eISSN: 2408-1906© 2020 JIR.
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Determinants of The Development Strategies of Chinese New Energy Vehicle Enterprises

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Received: October 13, 2025. Revised: December 15, 2025. Accepted: December 22, 2025.

Abstract

This study investigates the factors that affect the development strategies of New Energy Vehicle (NEV) companies in Chongqing, China, employing a descriptive quantitative design based on the SWOT framework. Data were collected through a validated structured survey administered to senior executives from 11 prominent NEV enterprises, selected through purposive expert sampling. Descriptive statistics were utilized, and SWOT determinants were discerned through a dual-basis methodology that combines quantified influence ratings with profile-based enterprise characteristics, substantiated by pertinent literature. Findings reveal that China's NEV enterprises are predominantly large-scale and mature, characterized by extensive operational capacity, established market presence, wide distribution networks, and strong innovation resources. Influence-based analysis identifies technological capability, R&D strength, manufacturing capacity, brand effect, and large-scale assets as key internal strengths, while human capital limitations and high operational costs emerged as major weaknesses. Externally, policy incentives, export expansion, digitalization, and technological advancement present significant opportunities, whereas regulatory volatility, intensifying global competition, technological disruption, and subsidy dependence pose substantial threats. The research finds that the development of NEVs is influenced by the size and maturity of the business, its internal operational and technological abilities, and changing external policy and market conditions. For long-term strategic growth, you need to use your strengths and policy opportunities that come from your size while also dealing with cost pressures, talent shortages, inflexible innovation, and regulatory risks. To stay competitive in China's NEV industry, you need a flexible, integrated strategy that fits with the profiles of your business and changing outside factors.

Keywords: determinants, SWOT, new energy vehicle, development strategies

1. Introduction

1.1 Background of the Study

The global automotive industry is going through an extensive shift toward sustainability, and New Energy Vehicles (NEVs) are leading the way. NEVs are cars that use alternative energy sources to move, which is different from regular internal combustion engine vehicles that use fossil fuels. New Energy Vehicles (NEVs)—including battery electric vehicles (BEVs), plug-in hybrid electric vehicles (PHEVs), and fuel cell electric vehicles (FCEVs)—have emerged as the primary technological solution for decarbonizing road transport and reducing dependence on fossil fuels (International Energy Agency, 2023). Major economies such as the United States, Germany, Japan, and China have adopted long-term electrification roadmaps supported by regulatory mandates, infrastructure investment, and innovation-oriented industrial policies (European Commission, 2021; International Energy Agency, 2023). Because global battery prices have dropped significantly and EV production and competition have intensified, the worldwide EV market is now growing rapidly, with accelerating innovation and expanding market share (International Energy Agency, 2023)

Within this global transformation, China has assumed a leading position as both the world's larger producer and consumer of NEVs.. The rapid expansion of the

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international economy has led to a trend toward low-carbon environmental preservation. This has made governments create measures for saving energy and cutting down on emissions. Countries including the US, Japan, and Germany have announced goals to help their NEV sectors grow. that the country is committed to sustainable development (Chu, 2021). China's NEV sector has expanded rapidly due to sustained policy coherence and strong institutional support (Wang et al., 2020). China's new energy vehicle (NEV) industry has grown a lot because of consistent policies, strong institutional support, and a huge local market that speeds up the spread of innovative technologies. Research indicates that market attributes, in conjunction with national incentive frameworks, substantially enhance the dissemination and acceptance of NEVs within China's swiftly growing consumer demographic (Jiao et al., 2022). The sector's competitiveness has been boosted by the emergence of technologically advanced domestic manufacturers like BYD, NIO, and XPeng, which are now seen as global leaders in battery-electric vehicle innovation and system architecture (He et al., 2022). At the same time, the strategic involvement of big foreign companies like Tesla and Volkswagen has made competition stronger and added to the overall dynamism of China's NEV ecosystem. These companies have made long-term market plans and big production commitments in the country.

However, despite strong growth momentum, Chinese NEV enterprises operate under intense strategic pressure arising from capital intensity, profitability fluctuations, supply chain uncertainty, fast-paced technological change, and increasingly fierce domestic and global competition. These challenges indicate that market alone does not guarantee sustained firm-level competitiveness.

1.2 Related Literature

The development plans of new energy vehicle (NEV) companies in China are influenced by a number of factors, including the company's size, scale, and age, its internal financial and operational capabilities, and the possibilities or dangers it faces from outside sources. Corporate scale, R&D expenditure, financing structure, and supply-chain stability are all important elements that affect innovation performance and competitive resilience (Zhang et al., 2024). External factors, including as institutional policies, supply-chain unpredictability, the regulatory environment, and market rivalry, significantly influence strategic results (Wang et al., 2017). Researchers employing structured strategic frameworks such as SWOT in conjunction with ANP assert that the interplay between internal and external factors require systematic study to elucidate how NEV enterprises might evolve from being merely huge to genuinely competitive (Phadermrod et al., 2019: Wang et al., 2017). Nonetheless, empirical firm-level studies are still scarce, particularly those that incorporate profitability, solvency, operational capability, and external institutional elements into cohesive strategic frameworks.

1.2.1 Internal determinants of NEV enterprise development strategies

Profitability is an important internal factor that determines whether a company can pay for research and development, increase production, and look for new markets or ways to stand out. Evidence from the automobile and parts sector indicates that companies with greater profitability and an ideal debt ratio are more capable of balancing investment capacity and leverage, thus ensuring long-term financial stability and strategic adaptability (Basdekis et al., 2020).

Additionally, a company's operational capacity, which includes its ability to manage the supply chain, adapt production, and turn over assets, is very important for turning resources into useful output. In China's car industry, companies with better basic operational and dynamic skills are better able to deal with changes in the market, like electrification, which leads to better performance (Tsou & Kim, 2024).

Financial flexibility, which includes solvency, liquidity, and access to capital, is also very important. In capitalintensive industries such as NEVs, companies with a smart capital structure and financial flexibility can better handle shocks, invest in long-term innovation, and keep their operations going in a way that is good for the environment (Sheng & An, 2024).

Lastly, companies can make strategic investments, do research and development, and grow their capacity if they can get money from their own funds, credit lines, or outside sources. Research shows that companies that have more financial flexibility tend to spend more on new ideas and are better able to follow growth plans, especially when the market is unstable or the environment is changing (Liu et al., 2024).

These internal factors—profitability, operational ability, solvency/financial flexibility, and capital access—make up the "S/W" (strength/weakness) side of a strategic analysis at the firm level. How they interact determines whether a business can turn resources into a competitive edge, keep coming up with new ideas, and respond to threats or opportunities from outside the company.

1.2.2 External determinants that affect NEV business growth strategies

Policy: Policy includes things like tax breaks, subsidies, incentives to buy electric vehicles, investments in infrastructure, and rules for businesses. These government actions are still some of the most important things that affect

how the NEV market works. Research shows that well thought-out financial and regulatory policies can greatly increase the number of electric vehicles (EVs) on the road and change how companies plan to invest and make things. A quasi-natural experiment conducted in Chinese cities revealed that purchase subsidies markedly enhanced EV penetration (Shang et al., 2024). Combining subsidies, infrastructure, and regulation into mixed policy packages is the best way to get people to use new products and change the market (Shao, 2024). Government intervention policies also affect the choices manufacturers make about how to make things, pushing them to make more NEVs instead of regular cars (Ge & Chen, 2025).

Economic Conditions: Macro-economic factors like the cost of raw materials (like lithium and nickel), tariffs, trade policies, and consumer purchasing power have a direct impact on NEV companies' competitiveness and strategic choices. For instance, battery prices and trends in affordability affect how NEV manufacturers plan to enter the market and how much demand there will be (International Energy Agency, 2023). Interest rates and supply-chain costs affect how companies use leverage and how they plan to stay in business. Trade tensions, on the other hand, affect how companies export and where they choose to do business.

Societal demand plays a crucial role in shaping the electric vehicle (EV) market, as consumer preferences—such as environmental awareness, openness to new technologies, and evolving urban mobility patterns—directly influence EV sales and market segmentation. Consumer-related concerns, including range anxiety and the availability and convenience of charging infrastructure, also affect product design, service delivery, and after-sales support strategies. Empirical studies show that environmental concern, social influence, and perceived utility are significant predictors of electric vehicle adoption and purchase intention (Chang, 2025; Kottala et al., 2025). Firms that effectively align their product offerings and services with these customer expectations are more likely to expand their market share and strengthen their competitive position.

Technology trends — such as advancements in new batteries, energy storage systems, drivetrains, vehicle software, and automated driving systems — define the boundaries and possibilities for innovation within the new energy vehicle (NEV) industry. Improvements in battery energy density, cost reductions, and charging infrastructure enhancements provide firms with strong R&D capabilities a competitive edge, whereas companies that lag may struggle to remain relevant in fast-moving markets. Research shows that battery technology development and integration across vehicle platforms are significant determinants of competitiveness for electric vehicle companies, influencing range, performance, cost structures, and consumer adoption (Sang et al., 2024; Yamini, 2025). Additionally, scholars highlight the broader impacts of emerging technologies — including drivetrain and platform integration — on strategic positioning and innovation performance in global EV markets (Yamini, 2025).

The external environment defined by Policy, Economic Conditions, Societal Demand, and Technology — critically influences NEV enterprise strategies. A thorough understanding of these determinants helps firms anticipate market trends, make informed strategic decisions, and enhance their competitive positioning in China's rapidly evolving NEV sector. These external factors make up the "O/T" (Opportunities/Threat) side of a strategic analysis at the firm level.

1.1.3 Problem Statement

This study investigates Chinese New Energy Vehicle (NEV) enterprises through a SWOT analysis, focusing on the internal strengths and weaknesses, as well as external opportunities and threats that influence their development strategies. The study highlights key determinants that shape these strategies, emphasizing the importance of understanding both internal and external factors in navigating technological innovation, policy changes, and market competition. By doing so, it provides insights into how NEV enterprises can leverage their strengths, address weaknesses, seize opportunities, and mitigate threats to enhance their competitive edge in a dynamic industry. Specifically, the study aims to answer the following questions:

What is the profile of the new energy vehicle enterprises in terms of: a) Number of Employees, b) Number of Years in Operation, c) Number of branches, d) Organizational Scale?

What are the internal factors (strengths and weaknesses) in the development strategies of new energy vehicle enterprises in terms of a) Profitability, b) Operating Ability, c) Solvency, d) Capital?

What are the external factors (opportunities and threats) in the development strategies of new energy vehicle enterprises in terms of A) Policy, B) Economy, C) Society, D) Technology?

What are the determinants of development strategies of the new energy vehicle industry in China in terms of profile, internal factors, and external factors?

This paper analyzes the internal and external factors influencing the development strategies of China's New Energy Vehicle (NEV) enterprises using a structured SWOT framework. It categorizes internal determinants into strengths (like profitability and operational ability) and

weaknesses (such as financial constraints), while external determinants include opportunities (like supportive policies and market demand) and threats (such as regulatory changes and economic vulnerabilities). The study emphasizes the importance of adapting strategies based on real-world data and highlights the urgent need for NEV enterprises to enhance their development strategies amidst rapid technological advancements and global competition. The findings provide valuable insights for business leaders, policymakers, and investors, and contribute to the academic discourse on sustainable industries by linking theoretical frameworks with empirical data from the NEV sector.

2. Methodology

This study adopted a descriptive quantitative research design to systematically examine the determinants influencing the development strategies of New Energy Vehicle (NEV) enterprises in Chongqing, China, using the SWOT analytical framework. This design is appropriate for identifying patterns, dominance of factors, and strategic conditions based on measurable enterprise-level indicators. The unit of analysis comprised NEV enterprises, while the units of observation were senior managers and directors who are directly involved in strategic decision-making.

A purposive expert sampling technique was employed to select respondents from 11 leading NEV enterprises in Chongqing. Chongqing was selected due to its strategic designation as a national manufacturing hub for new energy vehicles, strong industrial base, and active policy support for NEV development. Although the sample size is relatively small, it is justified by the highly specialized managerial population and the strategic-level data required. The findings are therefore interpreted as analytically generalizable to similar NEV enterprise contexts rather than statistically generalizable to the entire industry. Data were collected using a researcher-developed structured questionnaire consisting of four sections: (1) enterprise profile (number of employees, years in operation, number of branches, organizational scale), (2) internal factors (profitability, operating ability, solvency, capital), (3) external factors (policy, economy, society, technology), and (4) SWOT classification items. All influence indicators were measured using a 5-point Likert scale ranging from 1 (Very Low Influence) to 5 (Very High Influence), while SWOT checklist items were assessed using Yes/No responses. The questionnaire was developed based on recent empirical literature and validated by subject-matter experts.

Content validity was established using the Content Validity Index (CVI), yielding values of 0.8971 for external factors and 0.8129 for internal factors, indicating acceptable to strong validity. Reliability was assessed using Cronbach's alpha, with coefficients of 0.736 for external factors and 0.817 for internal factors, both exceeding the acceptable reliability threshold of 0.70. The final validated questionnaire was administered electronically. Participation was voluntary, and informed electronic consent was obtained prior to data collection.

Two ways was used to determine the determinants, the profile based and the influence - based. The development of the final SWOT matrix was stengthened by ensuring that the inputs were not solely derived from the measured degree of influence of internal and external factors but it also included

the analysis of profile using literature to examine how enterprise characteristics are empirically associated with distinct strengths, weaknesses, opportunities, and threats.

For the influence based path, quantitative data were analyzed using descriptive statistical techniques, including frequencies, percentages, means, and standard deviations. Enterprise profiles were examined using frequencies and percentages, while internal and external strategic factors were analyzed using mean scores and standard deviations to reflect both central tendency and variability of responses. Results were presented using standard statistical tables to ensure clarity and transparency. To avoid redundancy, numerical values from tables were not repeated verbatim in the textual discussion; instead, interpretation focused on identifying dominant trends, key strengths and weaknesses, and meaningful cross-factor patterns.

SWOT classifications were empirically derived from quantified mean score intervals. Indicators with mean values within the "High" to "Very High" range (3.41-5.00) were classified as strategic Strengths or Opportunities, while indicators with lower mean ratings were classified as Weaknesses or Threats. This ensured that the SWOT matrix was grounded in quantitative evidence rather than purely qualitative judgment.

Although the study primarily relies on descriptive statistics, the analytical integration of quantitative indicators into the SWOT framework provides a structured empirical basis for determining the strategic position of NEV enterprises

For the profile based path, the descriptions of the enterprises—such as organizational scale, years of operation, number of employees, and branch distribution—were systematically reviewed using related literature. This was conducted to identify how specific enterprise profile characteristics are commonly associated with strengths, weaknesses, opportunities, and threats. These empirically supported profile-based strengths and constraints were then triangulated with the survey results, thereby enhancing the analytical rigor and contextual validity of the SWOT matrix.

3. Results and Discussion Profile of the new energy vehicle enterprises

Based on grouped classifications of workforce size, years of operation, number of branches, and organizational scale, Table 1 shows the profile of the 11 New Energy Vehicle (NEV) companies that took part in the study. The Large (5,000-14,999 employees) category (36.4%) has the most businesses, followed by the Medium (27.3%) category. The Small and Extra-Large enterprises each account for 18.2%. This distribution shows that the sample is mostly made up of medium-to-large enterprises, which is in line with how NEV businesses work.

The Mature category (15-19 years) has the most businesses, with 36.4% of them. The Young enterprises (≤9 years) category has the second most, with 27.3% of them. The Growing (10-14 years) and Established enterprises (≥20 years) categories each have 18.2% of them. This shows that most of the companies that took part have a lot of operational experience, but a significant number of them are also fairly new.

Most businesses have between 10 and 12 branches, which puts them in the "Extensive" category (63.6%). "Limited" businesses (5 or fewer branches) and "Highly Extensive" businesses (13 or more branches) each make up 18.2% and 9.1%, respectively. This means that most companies have "multi-branch operations," which means they have a wide range of operations in their markets.

In terms of size, large enterprises make up 81.8% of the sample while Medium enterprises make up 18.2%. This confirms that the profile of NEV enterprises that took part is mostly made up of large-scale organizations. The results of this study mostly show the structural and strategic conditions of these kinds of companies.

Ability to Operate and Integrate the Supply Chain. The SW Matrix lists strong operating ability as one of the company's main internal strengths. This includes things like technological capabilities, R&D capacity, manufacturing scale, supply-chain management, and flexibility (see Table 2). Research has shown that supply chain integration makes supply chains much more resilient, which means that NEV manufacturers can deal with changes in the market, new rules, and production problems (Zhang et al., 2024). This evidence supports the conclusion that operational competence is the foundation of a company's ability to adapt and compete.

Profitability. The SW Matrix shows that Chinese NEV companies are very profitable. This means that they can pay for research and development, grow their manufacturing, and work on strategic projects. This is supported by empirical studies indicating that companies with robust financial performance can invest in innovation and sustain competitive advantage, even in capital-intensive green sectors (Wang et al., 2022). The correlation between observed profitability and academic evidence highlights the strength of NEV firms' internal financial resources.

Table 1: Profile of the New Energy Vehicle (NEV) Enterprises That Participated in the Study (Grouped Classification)

Profile Variable	Category	Frequency (n = 11)	Percentage (%)
A. Number of Employees	Small (<1,000)	2	18.2
	Medium (1,000-4,999)	3	27.3
	Large (5,000-4,999)	4	36.4
	Extra-Large (≥15,000)	2	18.2
B. Years in Operation	Young (≤9 years)	3	27.3
	Growing (10-14 years)	2	18.2
	Mature (15-19 years)	4	36.4
	Established (≥20 years)	2	18.2
C. Number of Branches	Limited (≤5)	2	18.2
	Moderate (6-9)	1	9.1
	Extensive (10-12)	7	63.6
	Highly Extensive (≥13)	1	9.1
D. Organizational Scale	Medium Enterprises	2	18.2
	Large Enterprises	9	81.8
Total	—	11	100%

Internal Factors in the Development Strategies of NEV Enterprises

The examination of internal factors influencing the development strategies of New Energy Vehicle (NEV) enterprises reveals a prevalent executive consensus that companies possess significant internal strengths in profitability, operational ability, solvency, and capital accessibility. Indicators like technological capability, R&D intensity, manufacturing scale, cost-management efficiency, and brand recognition are often mentioned in the literature as advantages for Chinese NEV producers at the firm level. When these resources are combined with good industrial policy and economies of scale, they help businesses run more efficiently, respond to market changes more quickly, and be more flexible when prices and demand change. Evidence from major companies in the industry shows that

scale and financial strength have been the main reasons for recent profit growth (e.g., BYD's revenue and profit growth), even though competition is getting tougher and margins are getting tighter. The peer-reviewed evidence and industry data together support the idea that resources and money are still the most important factors in how well companies do in capital-intensive green sectors like NEVs (Qian, 2023).

Table 2: Strength -Weaknesses (SW) Matrix: Chinese New Energy Vehicle Enterprises

Strengths		Weaknesses
A. Operating Ability	-Large number of core technologies -Have lower production costs China's new energy vehicles attach great importance to corporate culture management -Technological Capabilities R&D Capabilities -Manufacturing Capacity -Human Capital -Corporate Culture -Supply Chain Management -Distribution Network -Strategic Alliances and Partnerships -Flexibility and Adaptability	None
B. Profitability	-Strong profitability of Chinese NEV enterprises	None
C. Solvency	-Strong asset liquidity of Chinese NEV enterprises -Large scale of NEV assets in China -Certain risk resistance capabilities -Financial Resources	None
D. Capital	-A good brand effect	None

However, the complete absence of reported weaknesses represents an unexpected finding that warrants critical scrutiny. From a methodological standpoint, such uniform positive reporting may reflect well-documented response biases in self-reported surveys, including social-desirability bias and self-serving attributions, whereby respondents tend to over-report favorable attributes and under-report unfavorable ones to present themselves or their organization in a positive light (Krumpal, 2013). In strategic management and behavioral research, executives have been shown to exhibit overconfidence and optimism biases that systematically inflate assessments of organizational strengths (Malmendier & Tate, 2007). These cognitive tendencies can lead senior managers to perceive higher capability and overlook internal limitations when responding to subjective survey items, thereby skewing the distribution of reported indicators toward strengths.

External factors in the development strategies of NEV Enterprises

The analysis of external factors influencing the development strategies of New Energy Vehicle (NEV) enterprises in China reveals a predominantly favorable environment, with opportunities significantly outweighing threats. The findings are categorized into four key areas: policy, economy, society, and technology.

Table 3, presents that NEV industry operates within a highly favorable opportunity structure while facing multidimensional external threats. What distinguishes this study from prior discussions is the explicit recognition that many "threats" (e.g., regulation, competition, and economic volatility) also function as secondary innovation

Policy. Under the policy dimension, respondents unanimously identified national industry policies, financial incentives, and favorable regulatory frameworks as critical opportunities for the growth of the New Energy Vehicle (NEV) industry. These findings align with the national strategic direction outlined in China's New Energy Vehicle Industry Development Plan (2021-2035), which prioritizes market expansion, innovation, and global competitiveness. This strong policy alignment confirms the state's central role as a developmental catalyst in strategic industrial transformation. However, respondents also emphasized threats arising from the global political climate and legal constraints, particularly stricter international safety regulations and intellectual property (IP) protection requirements. These findings introduce a critical tension between rapid domestic expansion and constraints on internationalization, suggesting that regulatory compliance may slow global market penetration despite strong domestic policy support (International Energy Agency, 2023; WIPO, 2022).

Economic Condition. From the economic dimension, respondents consistently perceived China's strong international competitiveness, large export volume, and well-established supplier networks as dominant opportunities. This is strongly supported by recent global market data, which show that China remains the world's largest producer and exporter of NEVs (International Energy Agency, 2023). The development plan further reinforces these economic advantages through fiscal incentives, infrastructure investments, and industrial clustering support. Nevertheless, threats related to fuel price volatility, inflation, fluctuating interest rates, and uncertain global economic conditions were also identified.

An alternative interpretation of this finding suggests that while macroeconomic instability is viewed as a threat, it

may simultaneously accelerate NEV adoption as consumers shift away from fossil fuel dependency.

Society Under the social dimension, factors such as high customer satisfaction, an expanding talent pool, and increasing environmental awareness were overwhelmingly identified as opportunities. These findings reflect broader societal acceptance of sustainable mobility and align with empirical studies showing that environmental consciousness significantly influences NEV purchase intention (Li et al., 2020). However, a critical reflection reveals that high customer satisfaction may be unevenly distributed across urban and rural markets, where infrastructure readiness and affordability remain inconsistent. Ignoring this segmentation could result in overgeneralized strategic assumptions about consumer readiness. Thus, while society appears broadly supportive, adoption depth may still vary structurally across regions.

Technology. From the technological perspective, respondents emphasized technological advancement—particularly in battery performance, charging infrastructure,

and autonomous driving—as a major opportunity. This is consistent with global evidence showing that battery energy density and charging speed have improved substantially over the past five years (International Energy Agency, 2023). However, the rapid pace of innovation was simultaneously perceived as a threat due to intense market competition and shortened technology life cycles. This apparent paradox highlights a strategic dilemma:

technological leadership creates opportunity but also accelerates competitive imitation and market saturation. Firms that fail to sustain continuous R&D investment risk rapid obsolescence (Liu et al., 2024).

Table 3: Opportunities -Threat (OT) Matrix: Chinese New Energy Vehicle Enterprises

Opportunities	Threats
• National industry policies are conducive to the production of •new energy vehicles in China • Financial policies for the development of new energy vehicles in China • China's strong international competitiveness in new energy vehicles • China's large export volume of new energy vehicles • China has sufficient suppliers of new energy vehicles • High international sales volume of new energy vehicles in China • Energy Infrastructure: • Supplier Relationships • High customer satisfaction • China has a large demand for new energy vehicle talents • Market Demand and Trends • Environmental and Sustainability Trends • Consumer Behavior: • Public Perception and Awareness • Fast update speed of core technologies for new energy vehicles in China • Advancement in Technology • Environmental Influence to the Industry Technological Advancements	• The global political climate • Legal considerations such as comprehensive copyrights, increased safety regulations for auto manufacturers, etc. • Government Policies and Regulations • Legal Issues and Intellectual Property • Economic factors • Global Market Conditions • Financial Markets • Natural Disasters and Geopolitical Risks • Competitive Landscape:

Determinants based on Profile Data and Literature-

The following discussion presents the determinants based on the results of profile data. In this section, the identification of determinants is based on literature.

Strengths Identified (Profile-Based and Literature-Corroborated

Most of the NEV companies that took part are large (81.8%) and have been around for a long time (36.4% have been in business for 15 years or more). This type of organization is one that has a lot of resources, skills, and strategic stability. In the NEV sector, large companies usually have better innovation capacity, better ability to hire talented people, and more financial resources. These are all reasons why "Scale and Capacity of Operations" and

"Innovation Resources" are considered key strengths (Chen & Wang, 2023).

The profile indicates that 45.5% of firms have been in operation for 15 years or more. One firm has 30 years in the industry. Longevity contributes to supply chain stability, technological refinement, and market trust business for a long time, which means they have learned how to follow rules and are better able to do so. This makes them more ready for changes in safety, emissions, and digital standards (Wang et al., 2022). Such indication classifies this kind of profile as a strength.

The profile also shows that majority of the respondents indicated engagement in extensive distribution networks .

Almost 73 % have 10 or more branches, supporting logistics, service availability, and customer accessibility. Broad distribution channels are crucial for reaching national markets and improving customer experience in the NEV sector (Li et al., 2020). Such kind of profile is also classified as strength.

Also, the fact that the company has a lot of employees

(some with more than 10,000) and runs more than ten branch offices shows that it is well-organized and has a strong supply chain. This is consistent with research indicating that established NEV companies perform better when they possess integrated supply chain systems and enhanced operational efficiency (Xu & Chen, 2020). Such type of profile on, scale and capacity of Operations efficiency and resource leverage are essential for the competitiveness of NEVs and therefore considered as a strength. Consequently with this number we can also surmise that resource availability for innovation is a strength. Firms with thousands of employees have the capacity to sustain R&D departments and attract top talent.

Larger NEV enterprises are more capable of funding innovation clusters and establishing R&D synergies (Chen & Wang, 2023).

Weaknesses Identified (Profile-Based and Literature-Corroborated)

Even though they have advantages in terms of size, organizational maturity can also show some flaws. Companies that have been around for 15 to 30 years may be more likely to experience path dependence and structural inertia, which can make it harder to change R&D portfolios and innovation processes. Research employing dynamic network DEA and analogous methodologies has revealed predominantly low and heterogeneous innovation efficiency within Chinese NEV enterprises, characterized by notable inflexibility in R&D divisions (Chen et al., 2021; Zhang et al., 2023). This empirical pattern corroborates the profile based classification of Innovation Rigidity as a significant vulnerability for established, large-scale enterprises.

Also, having a lot of employees and a lot of branches means high fixed operating costs. This puts more pressure on finances when demand, subsidies, or credit conditions aren't as good. Studies on the NEV industry that use system dynamics and policy evaluation show that competition is moving from being based on subsidies to being based on the market. This is especially true for companies with high costs, which have to adjust more quickly when direct support is taken away or changed. Large employee base and extensive branch network raise overhead expenses. High fixed costs and operational complexity can challenge scalability and profitability in NEVs.

Only 18.2% of firms are medium-sized; few small enterprises included.NEV innovation ecosystems benefit from a balance of large and small firms, but barriers exist for SMEs. Thus this limited representation of SMEs is also be considered as a weakness.

The concentration of all sampled firms in Chongqing objectively demonstrates "Regional Centralization" as a structural deficiency, as industrial cluster documentation and official statistics indicate that Chongqing has implemented a highly concentrated, worldclass NEV cluster strategy; this enhances local connections while simultaneously heightening vulnerability to region specific regulatory, economic, or environmental disruptions (Chongqing City NEV Cluster Plan 2022-2030; State Council Information releases on Chongqing NEV clusters).

Dependence on domestic policy support further underscores vulnerability to political and subsidy volatility, as the NEV Industry Development Plan (2021-2035) and subsequent policy-network studies Overdependence on policy incentives risks sustainability if subsidies are phased out (Wang et al., 2022) and thus considered as a weaknes.

Opportunities Identified (Profile-Based and Literature-Corroborated)

Policy Incentives for NEVs is one the opportunites that can be drawn based on profile. All respondents are from Chongqing, China—a major NEV development zone. Most firms are large-scale and well-positioned to benefit from long-term national policies. National incentives, subsidies, and green industrial strategies create favorable conditions for large enterprises (Li et al., 2020).

Development Plan (2021- 2035)—creates strong external conditions that favor the expansion of large, well-established enterprises. Another opportunity is the export market expansion drawn from the profile as large enterprises with over 5,000 employees, indicating sufficient production and logistics capacity to scale globally. Chinese NEV firms with mature supply chains and production capacity are increasingly expanding into international markets (Chen & Wang, 2023; He et al., 2022). This policy stability enables firms with significant production capacity to pursue international market expansion, a trend increasingly observed among leading Chinese NEV manufacturers (Chen & Wang, 2023; He et al., 2022). The

operational maturity and substantial capital reserves of established NEV firms enhance their feasibility for vertical integration in critical value-chain segments such as battery production, software platforms, and broader mobility service ecosystems. Deep vertical integration—characterized by in-house production of batteries, electric motors, and proprietary software—has emerged as a significant strategic differentiator for leading EV manufacturers, enabling cost advantages, supply control, and coordinated innovation (Li, 2025.This is also perceived as an opportunity. Their geographic concentration in Chongqing further positions them advantageously within an established innovation cluster, strengthening access to university-industry partnerships, talent pipelines, and collaborative R&D environments (Zhou et al., 2021). Firms with large organizational scale and long operational histories are better positioned to accumulate the financial, technological, and managerial resources necessary to pursue vertical integration across the new energy vehicle (NEV) value chain, including upstream battery technologies and downstream mobility and service platforms. Empirical studies show that vertical integration in batteries, core components, and software systems enhances firms' control over product quality, cost efficiency, and innovation coordination, thereby strengthening competitiveness within NEV ecosystems (Chen et al., 2019; Li et al., 2020). In China's NEV industry, leading firms with mature operational capabilities have leveraged scale and experience to internalize key technologies and services, enabling tighter supply-chain control and faster technological upgrading (International Energy Agency, 2023).Moreover, firms with long industrial experience are better prepared to adopt digital manufacturing technologies such as IoT, AI, and smart factory platforms, which improve efficiency and accelerate product development (Xu & Chen, 2020). These industry-aligned opportunities support the growth strategies of the sampled firms.

Another opportunity based on literature is having Talent Acquisition and Innovation Clusters. Large workforce (up to 50,000) and regional concentration in Chongqing allow clustering and co-location with universities and tech firms. Innovation clusters and regional ecosystems facilitate advanced R&D and talent synergy (Zhou et al., 2021.

Lastly, long-established firms have time and structure to adopt intelligent systems such as AI, IoT, and smart factories. Mature NEV firms in China are increasingly integrating digital tools to enhance efficiency and personalization (Xu & Chen, 2020). Digitalization and Intelligent Manufacturing

Threats Identified (Profile-Based and Literature-Corroborated)

Based on literature, the following are the identified threats given the actual profile of the NEVs enterprises. Rapid adjustments in safety, emissions, and digital compliance standards create sustained regulatory pressure, especially for large legacy firms with complex operational systems. The NEV Industry Development Plan, together with subsequent IoV and data-security regulations, repeatedly raises performance, cybersecurity, and data governance requirements, which increase compliance complexity for established enterprises (State Council of the PRC, 2020; IoV/data-security guidelines). Regulatory Pressure and Technological Standards are thus considered as a threat especially for firms with long histories may struggle with frequent changes in emissions standards, safety protocols, and digital compliance. Rapidly evolving NEV policies demand high adaptability and frequent tech updates (Tang et al., 2020).

Technological disruption is also a threat, as recent analyses of NEV innovation capacity and policy shifts show that firms must transition from subsidy-driven to technology- and market-driven competition, exposing slow-moving incumbents to a higher risk of being out-innovated (Chen et al., 2021). Some firms may be slow adopters due to legacy systems and scale inertia, especially those with 10-30 years of operation. Established firms are often more vulnerable to radical and disruptive innovation introduced by startups or new global competitors, as entrenched routines, legacy assets, and dominant business models can constrain their ability to respond rapidly to fundamentally new technologies and market trajectories (Teece, 2018).

Firms with long histories may struggle with frequent changes in emissions standards, safety protocols, and digital compliance. Rapidly evolving NEV policies demand high adaptability and frequent tech updates (Tang et al., 2020). Expansion and workforce maintenance can strain cash flow, particularly if growth outpaces efficiency (Chen & Wang, 2023).

Intensifying competition from global and domestic industry leaders such as Tesla and BYD increases pressure on pricing strategies, innovation speed, and market share. Market and news data document that BYD has overtaken Tesla in global BEV deliveries and that the Chinese EV market is engaged in an aggressive price war, compressing margins and forcing continuous product and technology iteration (Reuters, 2024-2025; Statista/market-share analyses). Firms operating only in domestic zones like Chongqing face pressure from multinational players with advanced tech and pricing flexibility. Entry of global EV leaders like Tesla and BYD intensifies local competition in both innovation and market share (Li et al., 2020). The

competition from Global Giants therefore continue to be a threat.Rising costs associated with workforce expansion and market scaling further strain financial sustainability under these high competition, lower-margin conditions.

Finally, the empirical concentration of firms within a single regional market substantiates the threat of "Subsidy and Local Market Dependence," because firms embedded in regional NEV clusters remain heavily exposed to local fiscal capacity, regional industrial policies, and demand fluctuations even as national subsidies evolve (State Council of the PRC, 2020; Wang et al., 2025). The concentration of firms in one city (Chongqing) raises vulnerability to regional policy or market shocks. Overreliance on local government support can limit resilience to broader market dynamics (Zhou et al., 2021).

Rapid adjustments in safety, emissions, and digital compliance standards create sustained regulatory pressure pecially for large legacy firms with complex operational systems (Tang et al., 2020). Technological disruption presents significant threats to established enterprises because organizational inertia and structural rigidity can slow adaptive responses, making incumbent firms less agile in the face of disruptive technological change (Hannan & Freeman, 1984).

Table 4, presents the summary of profile based determinants as corroborated with literature.

Table 4: SWOT Matrix Summary of Determinants based on Literature on Profile of NEV respondents.

Strength 1.Scale & Capacity of Operations 2. Established Market Presence 3. Extensive Distribution Networks 4. Innovation Resources	**Weaknesses** 1. High Operational Costs 2. Innovation Rigidity 3. Limited SME Presence 4. Regional Centralization 5. Policy Dependence
Opportunities 1. Policy Incentives 2. Export Expansion 3.Vertical Integration 4.Talen & Clusters 5.Digitalization	**Threat** 1.Regulatory Volatitilty 2.Technology Disruption 3.Global Competition 4.Rising Expansion Cost 5.Sbsidy Balance

Table 5: Degree of influence of the internal factors in the development strategies of new energy vehicle enterprises

Category	Indicator	Mean	Description	Classification
A. Operating Ability	A large number of core technologies	4.55	Very High	Strength
	Have lower production costs	3.91	High	Strength
	China's new energy vehicles attach great importance to corporate culture management	4.00	High	Strength
	Technological Capabilities	4.64	Very High	Strength
	R&D Capabilities	4.64	Very High	Strength
	Manufacturing Capacity	4.36	Very High	Strength
	Human Capital	4.09	High	Strength
	Corporate Culture	4.00	High	Strength
	Supply Chain Management	4.00	High	Strength
	Distribution Network	4.09	High	Strength
	Strategic Alliances and Partnerships	4.00	High	Strength
	Flexibility and Adaptability	4.00	High	Strength
B. Profitability	Strong profitability of Chinese NEV enterprises	4.00	High	Strength
C. Solvency	Strong asset liquidity of Chinese NEV enterprises	4.00	High	Strength
	Large scale of NEV assets in China	4.36	Very High	Strength
	Certain risk resistance capabilities	4.00	High	Strength
	Financial Resources	4.00	High	Strength
D. Capital	A good brand effect	4.27	Very High	Strength

Determinants based on the degree of influence on the internal and external factors

Table 5 shows the results of an analysis of the internal factors that affect the development strategies of new energy vehicle (NEV) companies in China. These factors are divided into four groups: Operating Ability, Profitability, Solvency, and Capital. The analysis concentrates on the top-rated indicators within each category, evaluated by their average scores.

Technological Capabilities (Mean = 4.64) and R&D Capabilities (Mean = 4.64) are the two highest mean indicators for Operating Ability. Both were rated Very High. This finding is consistent with literature that highlights technological innovation and leadership as fundamental determinants of competitive advantage in the NEV sector. Research shows that the quality of new technologies, especially in midstream power battery and motor technologies and downstream charging services, has a positive effect on NEV sales and competition in the Chinese market.

Research on China's NEV companies also shows that eco-innovation performance is strongly linked to technological capability and cooperative R&D strategies. This shows how important R&D investments and innovation ecosystems are for a company's performance (Technological capability, 2024). Strong technological skills, like core technologies like powertrain integration, battery management systems, and intelligent driving, are what allow companies to make NEVs that are both cheap and high-performing.

Profitability only has one item: the strong profitability of Chinese NEV companies (Mean = 4.00, High). This rating shows that the Chinese NEV sector is doing well financially, which is in line with research that shows how profitability and resource strength help companies keep investing in new ideas and strategic growth even when they face competition. Government incentives and a well-developed innovation ecosystem have eased financing problems and encouraged companies to be more innovative, even though competition is still very strong (Zhao, 2024).

The highest mean indicator for Solvency is "Large scale of NEV assets in China" (Mean = 4.36, Very High). This shows that the leading NEV companies have strong asset bases. These strong asset positions help with risk management, production growth, and financial stability, which makes it easier to keep investing in R&D and be flexible in your strategy. Asset strength and economies of scale have been pinpointed as contributors to China's swift NEV industry expansion and global preeminence, especially via synchronized innovation and large-scale industrial advancement.

Table 6 shows how external factors affect the development strategies of new energy vehicle (NEV) companies in China. These factors are divided into four groups: Policy, Economy, Society, and Technology. To enhance analytical precision, the resultant SWOT matrix comprises solely the most significant determinants—characterized as indicators exhibiting a Very High degree of influence (mean ≥ 4.21). If no indicator in a category reached the Very High level, the single highest-rated factor was kept to make sure that all factors were represented fairly. This method gives you a short but strong assessment of the outside world based on real-world priorities.

In the Policy category, the mean score for both National industry policies and Government policies and regulations was 5.00, which is very high. This means that these were the most important opportunities. This result shows how important China's policy framework is for the growth of the NEV industry. A lot of evidence shows that tax breaks, subsidies, regulatory requirements, and long-term planning for the industry have all sped up the production, technological upgrades, and market adoption of NEVs in China (Hao et al., 2022; International Energy Agency, 2023). Policy support has also been important in encouraging investment in research and development, standardization, and the building of large-scale charging infrastructure. This has helped the sector grow quickly and become more competitive around the world (Chen et al., 2019).

In the Economy category, China's strong international competitiveness in new energy vehicles had the highest mean (Mean = 4.36, Very High), making it a key opportunity. This shows that China is becoming more powerful in the global NEV markets, thanks to economies of scale, integrated supply chains, and ongoing efforts to innovate. Studies show that China is now the world's biggest producer and consumer of NEVs. This helps companies save money and do better in international markets (Li et al., 2020; Zhang et al., 2018). This competitive edge gives China more power over global NEV value chains.

In the Society category, the mean values for demand for NEV-related talent, market demand and trends, and environmental and sustainability trends were all Very High (Means ≥ 4.73), which means they are all major opportunities. The NEV industry is knowledge-intensive, which is why there is a growing need for skilled workers. This shows how important it is to invest in human capital to keep innovation going (Wang et al., 2020). At the same time, rising environmental awareness and worries about sustainability—along with China's goals for carbon neutrality—have had a big impact on what people want and made the market for NEVs much stronger (Hao et al., 2022). These changes in society make it easier for NEVs to keep being used and grow.

Under Technology, both the advancement in technology and the technological development strategy of NEV companies got very high mean scores (Mean = 4.82). This shows that technological progress is a very important opportunity. The

NEV sector has seen a big boost in competitiveness thanks to quick improvements in battery technology, electric drivetrains, vehicle software, and smart systems (Zhang et al., 2018). Technological innovation enhances vehicle performance and reliability while enabling cost reductions and platform integration, allowing Chinese NEV companies to increase their market share both domestically and internationally (Li et al., 2020).

Table 6: Degree of influence of the external factors on the development strategies of new energy vehicle enterprises

External Factors	Mean	Description	Classification
A. Policy			
1. National industry policies are conducive to the production of new energy vehicles i n China	5.00	Very High	Opportunity
2. The global political climate	3.00	Average	Threat
3. Financial policies for the development of new energy vehicles in China	4.09	High	Opportunity
4. Legal considerations such as Comprehensive copyrights, increased safety regulations for auto manufacturers, etc.	3.09	Average	Threat
5. Government Policies and Regulations	5.00	Very High	Opportunity
6. Legal Issues and Intellectual Property	3.00	Average	Threat
B. Economy			
7. China's strong international competitiveness in new energy vehicles	4.36	Very High	Opportunity
8. China's large export volume of new energy vehicles	4.00	High	Opportunity
9. China has sufficient suppliers of new energy vehicles	4.00	High	Opportunity
10. High international sales volume of new energy vehicles in China	4.00	High	Opportunity
11. Economic factors such as fuel prices, inflation, and interest rates	3.00	Average	Threat
12.Global Market Conditions:	3.00	Average	Threat
13.Energy Infrastructure:	4.00	High	Opportunity
14. Supplier Relationships:	4.00	High	Opportunity
15. Financial Markets:	3.00	Average	Threat
16Natural Disasters and Geopolitical Risks:	3.00	Average	Threat
C. Society			
17 High customer satisfaction with new energy vehicles in China	4.00	High	Opportunity
18. China has a large demand for new energy vehicle talents	4.82	Very High	Opportunity
19. Market Demand and Trends:	4.73	Very High	Opportunity
20. Environmental and Sustainability Trends:	4.82	Very High	Opportunity
21. Consumer Behavior:	4.00	High	Opportunity
22. Public Perception and Awareness: External factors, such as media coverage and pu blic perception of new energy vehicles, can impact the market acceptance and success of these vehicles	4.00	High	Opportunity
D. Technology			
23. Fast update speed of core technologies for new energy vehicles in China	4.00	High	Opportunity
24. Advancement in Technology	4.82	Very High	Opportunity
25. Environmental Influence on the Industry	4.00	High	Opportunity
26. Competitive Landscape:	3.82	High	Threat
27. Technological development strategy of a new vehicle enterprise.	4.82	Very High	Opportunity

Table 7 presents the Determinants based on Internal and External Factors presented in the SWOT Matrix Under Society category, the indicators—China's demand for New Energy Vehicle (NEV) talents, environmental and sustainability trends, and technological advancements—each scored a mean of 4.82, indicating a "Very High" opportunity for growth. The increasing demand for skilled talent emphasizes the necessity for enhanced education and training programs to support the industry's expansion (Wang et al., 2020). Concurrently, the alignment of environmental trends with China's decarbonization goals reflects a shift in consumer preferences, further driving market demand for NEVs (Hao et al., 2022). Under the Technology category, both the advancement in technology and the technological development strategy of NEV enterprises also received a mean score of 4.82, highlighting significant opportunities. These indicators underscore the rapid evolution of core technologies such as battery development and autonomous driving, which are crucial for maintaining a competitive edge in the market (Zhang et al., 2018). Technological innovations not only improve vehicle performance but also facilitate cost reductions, allowing firms to expand their market presence domestically and internationally (Li et al., 2020).

Chinese NEV enterprises demonstrate considerable strengths in technological and innovation capabilities, with Technological Capabilities and R&D Capabilities scoring 4.64 ("Very High"). This reflects their proficiency in swiftly developing and commercializing advanced EV technologies (Xu et al., 2022). Additionally, their Core Technologies (4.55) and Manufacturing Capacity (4.36) ensure efficient production processes, while brand equity (4.27) and asset

scale (4.36) bolster market trust and resource utilization. Profitability also scored high at 4.00.

On the weaknesses front, the highest score was for Human Capital at 4.09 ("High"), indicating that while the workforce is skilled, there may be gaps in talent depth or organizational agility that require ongoing investment to sustain competitive advantages as technologies evolve (Tang et al.,2020).

Opportunities abound in the external landscape, with policy support—particularly the plan—scoring a perfect 5.00 ("Very High"), indicating strong governmental backing for NEV growth (Li et al., 2020)

Considering the threat, no external item reached "Very High"; the top item is the Competitive Landscape at 3.82 ("High"). Fierce rivalry from global players—Tesla, BYD, and established automakers—means domestic NEV firms must continually innovate and optimize costs to defend market share.

Table 7: Determinants based on Internal and External Factors presented in the SWOT Matrix

Strength (Internal Determinants)	**Weaknesses (Internal Determinants)**
1. Technological Capabilities (Mean 4.64-Very High) 2. R&D Capabilities (4.64 -Very High) 3. Large Number of Core Technologies (4.55-Very High) 4. A Good Brand Effect (4.27 -Very High) 5. Manufacturing Capacity (4.36- Very High) 6. Large Scale of NEV Assets (4.36 - Very High) 7. Strong Profitability (4.00 - High)	None
Opportunities (External Determinants)	**Threats External Determinants)**
1. National Industry Policies conducive to NEV production (5.00 - Very High)	1. Competitive Landscape (Mean 3.82 High)
2. Government Policies & Regulations (emissions standards, incentives) (5.00 - Very High)	(No "Very High" threats Competitive Landscapeis highest High)
3. China's Strong International Competitiveness in NEVs (4.36 - Very High)	
4. Large Demand for NEV Talent (4.82 - Very High)	
5. Market Demand & Trends (4.73 - Very High)	
6. Environmental & Sustainability Trends (4.82 - Very High)	
7. Advancement in Technology (4.82 - Very High)	
8. Technological Advancements (battery, autonomy, connectivity) (4.82 - Very High)	

Table 8 shows the unified matrix that highlights how the enterprises' profile-based determinants, together with the influence-based determinants, shape the SWOT landscape for China's NEV industry. The consolidated determinants illustrate a coherent strategic landscape for Chinese NEV enterprises. For the influence-based, it provides a focused SWOT matrix that includes only the top determinants—those with a "Very High" degree of influence in each cluster.

Where a cluster had no "Very High" items, its single highest-rated factor instead was included. For each cluster, all items rated "Very High" (mean ≥ 4.21) were included. If a cluster had no "Very High" items (e.g. Weaknesses, Threats), the single highest-rated factor (even if only "High") was included. Below is the consolidated presentation of the determinants of the strategies of the NEC. (profile-based and influence-based) .

Table 8: Consolidated Determinants to the Development Strategies of NEV in China

Strengths	**Weaknesses**
Profile-Based	**Profile-Based**
1. Scale & Capacity of Operations	1. High Operational Costs
2. Established Market Presence	2. Innovation Rigidity
3. Extensive Distribution Networks	3. Limited SME Presence
4. Innovation Resources	4. Regional Centralization
	5. Policy Dependence

Strengths	Weaknesses
Influence-Based	**Influence-Based**
1. Technological Capabilities	1. Human Capital
2. R&D Capabilities	(highest-rated "High")
3. Core Technologies	
4. Brand Effect	
5. Manufacturing Capacity	
6. Large Scale of NEV Assets Huge Consumer Market	
Opportunities	**Threats**
Profile-Base	**Profile-Based**
1. Policy Incentives	1. Regulatory Volatility
2. Export Expansion	2. Technological Disruption
3. Vertical Integration	3. Global Competition
4. Talent & Clusters	4. Rising Expansion Costs
5. Digitalization	5. Subsidy Reliance
Influence-Based	**Influence-Based**
1. National Industry Policies	1. Competitive Landscape
2. Government Policies & Regulations	(highest-rated "High")
3. China's International Competitiveness	
4. Demand for NEV Talent	
5. Market Demand & Trends	
6. Environmental & Sustainability Trends	
7. Technological Advancements	

4. Conclusion and Recommendation

The findings demonstrate that the majority of China's New Energy Vehicle (NEV) businesses are sizable, established, and labor-intensive. The majority of businesses have more than 5,000 employees, have been in business for more than 15 years, and have extensive branch networks, all of which demonstrate the maturity of the industry and its enormous market reach. Strong organizational capabilities, well-established operations, and a wide market presence are characteristics of the industry highlighted in this profile.

Internally. NEV businesses show high profitability, excellent operational capacity, steady solvency, and sufficient capital reserves. Advanced technology capabilities and efficient risk-management systems bolster these advantages. Crucially, the investigation found no serious inherent flaws in these fundamental operational and financial aspects. Nevertheless, there are still obstacles to overcome in enhancing automation, innovative agility, operational efficiency, and human capital development, indicating areas where businesses can still maximize internal operations.

Externally. the NEV sector gains from strong legislative backing, a vibrant economy, rising consumer satisfaction and societal acceptance, and quick technical development. Strong prospects for market growth, innovation, and worldwide competitiveness are presented by these circumstances. However, the business is threatened by economic volatility, quickly escalating domestic and international rivalry, political unpredictability around the world, and regulatory ambiguity. The necessity of strategic adaptability and proactive risk management is strengthened by these outside forces.

NEV enterprises' development strategies are influenced by a number of factors, including external circumstances (policy incentives, technological change, global market dynamics), internal strengths (financial stability, technology capability, risk management), and enterprise profile traits (large workforce, long operational history, extensive networks). Leveraging these capabilities while resolving internal limitations including operational expenses, a lack of skilled personnel, and restricted innovative flexibility is essential for strategic progress. Businesses must take advantage of policy-driven opportunities on the outside, expand into international markets, improve vertical integration, and implement digital and intelligent manufacturing technology. Maintaining agility, improving cost competitiveness, controlling expansion risks, and diversifying revenue sources beyond subsidies are all necessary for businesses to lessen dangers.

In general, integrated plans that match firm profiles with internal capabilities and external circumstances will be necessary for sustainable development. These strategies must be backed by concerted efforts from SMEs, industry leaders, and legislators.

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