this study exceeds 100,000 individuals. According to the sample size calculation table proposed by Cochran (1977), under the conditions of a 95% confidence level ( $Z = 1.96$ ) and a 5% margin of error ( $e = 0.05$ ), taking into account the characteristics of the research population and the precision requirements for subsequent statistical analysis, the Cochran (1977) sample size calculation formula (applicable to large populations,  $N \geq 100,000$ ) was applied.

$$n = \frac{Z^2 \cdot p \cdot (1 - p)}{e^2}$$

Where:

$$Z = 1.96$$

$$p = 0.5$$

$$e = 0.05$$

Substituting the aforementioned parameters into the formula yields:

$$n_0 = \frac{Z^2 \cdot p \cdot (1 - p)}{e^2} = \frac{(1.96)^2 \times 0.5 \times 0.5}{(0.05)^2} = 384.16 \approx 385$$

Since the sample size must be an integer, the recommended minimum sample size was 385 individuals. However, in practical operations, considering the potential existence of non-responses (where some respondents do not reply after receiving the questionnaire) and invalid data (such as incomplete questionnaire filling or logical errors), to ensure the acquisition of a sufficient number of valid samples in the end, it was advisable to distribute 400 questionnaires.

This sample size not only met the requirements of statistical analysis but also enhanced the reliability and generalizability of the results. To ensure the diversity and breadth of the sample, data were collected through online channels. Online data were mainly obtained via social media platforms, utilizing Wenjuanxing for data collection.

### 3.3 Hypothesis

This study aims to verify, through factor analysis, the specific impacts of cost-effectiveness advantage, precise market positioning, policy adaptability innovation, and service network coverage on market competitive advantage, thereby providing theoretical support and practical guidance for enhancing market competitive advantage. Therefore, this study proposes the following hypotheses:

H1: Cost-effectiveness advantage has a significant impact on market competitive advantage.

H2: Precise market positioning has a significant impact on market competitive advantage.

H3: Policy adaptability innovation has a significant impact on market competitive advantage.

H4: Service network coverage has a significant impact on market competitive advantage.

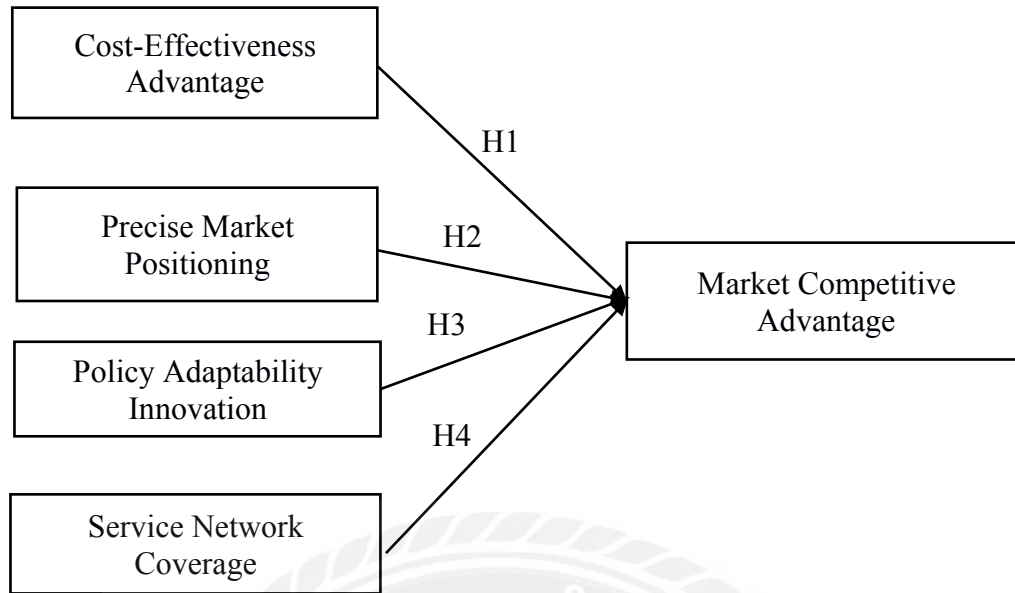


Figure 3.1 Hypotheses

### 3.4 Research Instrument

A questionnaire was designed to investigate the market situation of Wuling Hongguang automobiles.

The questionnaire designed for cost-effectiveness advantage aimed to measure consumers' perceptions of the relationship between the price and performance of Wuling Hongguang new-energy vehicles. Given that consumers of new-energy vehicles are concerned about the purchase price, usage costs, and long-term value, the items cover price competitiveness, performance advantages, usage economy, maintenance costs, and overall cost-effectiveness evaluation.

The item design for precise market positioning intends to examine whether the market positioning of Wuling Hongguang new-energy vehicles aligns with the needs of target consumers. As this brand targets urban and rural residents and price-sensitive groups, its strength lies in accurately grasping the consumption characteristics of the micro-electric vehicle niche market. These items can verify whether Wuling Hongguang has truly achieved market segmentation and precise positioning, thus gaining a competitive edge in the market.

The questionnaire design for policy adaptability innovation is based on the high policy-dependency characteristic of the new-energy vehicle industry. The measurement items focus on examining Wuling Hongguang's responsiveness to policy changes and the adaptability of technological innovation. The items revolve around policy response speed, compliance with environmental protection and



energy-saving standards, and adaptability to subsidy policies. These measurements can reveal whether Wuling Hongguang can promptly leverage policy advantages and carry out corresponding product and technological innovations.

The design of service network coverage focuses on the impact of the after-sales service system on consumers' vehicle purchase and usage experiences. Considering the strong dependence of new-energy vehicles on battery maintenance and after-sales support, the items cover the breadth of service network layout, service accessibility, satisfaction with coverage, after-sales response speed, relative advantages of the service network, and overall consumer satisfaction.

Market competitive advantage, as the dependent variable, reflects consumers' evaluations of Wuling Hongguang's overall competitive position in the new-energy vehicle market. Six items are designed including competitive position, market influence, competitive response ability, brand attractiveness, sales and market share performance, and expectations of future competitive advantages to comprehensively assess Wuling Hongguang's overall performance in the market.

The questionnaire comprises a total of 34 items and is divided into two main sections:

The first section contains 4 questions, focusing on the respondents' basic information, including age, gender, occupation, and monthly income.

The second section consists of 30 questions, primarily targeting the factors influencing market competitive advantage. Corresponding items are set from the perspectives of cost-effectiveness advantage, precise market positioning, policy adaptability innovation, service network coverage, and market competitive advantage, as detailed in Table 3.1.

Table 3.1 Measurement Items

| No | Measurement Item                                                                                                            |
|----|-----------------------------------------------------------------------------------------------------------------------------|
|    | <b>Cost-Effectiveness Advantage</b>                                                                                         |
| 1  | The selling price of Wuling Hongguang new-energy vehicles is more appealing compared to similar brands.                     |
| 2  | Wuling Hongguang new-energy vehicles offer superior performance at the same price level.                                    |
| 3  | I believe that the overall cost-effectiveness of Wuling Hongguang new-energy vehicles outperforms that of competing brands. |
| 4  | Wuling Hongguang new-energy vehicles exhibit outstanding economic performance in daily use.                                 |
| 5  | Wuling Hongguang new-energy vehicles hold an edge in terms of maintenance and repair costs.                                 |
| 6  | Taking into account both price and value, I am more inclined to choose                                                      |

|    |                                                                                                                                                            |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | Wuling Hongguang new-energy vehicles.                                                                                                                      |
|    | <b>Precise Market Positioning</b>                                                                                                                          |
| 7  | The product characteristics of Wuling Hongguang new-energy vehicles align with the needs of target consumers.                                              |
| 8  | The market positioning of Wuling Hongguang new-energy vehicles closely caters to the daily travel requirements of urban and rural residents.               |
| 9  | I consider that Wuling Hongguang new-energy vehicles have a leading edge in the micro-electric market.                                                     |
| 10 | The positioning of Wuling Hongguang new-energy vehicles can effectively attract price-sensitive consumers.                                                 |
| 11 | The market promotion of Wuling Hongguang new-energy vehicles is highly consistent with its target consumer groups.                                         |
| 12 | Consumers believe that the positioning of Wuling Hongguang new-energy vehicles aligns with their lifestyles.                                               |
|    | <b>Policy Adaptability Innovation</b>                                                                                                                      |
| 13 | Wuling Hongguang new-energy vehicles can promptly respond to changes in national new-energy policies.                                                      |
| 14 | The design and functions of Wuling Hongguang new-energy vehicles comply with the policy requirements for environmental protection and energy conservation. |
| 15 | Wuling Hongguang new-energy vehicles demonstrate good adaptability to new-energy subsidy policies.                                                         |
| 16 | The research and development of Wuling Hongguang new-energy vehicles reflect active innovation in line with policy orientations.                           |
| 17 | The government's new energy policies have enhanced my trust in Wuling Hongguang new-energy vehicles.                                                       |
| 18 | The technological upgrades of Wuling Hongguang new-energy vehicles can meet the trend requirements of future policies.                                     |
|    | <b>Service Network Coverage</b>                                                                                                                            |
| 19 | The sales and service network of Wuling Hongguang new-energy vehicles is widely distributed.                                                               |
| 20 | I can easily find after-sales service points in my city or the surrounding areas.                                                                          |
| 21 | The service network of Wuling Hongguang new-energy vehicles can satisfy the needs of most users.                                                           |
| 22 | The after-sales service response of Wuling Hongguang new-energy vehicles is relatively fast.                                                               |
| 23 | I believe that the service coverage of Wuling Hongguang new-energy vehicles has an advantage over similar brands.                                          |
| 24 | I am satisfied with the convenience of the service network of Wuling Hongguang new-energy vehicles.                                                        |
|    | <b>Market Competitive Advantage</b>                                                                                                                        |
| 25 | Wuling Hongguang new-energy vehicles hold a relatively strong                                                                                              |

|    |                                                                                                                         |
|----|-------------------------------------------------------------------------------------------------------------------------|
|    | competitive position in the new-energy market.                                                                          |
| 26 | I believe that the market influence of Wuling Hongguang new-energy vehicles is higher than that of some similar brands. |
| 27 | Wuling Hongguang new-energy vehicles can effectively cope with the competitive pressure in the new-energy market.       |
| 28 | The brand image of Wuling Hongguang new-energy vehicles is attractive in the market.                                    |
| 29 | Wuling Hongguang new-energy vehicles have shown remarkable performance in terms of sales volume and market share.       |
| 30 | I believe that Wuling Hongguang new-energy vehicles will maintain strong market competitive advantages in the future.   |

### 3.5 Reliability and Validity Analysis of the Scale

#### 3.5.1 Questionnaire Reliability Analysis

Table 3.2 Reliability Evaluation Criteria

| Cronbach's Alpha Value   | Reliability         |
|--------------------------|---------------------|
| Cronbach's Alpha<0.6     | Unreliable          |
| 0.6<Cronbach's Alpha<0.7 | Moderately Reliable |
| 0.7<Cronbach's Alpha<0.8 | Relatively Reliable |
| Cronbach's Alpha>0.8     | Highly Reliable     |

Reliability measures the degree of consistency in test results. It reflects the stability of a measurement tool across different time points or samples, that is, whether consistent results can be obtained for the same measurement object under similar conditions. For this study, the widely used Cronbach's Alpha coefficient in questionnaire analysis was employed to evaluate the internal consistency of the overall questionnaire and its individual sub-items. Cronbach's Alpha is a reliable method for reliability testing, capable of assessing the degree of intercorrelation among a set of items. Generally, it is considered that when the Cronbach's Alpha coefficient is above 0.7, the reliability of the measurement tool is satisfactory; if the coefficient approaches or exceeds 0.8, it indicates that the questionnaire has excellent internal consistency.

Reliability tests were conducted on each variable, with the results presented in Table 3.3. The reliability coefficients for all dimensions in this study are greater than 0.85, and the overall reliability is 0.888. This indicates that the questionnaire design exhibits strong internal consistency and is suitable for subsequent data analysis.

The Cronbach's Alpha for the dimension of cost-effectiveness advantage is 0.855, suggesting that the six items within this dimension can stably reflect consumers' perceptions of the match between the price and performance of new-energy vehicles.

The Cronbach's Alpha for precise market positioning is 0.870, demonstrating that the items in this dimension have high consistency and can effectively measure the advantages of Wuling Hongguang in terms of target market fit and niche market positioning. The reliability coefficient for policy adaptability innovation is 0.850, indicating that the item design in this dimension shows good stability in measuring policy responsiveness and technological innovation capabilities. The Cronbach's Alpha value for service network coverage is 0.859, implying that this dimension can reliably reflect consumers' perceptions of service outlet layout, service accessibility, and after-sales support. The Cronbach's Alpha for market competitive advantage is 0.871, revealing that this dimension has strong consistency in capturing competitiveness and future competitive prospects.

In terms of overall reliability, the Cronbach's Alpha value for the 30 items is 0.888, which is higher than the recommended standard of 0.80 and significantly above the minimum threshold of 0.70. This demonstrates that the entire questionnaire scale possesses strong internal consistency and reliability, providing solid data support for subsequent validity tests, correlation analyses, and structural equation modeling.

Table 3.3 Variable Reliability Test

| Variables                      | Cronbach's Alpha | N of Items |
|--------------------------------|------------------|------------|
| Cost-Effectiveness Advantage   | 0.855            | 6          |
| Precise Market Positioning     | 0.870            | 6          |
| Policy Adaptability Innovation | 0.850            | 6          |
| Service Network Coverage       | 0.859            | 6          |
| Market Competitive Advantage   | 0.871            | 6          |
| Total                          | 0.888            | 30         |

### 3.5.2 Questionnaire Validity Analysis

Table 3.4 KMO and Bartlett's Test

|                                                 |                    |       |
|-------------------------------------------------|--------------------|-------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy |                    | 0.872 |
| Bartlett's Test of Sphericity                   | Approx. Chi-Square | 4306  |
|                                                 | df                 | 3411  |
|                                                 | Sig.               | 0.000 |

This study employed the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity. The KMO value serves to assess the suitability of the sample data. When the KMO value approaches 1, it indicates a strong correlation among variables, and the effectiveness of factor analysis is relatively high. If the KMO value is below 0.60, it suggests that the data are not appropriate for factor analysis (Kaiser, 1974). From the results, the KMO test value is



0.872, significantly exceeding the favorable benchmark of 0.80. This implies that there is a strong correlation among the items, and the data are suitable for factor extraction.

Bartlett's Test of Sphericity was used to examine whether the correlation matrix is an identity matrix. If the correlation matrix is an identity matrix, it indicates that there is no significant correlation among variables, and factor analysis is not appropriate. In this study, the approximate chi-square value of Bartlett's Test of Sphericity is 4306, with degrees of freedom of 3411 and a significance level (Sig.) of 0.000, which is substantially less than 0.05. This result demonstrates a significant difference between the correlation matrix and the identity matrix. There is a strong correlation among variables, and factor analysis is statistically significant. The KMO value reaches a high level, and Bartlett's Test of Sphericity also meets the significance criterion. The scale is statistically suitable for Confirmatory Factor Analysis (CFA).

The Varimax Rotation (Maximum Variance Method) was applied to rotate the factor loadings. The reason for selecting the Varimax Rotation is that this method can maximize the variance among variables included in each factor. This enables the loadings of each item on a particular factor to be as high as possible while keeping the loadings on other factors as low as possible, thereby obtaining a clearer factor interpretation structure. The factor analysis results reveal that five main factors were extracted, which are highly consistent with the five theoretically set dimensions.

The factor analysis corresponds to cost-effectiveness advantage, precise market positioning, policy adaptability and innovation, service network coverage, and market competitive advantage, respectively.

The rotated factor loadings are all greater than 0.60, and the loadings of each item on its corresponding factor are significantly higher than those on other factors. This indicates that the items can be well aggregated under the preset dimensions, with a clear structural distinction. The cumulative variance explained rate of the five factors reaches 66.77% (usually acceptable when  $> 50\%$ ), suggesting that the extracted factors can effectively explain the overall variation in the sample data.

### **3.6 Data Collection**

This study adopted a quantitative approach. Consumers of Wuling Hongguang vehicles were selected as the research subjects, and data collection was conducted from June 2025 to July 2025. The distribution and collection of questionnaires were mainly carried out through the online platform Wenjuanxing to ensure that the sample covered different age groups, genders, occupations, and monthly incomes. A sample size of 400 was selected, and a total of 400 questionnaires were distributed. During the questionnaire recovery process, the research team conducted rigorous checks to eliminate invalid questionnaires, including those that were incomplete or had



obviously inconsistent answers. A total of 345 valid questionnaires were obtained, with an effective rate of 86.25%. Descriptive statistical analysis, reliability and validity analysis, factor analysis, and regression analysis were conducted on the recovered valid samples.

## **3.7 Data Analysis**

### **3.7.1 Descriptive Statistics**

Descriptive statistical analysis focuses on conducting an in-depth exploration of personal background information, aiming to comprehensively understand the distribution characteristics of the demographic data of consumers of Wuling Hongguang new-energy vehicles. In this study, the background variables involved age, gender, occupation, and monthly income.

### **3.7.2 Factor Analysis**

Factor analysis is a data analysis method that reveals the underlying structure among variables. Before conducting factor analysis, this study used the KMO test and Bartlett's Test of Sphericity to determine whether the data were suitable for factor analysis. In this study, the KMO value is 0.862, greater than 0.8, indicating a strong correlation among variables. The significance level of Bartlett's Test of Sphericity is 0.000, rejecting the null hypothesis. There is a significant correlation among variables. Based on the combined results of these two tests, the data are suitable for factor analysis.

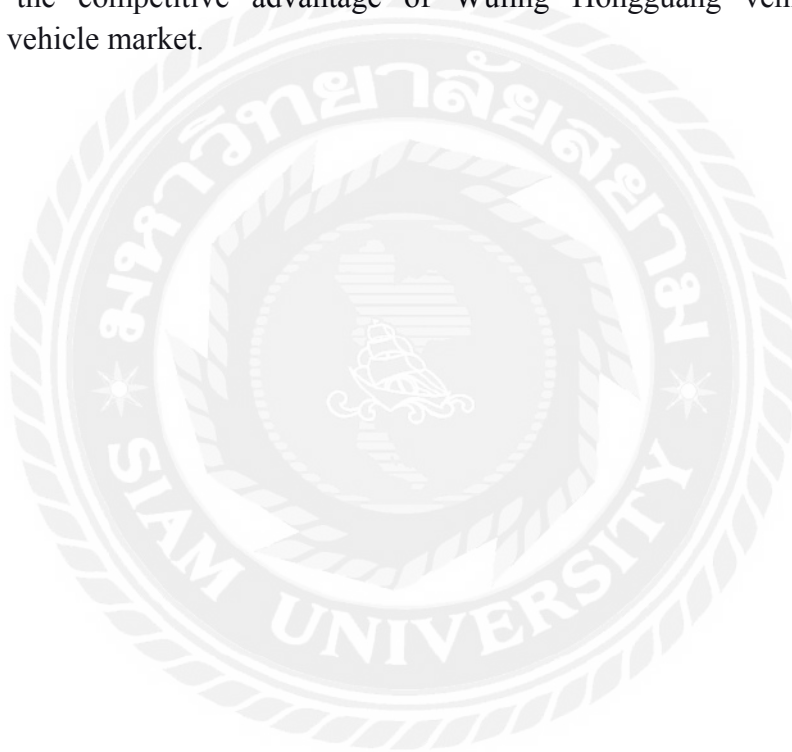
### **3.7.3 Correlation Analysis**

Correlation analysis was employed to examine the linear relationship and its direction among variables, providing a theoretical basis for regression analysis. By calculating the Pearson correlation coefficient between each potential variable and the dependent variable (market competitive advantage), it can be determined whether each dimension has a statistically significant positive or negative relationship. Correlation analysis can display the degree and direction of the correlation between independent and dependent variables, and whether there are potential associations among variables. It helps to identify the issue of multicollinearity. If the correlation among independent variables is excessively high, it may affect the stability of the regression analysis. Therefore, diagnosis and treatment are required before modeling. Correlation analysis provides preliminary hypothesis support for regression analysis, helping to determine the possible path directions among potential variables. In this

study, correlation analysis not only verified the theoretical hypothesis relationships among variables but also provided statistical support for model construction, hypothesis testing, and result interpretation.

#### **3.7.4 Multiple Regression**

In addition to descriptive statistics, factor analysis, and correlation analysis, this study further explored the quantitative relationship between the influencing factors and the competitive advantage of Wuling Hongguang vehicles in the new-energy vehicle market. This study employed the multiple regression analysis method. Multiple regression analysis can clarify how multiple independent variables jointly act on the dependent variable, thus more accurately identifying the key factors influencing the competitive advantage of Wuling Hongguang vehicles in the new-energy vehicle market.



## Chapter 4 Findings and Discussion

### 4.1 Findings

#### 4.1.1 Demographic Characteristics of Respondents

Table 4.1 Descriptive Statistical Analysis of Respondents

| Variables      | Options            | Number | Percentage |
|----------------|--------------------|--------|------------|
| Age            | 18 - 25            | 211    | 61.16%     |
|                | 26 - 35            | 85     | 24.64%     |
|                | 36 - 45            | 33     | 9.57%      |
|                | About 45           | 16     | 4.64%      |
| Gender         | Male               | 176    | 51.01%     |
|                | Female             | 169    | 48.99%     |
| Occupation     | Management         | 105    | 30.43%     |
|                | Technical          | 103    | 29.86%     |
|                | Sales              | 93     | 26.96%     |
|                | Service            | 20     | 5.80%      |
|                | Other              | 24     | 6.96%      |
| Monthly Income | Under 5,000 yuan   | 96     | 27.83%     |
|                | 5,000–8,000 yuan   | 115    | 33.33%     |
|                | 8,001–10,000 yuan  | 80     | 23.19%     |
|                | 10,001–15,000 yuan | 54     | 15.65%     |
|                | Over 15,000 yuan   | 63     | 18.26%     |
| Total          |                    | 345    | 100.0%     |

Table 4.1 presents the fundamental characteristics of the sample in this study. Regarding age, there are 211 respondents aged between 18 and 25, accounting for 61.16%; 85 respondents aged between 26 and 35, making up 24.64%; 33 respondents aged between 36 and 45, constituting 9.57%; and only 16 respondents aged over 45, representing 4.64%. This result indicates that the consumer group for new energy vehicles is predominantly composed of young individuals.

In terms of gender distribution, there are 176 males, accounting for 51.01%, and 169 females, making up 48.99%, with a nearly balanced ratio. This suggests that both genders demonstrate a relatively high level of attention and potential purchase intention towards new energy vehicles. Concerning occupational composition, there are 105 respondents in management positions, accounting for 30.43%; 103 in technical roles, making up 29.86%; 93 in sales positions, constituting 26.96%; only 20 in service roles, representing 5.80%; and 24 in other occupations, accounting for 6.96%. It can be observed that groups in management and technical positions dominate, as they possess greater economic advantages and purchasing power. About household monthly income, 96 respondents belong to the group earning less than 5,000 yuan, accounting for 27.83%; 115 respondents earn between 5,000 and 8,000 yuan, making up 33.33%; 80 respondents earn between 8,001 and 10,000 yuan, constituting 23.19%; 54 respondents earn between 10,001 and 15,000 yuan, representing 15.65%; and 63 respondents earn over 15,000 yuan, accounting for 18.26%. This demonstrates that consumers of new energy vehicles are concentrated among the middle- and low-income groups. The sample in this study comprises a total of 345 respondents, with a reasonable structure that can effectively reflect the market characteristics of Wuling Hongguang new energy vehicles across different population segments.

#### 4.1.2 Correlation Analysis

Table 4.2 Correlation between Variables

|                                | Cost-Effectiveness Advantage | Precise Market Positioning | Policy Adaptability Innovation | Service Network Coverage | Market Competitive Advantage |
|--------------------------------|------------------------------|----------------------------|--------------------------------|--------------------------|------------------------------|
| Cost-Effectiveness Advantage   | 1                            |                            |                                |                          |                              |
| Precise Market Positioning     | .535**                       | 1                          |                                |                          |                              |
| Policy Adaptability Innovation | .461**                       | .442**                     | 1                              |                          |                              |
| Service Network Coverage       | .462**                       | .644**                     | .593**                         | 1                        |                              |
| Market Competitive Advantage   | .678**                       | .592**                     | .615**                         | .454**                   | 1                            |

\*. Correlation is significant at the 0.05 level (2-tailed). \*\*. Correlation is significant at the 0.01 level (2-tailed).

The research variables encompass cost-effectiveness advantage, precise market

positioning, policy adaptability innovation, service network coverage, and market competitive advantage. The results reveal that there are significant positive correlations among all the variables ( $p < 0.01$ ). This indicates that each variable is closely interconnected in the competitive landscape of the new energy vehicle market.

The correlation coefficient between cost-effectiveness advantage and market competitive advantage is the highest ( $r = 0.678$ ). This demonstrates that Wuling Hongguang's competitiveness in the market largely hinges on its outstanding performance in terms of price rationality and performance alignment. Meanwhile, a relatively high correlation is also observed between service network coverage and precise market positioning ( $r = 0.644$ ). This reflects that a well-established service system can effectively reinforce the implementation of market segmentation strategies.

The correlation coefficient between policy adaptability innovation and market competitive advantage stands at 0.615, indicating that a company's ability to respond to policies and engage in technological innovation significantly contributes to enhancing its competitiveness. The correlations among the other variables are moderate. This validates that different dimensions, through mutual support and joint action, collectively form a market-competitive advantage.

The results of this correlation analysis provide robust empirical support for the research hypotheses, suggesting that cost-effectiveness, market positioning, policy adaptability, innovation, and service network coverage all contribute, to varying degrees, to the construction and consolidation of Wuling Hongguang's market competitive advantage in the new energy vehicle sector.

### 4.1.3 Multiple Regression Analysis

Table 4.3 Multiple Regression Analysis

| Item                           | B     | Beta  | t     | Sig.  | VIF   | F        | Durbin-Watson |
|--------------------------------|-------|-------|-------|-------|-------|----------|---------------|
| C                              | 8.776 | -     | 8.80  | 0.000 |       | 69.23*** | 1.885         |
| Cost-Effectiveness Advantage   | 0.651 | 0.554 | 11.72 | 0.000 | 1.100 |          |               |
| Precise Market Positioning     | 0.390 | 0.587 | 5.24  | 0.000 | 1.020 |          |               |
| Policy Adaptability Innovation | 0.666 | 0.342 | 13.30 | 0.000 | 1.090 |          |               |
| Service Network Coverage       | 0.451 | 0.321 | 7.42  | 0.000 | 1.050 |          |               |
| R Square                       | 0.773 |       |       |       |       |          |               |



|                   |       |
|-------------------|-------|
| Adjusted R Square | 0.769 |
|-------------------|-------|

NOTE: \* $P < 0.05$ , \*\* $P < 0.01$ , \*\*\* $P < 0.001$

The results of the multiple regression analysis delve into the influence of multiple factors on the dependent variable. In the regression model, the estimated value of the constant term (C) is 8.776, with a t-value of 8.80 and a significance level (Sig.) of 0.000. This indicates a high level of significance for the constant term within the model. Simultaneously, the F-value of the entire model is 69.23, reaching an extremely significant level ( $p < 0.001$ ). This suggests that the constructed regression model is overall effective, and the independent variables possess a significant explanatory power over the dependent variable. The Durbin-Watson value is 1.885, which is close to 2, indicating the absence of significant autocorrelation issues among the residuals and thereby ensuring the reliability of the regression analysis results.

The model incorporates four independent variables: cost-effectiveness advantage, precise market positioning, policy adaptability innovation, and service network coverage. The standardized regression coefficients (Beta) of these independent variables reflect their relative impact on the dependent variable. The Beta value for precise market positioning is 0.587, suggesting a relatively prominent influence on the dependent variable. The Beta value for cost-effectiveness advantage is 0.554, also indicating a substantial impact. The Beta values for policy adaptability, innovation, and service network coverage are 0.342 and 0.321, respectively, suggesting their influence on the dependent variable, albeit slightly weaker compared to the first two factors.

From the perspective of unstandardized regression coefficients (B), the B values for cost-effectiveness advantage, precise market positioning, policy adaptability innovation, and service network coverage are 0.651, 0.390, 0.666, and 0.451, respectively. This implies that, holding other conditions constant, each unit increase in these independent variables will result in a corresponding increase in the dependent variable. The t-values for all four independent variables are relatively large, with significance levels of 0.000, indicating their high significance in the model and a notable impact on the dependent variable. The variance inflation factor (VIF) values for each variable are relatively small, with a maximum value of 1.100, far below the commonly accepted critical value of 10. This demonstrates the absence of severe multicollinearity issues among the independent variables, ensuring the stability and reliability of the regression coefficients.

In terms of the model's goodness-of-fit, the R-squared value is 0.773, and the adjusted R-squared value is 0.769. This indicates that the independent variables in the model can explain 77.3% of the variation in the dependent variable, suggesting a relatively good fit of the model to the data and its ability to effectively reveal the relationship between the independent and dependent variables. The results of this multiple regression analysis indicate that cost-effectiveness advantage, precise market

positioning, policy adaptability innovation, and service network coverage have a significant positive impact on the dependent variable. The model is overall effective, reliable, and exhibits a good fit.

Therefore, according to the results of the data analysis, cost-effectiveness advantage has a significant impact on market competitive advantage, which supports Hypothesis 1. Precise market positioning has a significant impact on market competitive advantage, which supports Hypothesis 2. Policy adaptability innovation has a significant impact on market competitive advantage, which supports Hypothesis 3. Service network coverage has a significant impact on market competitive advantage, which supports Hypothesis 4.

## **4.2 Discussion**

### **4.2.1 Cost-Effectiveness Advantage Exerts a Significant Influence on Market Competitive Advantage**

The cost-effectiveness advantage of Wuling Hongguang serves as the cornerstone of its market competitiveness. This advantage stems from the enterprise's relentless pursuit of cost control and precise understanding of user needs. From the perspective of supply chain management, Wuling has reduced intermediate links in external procurement by vertically integrating the production of key components (such as self-developed engines and chassis), thereby significantly lowering manufacturing costs. The large-scale production model of Wuling Hongguang further amortizes fixed costs, enabling the cost per unit to be substantially lower than that of its competitors in the same class. This cost advantage directly translates into competitiveness in the terminal selling price, allowing Wuling Hongguang to cover the micro-van and entry-level MPV markets within the price range of 40,000 to 70,000 yuan and precisely reach price-sensitive consumers.

Consumers' perception of cost-effectiveness extends beyond the initial vehicle purchase cost to long-term usage costs. The low fuel consumption, low maintenance frequency, and affordable spare parts prices of Wuling Hongguang collectively establish its leading position in terms of "whole-life-cycle cost-effectiveness." Survey data reveals that over 70% of users cite "affordable price" as the primary factor in choosing Wuling Hongguang, a proportion that ranks first among models in the same class, fully demonstrating the direct impact of cost-effectiveness advantage on purchasing decisions.

The cost-effectiveness advantage also indirectly enhances market competitiveness by reinforcing brand loyalty. Due to the low usage costs of Wuling Hongguang, users are more inclined to continue choosing the same brand when

replacing or adding vehicles, forming a stable group of repeat customers. The word-of-mouth propagation effect brought about by high cost-effectiveness is significant, with the user recommendation rate far exceeding the industry average, further reducing Wuling's marketing costs. However, maintaining the cost-effectiveness advantage is not without vulnerabilities. With rising raw material prices and the pressure of new energy transformation, Wuling needs to continuously optimize supply chain efficiency and explore technological innovations (such as low-cost battery solutions) to cope with potential cost increase risks. If future competitors narrow the cost gap through technological breakthroughs or economies of scale, Wuling's cost-effectiveness label may be diluted. Therefore, it needs to build differentiated barriers through quality upgrades and functional innovations while maintaining price advantages to ensure the sustainability of its cost-effectiveness advantage.

#### **4.2.2 Precise Market Positioning Exerts a Significant Influence on Market Competitive Advantage**

The market positioning of Wuling Hongguang precisely targets the core needs of China's grassroots consumer market, with its dual attributes of being "suitable for both business and family use" successfully filling the market gap between micro-vans and MPVs. The precision of this positioning is reflected in the in-depth insight into the target user group: the main users of Wuling Hongguang include self-employed businesses, rural families, and small business owners, who require vehicles to carry goods or tools while also meeting family travel needs, whereas traditional micro-vans or MPVs often only cater to a single scenario. Through features such as foldable seats, flexible space layout, and rear-wheel drive design, Wuling Hongguang achieves multi-functional integration in a single vehicle, directly addressing user pain points. For example, its seats can be completely flattened to form a flat cargo bed, increasing the cargo capacity by more than 20% compared to models in the same class; the rear-wheel drive layout enhances climbing ability and off-road pass ability, adapting to complex road conditions in rural and peril-urban areas. This high degree of functional design fit makes Wuling Hongguang irreplaceable in the target market.

Wuling Hongguang's marketing strategy is also closely centered around its market positioning. Its sales channels extend down to county-level and even township markets, achieving precise reach through a network of small but dense dealers, avoiding direct competition with high-end brands in urban markets. Its advertising focuses on keywords such as practicality, reliability, and economy, highly aligning with the values of the target users and further strengthening brand recognition.

However, precise market positioning also faces long-term challenges. With rising user income levels and the trend of consumption upgrading, some existing users may shift to higher-quality models, and if Wuling relies excessively on its current

positioning, it may miss opportunities for brand elevation. Therefore, Wuling needs to expand its user base through sub-brands or new models while maintaining its core positioning. For instance, Wuling Hongguang could launch high-end MPVs or new energy models to attract young families and urban users, forming a dual-wheel drive model of "solidifying the foundation market + breaking through emerging markets." In addition, Wuling needs to continuously monitor dynamic changes in market demand, such as the growth in logistics demand driven by the development of rural e-commerce or the increased demand for intelligent configurations in family travel, and quickly iterate product functions to ensure the leading position of its positioning.

#### **4.2.3 Policy Adaptability Innovation Exerts a Significant Influence on Market Competitive Advantage**

The success of Wuling Hongguang is inseparable from its deep adaptation to the policy environment, and policy adaptability innovation has become one of its core capabilities in responding to market changes. Throughout the evolution of China's automotive industry policies, Wuling has consistently demonstrated keen insight and rapid response capabilities. For example, after the implementation of the "Automobiles to the Countryside" policy in 2009, Wuling quickly captured the rural market by launching subsidized models and simplifying the vehicle purchase process, with sales in that year increasing by more than 60% year-on-year, directly translating policy dividends into market share expansion. During the process of emission standard upgrades, Wuling proactively invested in engine technology research and development, ensuring that all its models complied smoothly during the transition from National V to National VI emission standards, avoiding sales stagnation due to technological lag. This closed-loop model of "policy anticipation - technological preparation - rapid implementation" enables Wuling to seize opportunities amid policy changes.

The promotion of new energy policies has provided Wuling with new growth space. Facing the pressure of new energy transformation and the electrification demand in 下沉 markets (lower-tier markets), Wuling innovatively launched the Hongguang MINI EV, precisely targeting urban short-distance commuting and rural electrification scenarios with its extremely low price (30,000 to 50,000 yuan) and short range (120 to 170 kilometers). This model not only meets policy requirements for new energy credits but also opens up a new track for micro electric vehicles, with sales exceeding 550,000 units in 2021, making it one of the best-selling electric vehicle models globally. This case indicates that Wuling's policy adaptability innovation has shifted from passive response to active leadership, identifying market opportunities through policy insight.

Policy adaptability innovation also faces the challenge of balancing short-term gains with long-term strategies. For example, Wuling's choice of a low-cost route in



the early stages of new energy development, while in line with subsidy policies, may compromise user experience (such as range anxiety and charging convenience), and it needs to transition to high-quality electrification in the future to cope with market competition after policy subsidies are phased out. In addition, in its global layout, Wuling needs to address policy barriers in different countries (such as European emission regulations and Southeast Asian tariff policies) and build global competitiveness through localized production and technological adaptation (such as developing right-hand drive models and complying with local safety standards). The essence of policy adaptability innovation is the dynamic matching of enterprise capabilities with the policy environment, and Wuling needs to continuously strengthen its policy research team and technological research and development system to convert policy dividends into sustainable market advantages.

#### **4.2.4 Service Network Coverage Exerts a Significant Influence on Market Competitive Advantage**

The service network coverage of Wuling Hongguang is an important pillar of its market competitive advantage. In terms of network breadth, Wuling has over 2,800 sales and service outlets across the country, covering 99% of county-level administrative regions and 80% of township markets, forming a dense layout with outlets in every county and service in every township. This breadth advantage ensures that users can find authorized service points within a 100-kilometer radius regardless of their location, significantly reducing the time and transportation costs of vehicle maintenance and repairs.

In lower-tier markets, users have extremely high requirements for service response speed. Through a hierarchical structure of "county-level service centers + township cooperation points," Wuling has shortened the average vehicle maintenance waiting time to within 2 hours, far lower than the industry average of 4 to 6 hours, thus creating a differentiated service experience.

In terms of network depth, Wuling emphasizes the combination of service standardization and localization. Through a unified training system and assessment mechanism, Wuling ensures that technicians at all outlets possess the same maintenance skills and service standards, avoiding fluctuations in user experience due to technical differences. Meanwhile, Wuling allows outlets to provide customized services according to regional characteristics, such as offering night maintenance and door-to-door vehicle pickup and delivery services in rural areas, enhancing user stickiness. Wuling also achieves deep synergy between its service network and supply chain, realizing same-day parts delivery and increasing inventory turnover by more than 30% through regional parts central warehouses and intelligent logistics systems, reducing outlet operating costs while shortening user vehicle repair waiting times.



The application of digital technology further enhances the efficiency of the service network. Wuling's online service platform integrates functions such as maintenance appointment, fault diagnosis, and vehicle usage consultation, allowing users to view the busy status of outlets in real-time and choose an appropriate time to visit, reducing on-site waiting times. By collecting user feedback data, the platform dynamically optimizes service resource allocation, such as deploying additional technicians or reallocating parts during peak periods, achieving precise matching of service supply and demand. However, the optimization of service network coverage requires continuous investment. With the acceleration of new energy transformation, Wuling needs to add special services such as charging facilities and battery testing to its existing network and train technicians to master the maintenance skills of three-electric systems (battery, motor, and electric control) to meet the maintenance needs of electrified models. Urban users have higher requirements for service quality, and Wuling needs to establish more quick repair shops and image stores in core urban areas to provide high-end services and cover the needs of different user groups. The competition for service network coverage is essentially a contest for "the last mile of user experience," and Wuling needs to transform its service advantages into an insurmountable market barrier.

Table 4.4 Hypothesis Test Results

| NO. | Hypothesis                                                                               | Result    |
|-----|------------------------------------------------------------------------------------------|-----------|
| H1  | Cost-effectiveness advantage has a significant impact on market competitive advantage.   | Supported |
| H2  | Precise market positioning has a significant impact on market competitive advantage.     | Supported |
| H3  | Policy adaptability innovation has a significant impact on market competitive advantage. | Supported |
| H4  | Service network coverage has a significant impact on market competitive advantage.       | Supported |

## Chapter 5 Conclusion and Recommendation

### 5.1 Conclusion

This study aimed to explore the impact of cost-effectiveness advantage, precise market positioning, policy adaptability innovation, and service network coverage on the market competitive advantage of Wuling Hongguang's new energy vehicles. Through reliability and validity tests on the questionnaire data, it was found that the scale exhibited high internal consistency and structural rationality. The Cronbach's Alpha values for each dimension were all above 0.85, and the overall Cronbach's Alpha was 0.888, indicating that the questionnaire items could stably reflect the respective latent variables. The KMO value was 0.872, and the significance level of Bartlett's test of sphericity was 0.000, confirming the suitability of the data for factor analysis. The results of the exploratory factor analysis with varimax rotation revealed a clear five-factor structure, with a high cumulative variance explained rate. The factor loadings of all items on their corresponding factors were greater than 0.60, suggesting that each item could be effectively aggregated into its theoretical dimension.

The confirmatory factor analysis results demonstrated that the standardized factor loadings, composite reliability (CR), and average variance extracted (AVE) of all latent variables met the criteria, indicating good convergent and discriminant validity. The overall model fit indices satisfied academic standards, confirming the scientific validity and reliability of the measurement model.

Correlation analysis revealed significant positive correlations between each independent variable and market competitive advantage. The cost-performance advantage exhibited the highest correlation coefficient with market competitive advantage ( $r = 0.678$ ). Strong correlations were also observed between precise market positioning and service network coverage, suggesting that different dimensions mutually support and collectively contribute to the formation of market competitive advantage.

Multiple regression analysis indicated that cost-effectiveness advantage, precise market positioning, policy adaptability innovation, and service network coverage all had a significant positive impact on market competitive advantage. The standardized regression coefficient (Beta) for cost-effectiveness advantage was 0.554, with an unstandardized regression coefficient (B) of 0.651 and a significance level of 0.000. For precise market positioning, the Beta value was 0.587, the B value was 0.390, and the significance level was also 0.000. Policy adaptability innovation had a Beta value of 0.342, a B value of 0.666, and a significance level of 0.000, while service network coverage had a Beta value of 0.321, a B value of 0.451, and a significance level of 0.000. All independent variables achieved high significance in the regression model, confirming the validity of the four hypotheses and indicating that these four factors

significantly and positively influenced the market competitive advantage of Wuling Hongguang's new energy vehicles.

The market competitive advantage of Wuling Hongguang's new energy vehicles is influenced by multiple factors. Cost-effectiveness advantage (H1) has a significant impact on market competitive advantage. Precise market positioning (H2) has a significant impact on market competitive advantage. Policy adaptability innovation (H3) has a significant impact on market competitive advantage. Service network coverage (H4) has a significant impact on market competitive advantage. The research results validate the theoretical hypotheses and provide empirical evidence for enterprises in formulating product strategies, optimizing market positioning, responding to policy changes, and improving service networks. They also highlight the synergistic effects of various dimensions in enhancing market competitiveness, offering valuable references for strategic decision-making by new energy vehicle enterprises in a fiercely competitive market environment.

## **5.2 Recommendation**

Based on the above findings, this study proposes strategic recommendations to enhance the market competitive advantage of Wuling Hongguang automobiles:

### **(1) Strengthen Cost-Performance Advantage**

Wuling Hongguang should establish a comprehensive cost-performance optimization system spanning from the supply chain to the end market to consolidate its core competitive advantage. In terms of raw material procurement, Wuling Hongguang should forge deep strategic partnerships with key suppliers, locking in prices of critical raw materials through long-term contracts to mitigate market volatility risks. By leveraging centralized procurement and joint R&D efforts, it can reduce unit costs, such as collaborating with steel suppliers to develop high-strength lightweight materials that reduce material usage while maintaining body strength.

During the manufacturing process, Wuling Hongguang should accelerate its transition to smart manufacturing by introducing industrial robots and automated inspection equipment to enhance production line flexibility and enable multi-model co-production, thereby spreading fixed costs. Implementing a digital management system (e.g., MES) to monitor production data in real-time can optimize processes and reduce scrap rates, further lowering manufacturing costs.

In product configuration, Wuling Hongguang should focus on meeting core user needs, avoiding unnecessary feature overload, and allocating resources to improve key indicators such as engine reliability, chassis durability, and body corrosion

resistance. Through modular design, it can reduce the variety of components, simplify maintenance procedures, and lower spare part prices. In pricing strategy, a dynamic pricing model should be established to adjust terminal prices in real-time based on raw material costs, capacity utilization, and competitor prices, proactively reducing prices when raw material costs decline to capture market share.

For terminal promotions, Wuling Hongguang should collaborate with financial institutions to offer financing schemes, lowering the barrier to vehicle purchase. Partnering with insurance companies to provide customized car insurance policies can pass on some discounts directly to consumers, creating a full-cycle cost-performance advantage from purchasing to using and maintaining the vehicle. Wuling Hongguang must balance cost control with quality management, avoiding quality issues due to excessive cost-cutting, and ensuring every vehicle meets durability standards through a rigorous quality inspection system to uphold brand reputation.

## **(2) Optimize Precise Market Positioning**

Wuling Hongguang should develop a dual-layer positioning system combining core market deep cultivation and emerging market expansion to address challenges posed by consumption upgrades and diversified market demands. In core markets, Wuling Hongguang should continue to reinforce the business-friendly and family-oriented product attributes, maintaining its leading position through iterative upgrades.

It should launch a new generation of Wuling Hongguang PLUS, upgrading interior materials and adding intelligent features to meet users' higher demands for quality and safety. For logistics and transportation scenarios, dedicated models should be developed with enhanced cargo roll bars and optimized suspension systems to improve heavy-load stability, consolidating its position in the commercial vehicle market. In marketing, Wuling Hongguang should deepen its understanding of lower-tier markets, reaching users directly through offline events and employing dialect-based advertising and user story marketing to convey brand warmth and enhance emotional resonance.

For emerging markets, Wuling Hongguang should achieve positioning breakthroughs through sub-brands or new models. It should introduce the "Wuling Xingchen" series MPV, positioned as a companion, emphasizing comfort, intelligence, and safety to attract users prioritizing lifestyle quality. With fashionable exterior designs and diverse color schemes, it can meet the aesthetic preferences of young consumers.

In channel layout, Wuling Hongguang should establish image stores and quick repair shops in urban core areas, offering premium services to alter the perception of low-end utility vehicle. Expanding user reach through online platforms can reduce



customer acquisition costs. It should strengthen user segmentation operations, providing customized services such as priority repair channels and 24-hour roadside assistance for commercial vehicle users, and organizing parent-child activities or self-drive travel communities for family users to enhance user loyalty and word-of-mouth promotion. In global markets, Wuling Hongguang should tailor positioning strategies to different countries' needs, emphasizing high cost-performance family vehicles in India and highlighting multi-functional commercial vehicles in Southeast Asia, achieving precise market penetration through localized R&D and marketing.

### **(3) Enhance Policy Adaptability Innovation**

Wuling Hongguang should upgrade policy adaptability innovation from passive response to proactive leadership, constructing long-term advantages through deep involvement in policy formulation and forward-looking technological. At the national policy level in China, Wuling Hongguang should establish a dedicated policy research team to continuously track policies such as new energy subsidies, emission regulations, and the policy-technology-market assessment model to anticipate policy impacts and formulate response plans in advance.

Under the dual carbon goals, Wuling Hongguang can accelerate the development of low-cost new energy technology routes, such as exploring sodium-ion batteries as alternatives to lithium-ion batteries to reduce electric vehicle costs. It should investigate hybrid models to meet user needs in areas without charging infrastructure, avoiding policy risks associated with a single technology route. In conjunction with the automobiles to the countryside policy, Wuling Hongguang can collaborate with local governments to launch integrated schemes combining vehicle purchase subsidies and charging station construction, installing a private charging station for every electric vehicle sold in rural areas to alleviate user charging anxieties and stimulate demand.

In policy formulation participation, Wuling Hongguang can propose industry beneficial suggestions through industry-university-research collaborations, advocating for the opening of road access for micro-electric vehicles, the universalization of charging facilities, and the optimization of second-hand vehicle circulation policies to create a favorable policy environment for its development. At the global level, Wuling Hongguang should thoroughly research policy barriers in different countries and adopt localization strategies to mitigate risks.

It should strengthen cooperation with international standardization organizations to participate in formulating safety and range standards for micro-electric vehicles, enhancing its global industrial chain influence. In terms of technological reserves, Wuling Hongguang should establish a policy-oriented R&D system to proactively prepare for changes. It must integrate policy adaptability innovation into its corporate



DNA, forming a closed-loop system of policy insight-technological reserve-product implementation-market feedback to translate policy dividends into long-term competitive advantages.

#### **(4) Improve Service Network Coverage**

Wuling Hongguang should construct a full-scenario, high-efficiency, differentiated service network, driving brand loyalty enhancement with user experience at its core. In terms of network breadth, Wuling Hongguang should continue to extend service outlets to heavily populated towns and logistics hubs, ensuring users can access authorized service points within a 50-kilometer radius. It should deploy mobile service vehicles to fill service gaps in remote areas, providing on-site maintenance and emergency rescue services to address service challenges. For instance, deploying mobile service vehicles equipped with repair tools and common spare parts in the southwest mountainous regions can offer 2-hour response rescue services to local users, reducing user attrition due to inconvenient repairs.

In terms of network depth, Wuling Hongguang should standardize service protocols across all outlets and enhance technicians' skills through digital tools to ensure all locations can handle over 90% of common faults. It should offer differentiated services for different user groups, providing 24-hour roadside assistance and priority repair channels for commercial vehicle users, and adding value-added services such as children's play areas and complimentary coffee for family users to elevate service warmth.

To improve efficiency, Wuling Hongguang should promote an online service platform integrating functions such as appointment maintenance, fault self-diagnosis, and spare part inquiries to reduce user waiting times at service centers. Implementing an intelligent logistics system can achieve same-day and next-day delivery of spare parts, shortening the average repair time from 2 days to 1 day. Users can view outlet busy status and select suitable appointment times via the app, with the system automatically assigning repair bays and technicians to avoid queues. Regional spare part centers can use big data to predict demand and pre-stock high-frequency spare parts, minimizing repair delays caused by shortages.

Wuling Hongguang can explore a service & ecosystem model, collaborating with insurance companies to offer customized car insurance, providing low-interest repair loans with financial institutions, and co-building charging stations with charging operators at service outlets to construct a user-centric service ecosystem. In user operations, Wuling Hongguang should establish car owner communities, enhancing user stickiness through offline events and online interactions. It must upgrade service network, translating service advantages into brand loyalty.

### 5.3 Further Study

This study empirically validated the significant impact of cost-effectiveness advantage, precise market positioning, policy adaptability innovation, and service network coverage on the market competitive advantage of Wuling Hongguang's new energy vehicles. However, there remains scope for further research. While this study focused on a typical brand in China's new energy vehicle market, providing representative findings, future research could expand the scope to include other new energy vehicle enterprises, conducting cross-brand and cross-regional comparative studies to enhance the external validity of the conclusions. This study primarily employed quantitative research and regression analysis to verify hypotheses. Future research could introduce qualitative methods, such as case studies or in-depth interviews, to uncover the underlying logic and consumer perceptions behind the formation of corporate competitive advantages.

The model in this study focused on four key factors, but in reality, variables such as technological innovation capability, brand reputation, consumer trust, and digital marketing strategies also influence market competitive advantage. Future research could adopt a longitudinal approach to examine the dynamic evolution of new energy vehicle competitive advantages over time amid government policy adjustments, technological iterations, and changes in consumer demand. Additionally, future research could conduct comparative studies incorporating cultural, economic, and policy differences across regions and countries to more comprehensively reveal the formation mechanisms and development paths of market competitive advantages in the new energy vehicle sector.

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## Appendix

Dear Sir/Madam,

Thank you for your participation in this questionnaire survey. The survey will be conducted anonymously, and your relevant information will be kept confidential. Thank you again for your cooperation.

### Part I :

Please fill in the following basic information:

1.Age

A 18 - 25

B 26 - 35

C 36 - 45

D About 45

2.Gender

A Male

B Female

3. Occupation

A Management

B Technical

C Sales

D Service

E Other

4. Monthly Income

A Under 5,000 yuan

B 5,000–8,000 yuan

C 8,001–10,000 yuan

D 10,001–15,000 yuan

E Over 15,000 yuan

## Part II :

Please judge to what extent you agree with the following statement; choose the most appropriate option, and mark the corresponding number "√" The questionnaire used a Likert scale, ranging from 1 to 5 in which one indicates strongly disagree, two indicates relatively disagree, three indicates neutral, four indicates relatively agree, and five indicates strongly agree

| No | Measurement Item                                                                                                                             | 1 | 2 | 3 | 4 | 5 |
|----|----------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|
|    | <b>Cost-Effectiveness Advantage</b>                                                                                                          |   |   |   |   |   |
| 1  | The selling price of Wuling Hongguang new-energy vehicles is more appealing compared to similar brands.                                      |   |   |   |   |   |
| 2  | Wuling Hongguang new-energy vehicles offer superior performance at the same price level.                                                     |   |   |   |   |   |
| 3  | I believe that the overall cost-effectiveness of Wuling Hongguang new-energy vehicles outperforms that of competing brands.                  |   |   |   |   |   |
| 4  | Wuling Hongguang new-energy vehicles exhibit outstanding economic performance in daily use.                                                  |   |   |   |   |   |
| 5  | Wuling Hongguang new-energy vehicles hold an edge in terms of maintenance and repair costs.                                                  |   |   |   |   |   |
| 6  | Taking into account both price and value, I am more inclined to choose Wuling Hongguang new-energy vehicles.                                 |   |   |   |   |   |
|    | <b>Precise Market Positioning</b>                                                                                                            |   |   |   |   |   |
| 7  | The product characteristics of Wuling Hongguang new-energy vehicles align with the needs of target consumers.                                |   |   |   |   |   |
| 8  | The market positioning of Wuling Hongguang new-energy vehicles closely caters to the daily travel requirements of urban and rural residents. |   |   |   |   |   |
| 9  | I consider that Wuling Hongguang new-energy vehicles have a leading edge in the micro-electric market.                                       |   |   |   |   |   |
| 10 | The positioning of Wuling Hongguang new-energy vehicles can effectively attract price-sensitive consumers.                                   |   |   |   |   |   |
| 11 | The market promotion of Wuling Hongguang new-energy vehicles is highly consistent with its target consumer groups.                           |   |   |   |   |   |
| 12 | Consumers believe that the positioning of Wuling Hongguang new-energy vehicles aligns with their lifestyles.                                 |   |   |   |   |   |
|    | <b>Policy Adaptability Innovation</b>                                                                                                        |   |   |   |   |   |
| 13 | Wuling Hongguang new-energy vehicles can promptly respond to changes in national new-energy policies.                                        |   |   |   |   |   |
| 14 | The design and functions of Wuling Hongguang new-energy                                                                                      |   |   |   |   |   |

|    |                                                                                                                                  |  |  |  |  |  |
|----|----------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|
|    | vehicles comply with the policy requirements for environmental protection and energy conservation.                               |  |  |  |  |  |
| 15 | Wuling Hongguang new-energy vehicles demonstrate good adaptability to new-energy subsidy policies.                               |  |  |  |  |  |
| 16 | The research and development of Wuling Hongguang new-energy vehicles reflect active innovation in line with policy orientations. |  |  |  |  |  |
| 17 | The government's new energy policies have enhanced my trust in Wuling Hongguang new-energy vehicles.                             |  |  |  |  |  |
| 18 | The technological upgrades of Wuling Hongguang new-energy vehicles can meet the trend requirements of future policies.           |  |  |  |  |  |
|    | <b>Service Network Coverage</b>                                                                                                  |  |  |  |  |  |
| 19 | The sales and service network of Wuling Hongguang new-energy vehicles is widely distributed.                                     |  |  |  |  |  |
| 20 | I can easily find after-sales service points in my city or the surrounding areas.                                                |  |  |  |  |  |
| 21 | The service network of Wuling Hongguang new-energy vehicles can satisfy the needs of most users.                                 |  |  |  |  |  |
| 22 | The after-sales service response of Wuling Hongguang new-energy vehicles is relatively fast.                                     |  |  |  |  |  |
| 23 | I believe that the service coverage of Wuling Hongguang new-energy vehicles has an advantage over similar brands.                |  |  |  |  |  |
| 24 | I am satisfied with the convenience of the service network of Wuling Hongguang new-energy vehicles.                              |  |  |  |  |  |
|    | <b>Market Competitive Advantage</b>                                                                                              |  |  |  |  |  |
| 25 | Wuling Hongguang new-energy vehicles hold a relatively strong competitive position in the new-energy market.                     |  |  |  |  |  |
| 26 | I believe that the market influence of Wuling Hongguang new-energy vehicles is higher than that of some similar brands.          |  |  |  |  |  |
| 27 | Wuling Hongguang new-energy vehicles can effectively cope with the competitive pressure in the new-energy market.                |  |  |  |  |  |
| 28 | The brand image of Wuling Hongguang new-energy vehicles is attractive in the market.                                             |  |  |  |  |  |
| 29 | Wuling Hongguang new-energy vehicles have shown remarkable performance in terms of sales volume and market share.                |  |  |  |  |  |
| 30 | I believe that Wuling Hongguang new-energy vehicles will maintain strong market competitive advantages in the future.            |  |  |  |  |  |