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# Analyzing Tesla's International Business Strategies: A Closer Look at the Korean and Chinese Markets

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## Abstract

**Purpose:** Taking Tesla Motors as a case study object, this research aims to summarize the management strategy of Tesla Motors through an evaluation of its business models in Korea and China then helps other new energy automobile enterprises in formulating strategic directions in a targeted manner. **Research design, data and methodology:** Using the case study method, this study conducts in-depth research on the business model of Tesla, a representative enterprise of the new energy automobile industry. This study mainly uses secondary data obtained from the official websites to support our research. **Results:** With its top-level innovative technology, distinctive marketing model, and extensive strategic model, Tesla holds the largest share of the new energy vehicle market. Local market brands such as BYD and Hyundai-Kia still have a considerable competitive advantage, and there is a need to learn from each other for further development. **Conclusions:** To adapt to the needs of economic transformation and environmental development, implementing business strategies related to new energy automobile enterprises is a topic worthy of study. Enterprises such as BYD and Hyundai-Kia have unique advantages in their home markets. However, as sustainable development progresses, these advantages will gradually weaken, and further measures are necessary to maintain their competitive advantage.

**Keywords :** Tesla Motors, New Energy Vehicle, International Business Strategies, Korean and Chinese Markets, BYD, Hyundai-Kia Motors

**JEL Classification Code:** F14, F23, L11, L62

## 1. Introduction

As global warming and carbon emissions become increasingly severe, the need for environmental protection has become an urgent issue. Consumer awareness of environmental protection is growing, and car manufacturers have started to change their production methods, assume more social responsibility, and initiate green production.

New energy-related industries are strongly supported worldwide, and new energy vehicle-related industries are developing rapidly.

Several years ago, many car companies announced plans to stop selling fuel-powered cars. For example, in 2021, Volkswagen and Audi announced that they would control the development of internal combustion engines. In particular, Audi is set to launch its last new fuel model in

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2025 and will stop selling fuel models by 2030; meanwhile, Volkswagen will stop selling fuel cars in the European market by 2035. Similarly, Toyota announced that it will stop selling fuel-powered automobiles in China, Europe, and North America by 2030, while Lexus will stop selling fuel-powered vehicles altogether by 2035. Previously, Kia Motors stated that it would stop selling fuel-powered cars in the European Union (EU) market by 2035 and completely electrify its international markets by 2040. On April 3 this year, BYD announced its withdrawal from the fueled car market, becoming the first traditional car company in the world to promote the cessation of fueled car production. Following the trend of new energy vehicle development, Tesla Motors, as the pioneer and leader of the industry, employs innovative power design and new driving concepts that make it representative of new energy vehicles. After its rapid development, Tesla Motors was projected to be worth trillions of dollars and have the highest market value among car companies in 2021. Therefore, Tesla can serve as a representative of new energy vehicle companies. A case study of Tesla's overseas business strategies can further enable us to understand the current situation of the new energy vehicle industry. Other companies may also benefit from learning to formulate strategic directions in a targeted manner.

Tesla Motors has undoubtedly attracted extensive research, but most Tesla-related studies and analyses have concentrated on its technological advancements (Mangram, 2012). For instance, Ingle and Phute (2016) presented a brief overview of Tesla Motors' semi-autonomous driving technology called Tesla Autopilot. Bae and Kim (2017) reviewed the vital technical trends of Tesla Motors' electric vehicles (EV). Tesla leads the EV industry through its innovative technology, unique marketing, and extensive strategic model. Therefore, the research on its business model is valuable and informative, especially for other companies. Accordingly, the current work conducts a case study on Tesla Motors, a representative of new energy vehicles. The goal is to summarize the unique management advantages of Tesla Motors through an analysis of its business model and a comparison with local representative car brands after entering the Chinese and Korean markets. The results are expected to help new energy vehicle companies in formulating their strategic directions in a targeted manner and provide new energy vehicle business development with motivation and practical significance.

The remainder of this paper is structured as follows: Section II introduces the current development of new energy vehicles in China and Korea. Section III briefly describes the research methodology and the associated research components. Section IV introduces Tesla Motors, analyzes its business strategy in the Chinese and Korean markets, and

summarizes its success factors. Section V provides the conclusions and insights.

## **2. Literature Review**

### **2.1. Relevant Theory and Prior Research**

Classical theories on the internationalization of firms are diverse, such as the Uppsala model proposed by Varne and Johansen in 1975, the eclectic paradigm proposed by Dunning in 1977, and Porter's theory of competitive advantage in 1990. In this study, we focus on analyzing Tesla's internal and external environments; thus, Porter's Five Forces Model provides a sound theoretical background for our study. Additionally, the use of the SWOT analysis makes our analysis more comprehensive.

As a brand which is representative of new energy vehicles, Related research on Tesla is abundant. Prior research on Tesla focuses on three main areas. First, many scholars have conducted studies on Tesla's advanced technology. For example, Ingle and Phute (2016) presented a brief overview of Tesla Motors' semi-autonomous driving technology called Tesla Autopilot. Kumari and Bhat (2021) provided an in-depth examination of the Tesla Company and its innovations for autonomous vehicles. They also examined the use of artificial intelligence in Tesla. Second, many scholars have studied Tesla's business management. For instance, Mangram (2012) analyzed Tesla's globalization through the lens of marketing. He argued that the pure electric vehicle industry is undergoing a period of rapid growth, so Tesla should seize the opportunity and seek further development based on the marketing management method of "new technology." Thomas and Maine (2019) stated that Tesla Motors follows the attacker's strategy of dominance and capitalizes on the challenges in innovation faced by its competitors owing to Tesla's novel value proposition. Thirdly, some scholars have further analyzed Tesla by combining technology and business management since Tesla's principal success factor is its advanced technology. Hardman et al. (2015) comprehensively analyzed Tesla's technology and business model. They reviewed Tesla's approach to entering niche markets in detail and accordingly made rationalizations for the market entry of fuel cell vehicles. Similarly, Akakpo et al. (2019) described Tesla's management strategy, organizational policies, and visionary approach. They argued that challenges, such as increased instability in the global automotive industry, require automotive companies to innovate. Tesla responds in a flexible manner to these challenges using remote battery technology as the core of its strategy.

Existing studies primarily focus on Tesla's unique technology. Research on the business aspects remains insufficient and lacks in comparative studies. Accordingly, we use SWOT analysis to analyze Tesla's market entry mode in China and South Korea and conduct comparative analysis of local companies. Additionally, this study further analyzes Tesla's internal and external competitive environment using Porter's Five Forces Model. A comprehensive analysis, such as this study can provide meaningful references for related enterprises and scholars.

## 2.2. China's Current New Energy Vehicle Environment

China's new energy vehicles have developed rapidly in recent years, and the market is transforming from being influenced by policies market forces. Moreover, China's new energy vehicle market has gradually evolved from being unstable to being mature, and market sales have increased tremendously. Since 2001, the Chinese government has developed strategies and policies in support of the development of the industry so as to promote the application of new energy vehicles, improve the industrial chain, and build core technology modules. Benefiting from technological progress and policy support, China's new energy vehicle production and sales have increased, making this market the largest in the world.

New energy vehicle development is crucial for addressing urban ecological issues and reducing reliance on non-renewable energy sources. On April 16 and 23, 2020, relevant government departments released the Announcement on the Policy Concerning the Exemption of New Energy Vehicles from Vehicle Purchase Tax and the Notice on Further Improving the Financial Subsidy Policy for the Promotion and Application of New Energy Vehicles, respectively, to encourage consumption in the new energy vehicle market and support the steady and healthy growth of related vehicle enterprises. However, the sales of new energy vehicles fell sharply in early 2020 owing to the impact of COVID-19. Nevertheless, given the support of government subsidy policies and consumer confidence following the pandemic, live streaming, online shopping, and other online sales models have since stimulated consumer demand. Consequently, many local governments have developed preferential policies to promote the rebound of consumption in the new energy vehicle market, and these policies have gradually increased car sales (Perkins & Murmann, 2018). In 2022, China's new energy vehicle market exploded, and the market size and penetration rate hit a record high. According to statistics, among the top 10 new energy vehicle companies in China in 2022, Tesla Motors came in third with 439,800 units sold. However, the

uneven regional development still indicates an untapped market potential.

From a technological aspect, the development of EVs has progressively entered the industrialization stage, and the integration and safety of all vehicles have improved. The efficiency of EV power systems and other crucial parts has consistently increased, while safety plans, diagnosis, and other technologies have greatly improved. Moreover, the investment in and construction of new energy vehicle charging infrastructures are accelerating. As of February 2022, the cumulative number of charging infrastructures nationwide had reached 2.864 million units, indicating a year-on-year increase of 62.9%. However, the institutional design and practical operation of China's current business promotion model requires further improvement.

## 2.3. Korea's Current New Energy Vehicle Environment

According to the data released by South Korea's Ministry of Industry, Trade, and Resources (MITR), the local sales of new energy vehicles increased by 26.8% year-on-year to 440,000 units in 2022. The number of new energy vehicles registered in South Korea in 2022 increased by nearly 40% year-on-year, with the total number of vehicles registered by the end of 2022 reaching 25,503,000, reflecting an increase of 2.4% year-on-year. In particular, the total number of new energy vehicles registered reached 1.59 million, indicating an increase of 37.2% year-on-year, and accounting for 6.2% of the total number of registered vehicles. Meanwhile, South Korea's auto exports increased by 16.4% year-on-year in 2022, with exports of new energy vehicles increasing by 36.8% year-on-year to 554,000 units. Additionally, shortages of chips and parts previously faced by Korean automakers have eased, and sales and production of new energy vehicles have increased.

The MITR finalized the fourth phase of the New Energy Vehicle Development Plan (2021-2025) at the State Council. This development plan entails boosting the acceptance of alternative fuel vehicles, upgrading the charging infrastructure, ensuring price parity, increasing exports, and encouraging technological advancement. Regarding the popularization of new energy vehicles, the government plans to popularize 2.83 million and 7.85 million new energy vehicles by 2025 and 2030, respectively, to reduce carbon emissions from cars by 24% by 2030. To achieve this goal, the government has mandated that all public institutions purchase new energy vehicles and has introduced a new energy vehicle purchase target system for private companies (Park, 2021).

In terms of price competitiveness, the government will create a platform specifically for new energy vehicles, promote the localization of auto parts, reduce the price of

new energy vehicles by more than 10 million won (approximately 58,200 yuan) by 2025, and reduce the cost of cars by half by implementing battery-leasing services. With regard to carbon neutrality, the government is considering a program to regulate the carbon emissions of vehicles based on age. In terms of technology and corporate innovation, the government plans to popularize all models of hydrogen fuel cells by 2025; commercialize all-solid-state batteries by 2030; and promote the transformation of more than 1,000 companies into future automotive parts

companies by 2030, for which 200 billion won of the New Deal Fund for Future Vehicles will be established, new R&D departments will be built, and relevant human resources will be trained (Park, 2021). In terms of charging infrastructure, the government plans to build 500,000 new charging facilities and ultra-high-speed charging posts by 2025, and 450 new hydrogen refueling stations across the country.

Overall, the development of new energy vehicles in Korea shows immense potential. Owing to the advanced technology and rich experience of Korean auto companies, such as Hyundai and Kia, Korea’s new energy vehicles have a high starting point and are developing rapidly. However, according to the Auto Recall Center 2020 statistics, 90,746,000 cars were involved in EV recalls, relative to only 524, 12,264, and 13,024 in 2016, 2018, and 2019, respectively. Therefore, the safety and performance issues concerning new energy vehicles need to be addressed.

### 3. Research Method

Based on the concepts of carbon neutrality and sustainable development, this study explores the prevailing situation of the development of the new energy automobile industry using a qualitative, exploratory research method. Specifically, this study conducts in-depth research on the business model of Tesla using the case study method on secondary data obtained from the official websites of the relevant companies and their official reports, such as Tesla’s official data and the annual Tesla Impact Report. To compensate for any potential lack of objectivity owing to the use of case studies, we refer to and analyze the relevant literature and theories and conduct a comparative analysis, which enhances the validity and reliability of this study.

This study begins with a description of the general environment of the development of the new energy industry in the Chinese and Korean markets. The study then analyzes Tesla’s business model in the China-Korea market, and uses SWOT analysis to compare Tesla’s business model with those of representative local companies, such as BYD and Hyundai-Kia. Moreover, this study uses Porter’s five-forces analysis to analyze Tesla’s internal and external competitive environments. Through the analyses, this study summarizes Tesla’s unique competitive strengths and weaknesses. A case study of Tesla Motors can further clarify the current situation of the new-energy automobile industry. It may also benefit other enterprises as they learn and formulate strategic directions in a targeted manner. The relevant contents of the case study are listed in Table 1.

**Table 1:** Case Study of Tesla Motor

Research Subjects	Contents	
Tesla Motors	1. Introduction to Tesla Motors	
	2. Tesla Motors in China	Analysis of entry modes and related strategies
		Introduction to BYD; Comparison with BYD using SWOT approach
	3. Tesla Motors in Korea	Analysis of entry modes and related strategies
		Introduction to Hyundai-kia Motors; Comparison with Hyundai-kia Motors using SWOT approach
	4. Summary of Tesla’s business strategies	
	5. Analysis of Tesla’s Competitiveness	Internal environment analysis
		External environment analysis using Porter’s five forces model

### 4. Case study

#### 4.1. History and Development Status of Tesla Motors

Tesla Motors is an automotive company founded in 2003 by a group of engineers in Silicon Valley who wanted to develop EVs and hasten the development of sustainable transportation by offering appealing, mass-market EVs



(Bilbeisi & Kesse, 2017; Karamitsios, 2013). Tesla aims to produce battery-powered EVs for the mainstream market with appealing customer value propositions, including extended range, flexible recharging, energy efficiency, low ownership cost, and high performance, without sacrificing appearance or usefulness. Elon Musk, the current CEO, is a founding member of an American cyber-venture capital enterprise and has served as the CEO of Space Rocket Enterprises and SPACE X. The company was listed on the NASDAQ stock market in June 2010, thus becoming the first EV company to go public since Ford Motor Company in 1956. Tesla's main products include: Tesla Roadster, Tesla Model S, Tesla Model X, Tesla Model 3, Tesla Model Y, Tesla Model, Tesla Semi, and Tesla Cyber Truck. Figure 1 shows the historical timeline of Tesla.

Thirteen years after introducing its first model, the Tesla Roadster, to the worldwide market, Tesla has expanded its customer base by selling millions of automobiles worldwide. By 2022, Tesla had produced 1,369,611 units and delivered 1,313,851 units, representing increases of 47% and 40%, respectively. In addition to the significant global market movement toward EVs, particularly in the prosperous EU region, Tesla has benefited from the addition of about 500,000 cars per year for the production of Model Y in Shanghai (Car Sales Statistics, 2023). With Tesla's average growth of 59% over the last seven years, its annual sales are predicted to reach 5 million units/year by 2025. As the market for battery EVs increases rapidly (Mangram, 2012), Tesla Motors has emerged the world's leading producer of pure EVs (Thomas & Maine, 2019). Economically, by providing additional jobs and manufacturing facilities, Tesla Motors helps expand the global economy. Electric automobiles from Tesla Motors are more politically and socially responsible because they lower harmful externalities (such as pollution), thus adhering to the development strategy outlined by laws and regulations. From a technological standpoint, Tesla Motors has developed ground-breaking battery pack designs to lower the overall cost of batteries and to better incorporate autonomous driving technologies into EVs (Liu, 2021).

## 4.2. Tesla Motors in China

China actively promoted new energy vehicles in 2013, and this trend has enormous potential for growth. Tesla embraced this excellent opportunity to extend its international sales market by entering China. Tesla built its first 4S store in Beijing at the end of 2013, with Model S serving as its primary model for sales. Tesla delivered the Model S to its first buyers in China in April 2014, thus initiating its business activity in the country. The international market entry mode is mainly divided into exports, contract entry, and foreign direct investment. Specifically, these modes include exports, licenses, franchising, contract manufacturing, engineering contracting, two-way trade, investment in plant construction, and others. Tesla enters overseas markets mainly through franchising and investment in factory construction to promote the direct mode, the same is true for the Chinese market.

**Franchising:** The conventional approach to car marketing is to open a 4S store, engage in trade, and arrange for pick-up in a physical location. Meanwhile, Tesla has abandoned the traditional vehicle dealership model and switched to the Internet-based online-to-offline direct sales model, which combines offline experience with online booking and payment to reduce the price of intermediaries. The direct operation model is a type of franchising in which a service and experience center is established in the target market and managed directly by the head office to provide services such as test driving, car ordering, delivery, and after-sales service to customers. This approach to selling vehicles has been disruptive. Since establishing its first direct store in the United States in 2008, Tesla has continued to develop its business through overseas strategies and building its direct stores.

For consumers, this model has many advantages, particularly in three areas: (1) the online and offline unified selling prices are more open and transparent; (2) consumers can enjoy more professional services and a more straightforward purchase process, which reduces the intermediary costs; (3) consumers can experience private customization, which provides them with diverse choices. All Tesla stores are directly operated and are responsible for site selection, decoration, personnel recruitment, and product sales. Although the initial investment is relatively significant, Tesla can eventually obtain detailed and accurate operational data and refine the sales funnel indicators to guide the business across regions, cities, stores, and individual consumers.

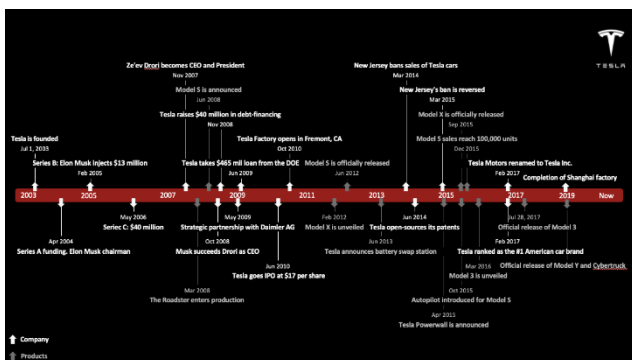


Figure 1: History of Tesla Motors

To date, the number of Tesla experience stores and showrooms in mainland China has reached 292, and the number of service centers has reached 170, as shown in Figure 2. Most of these facilities are concentrated in relatively economically developed provinces and cities.

Targeting consumer groups with high incomes and cutting-edge consciousness ideals, Tesla focuses on developed cities in China, with retail sites, mostly in urban areas with high consumption levels and high traffic flow.



Figure 2: Distribution of Tesla Stores in Mainland China

**Investment in factories:** Tesla supports the ongoing advancement from battery production to entire vehicle assembly, including EV manufacturing and solar cell energy storage through its four giga plants and one large automobile factory situated globally. Tesla’s primary auto-manufacturing facility is located in Fremont, California, USA. Tesla’s first gigafactory is in Nevada, USA, and it is the Company’s first self-built super factory that was completed and operated in June 2014. This factory produces power batteries, power walls, and power packs. The SolarCity facility, which can create 1,000 solar rooftop units per week, was acquired by Tesla in 2016 and is located in New York, USA. Its role works in conjunction with Powerwall and Powerpack. Tesla’s third gigafactory is in Shanghai and officially started production in early 2019. The Shanghai Gigafactory mainly produces Model 3 and Model Y. Tesla’s fourth gigafactory is in Berlin, Germany, and is called the Gigafactory Berlin-Brandenburg. In March 2022, the factory officially opened, mainly for Tesla to supply batteries, battery packs, and powertrains; it is also set to assemble Tesla’s Model Y. Unlike other countries’ car companies that have entered the Chinese market using the proven route of joint ventures, Tesla built a wholly-owned plant. As a result, with a total investment of around US \$2 billion, the Shanghai Gigafactory became the first entirely foreign-owned factory in China. A wholly-owned subsidiary has the advantage of not worrying about conflicts, communication problems, and information challenges; strengthening control over the local market; and

attributing all profits from overseas subsidiary activities to the parent company.

In addition to Tesla, the domestic brand BYD has outstanding sales in China. BYD was founded in 1995, established its industrial park five years later, and subsequently entered the European and American markets. BYD has been steadily developing in recent years and is at the forefront of the new energy vehicle industry. Commercial electric cars from BYD, such as electric buses and electric taxis, have been introduced and utilized in various nations with restrictions. These vehicles have attracted positive international attention. Therefore, BYD’s strategic operations can be reasonably compared with those of Tesla.

Different from Tesla, which employs franchising and investment in factory construction as modes of entry, BYD mainly applies direct exports, investment in factory construction, and strategic alliances. Since 2013, BYD has made export sales to the American, European, and Asia-Pacific markets, with its sales mainly comprising buses and trucks. BYD has also invested in and built factories in the United States, Brazil, Europe, and other regions to expand its production capacity. In 2008, BYD made its first strategic alliance with Berkshire Hathaway Energy and then established strategic alliances with Daimler, and ADLand Toyota of Japan to create a comprehensive layout of new energy technology, passenger cars, and commercial vehicles. For further analysis, we choose the SWOT approach with reference to some existing studies such as Byun (2016) and

Bredendfeld et al. (2020), which specifically addresses the strengths, weaknesses, opportunities, and threats of the two firms (Table 2).

**Table 2:** Tesla versus BYD

	Tesla	BYD
Strengths	<ol style="list-style-type: none"> <li>1. Advanced and innovative technological advantages</li> <li>2. Vertically integrated market strategy</li> <li>3. Strong leadership</li> <li>4. High R&amp;D expense ratio</li> <li>5. Strong brand image</li> </ol>	<ol style="list-style-type: none"> <li>1. High number of patents and emphasis on R&amp;D</li> <li>2. Mature power battery technology</li> <li>3. Strategic layout of the whole industry chain</li> </ol>
Weakness	<ol style="list-style-type: none"> <li>1. Inadequate production capacity</li> <li>2. Single customer group</li> <li>3. Over-reliance on suppliers</li> </ol>	<ol style="list-style-type: none"> <li>1. Weak capital strength of the company</li> <li>2. Low brand value and market recognition</li> </ol>
Opportunities	<ol style="list-style-type: none"> <li>1. Expanding demand from domestic and international markets</li> <li>2. Governmental support</li> </ol>	<ol style="list-style-type: none"> <li>1. Expanding demand from domestic and international markets</li> <li>2. National policy support</li> </ol>
Threats	<ol style="list-style-type: none"> <li>1. Threat of potential competitors</li> <li>2. Supply chain problems</li> <li>3. Barrier of habitual change</li> </ol>	<ol style="list-style-type: none"> <li>1. The global new energy vehicle market is highly competitive</li> <li>2. Energy subsidies decline</li> </ol>

The comparison shows that BYD’s main strengths are the number of patents and the whole industry chain strategy; however, its brand value and market recognition are relatively low. As for Tesla, it has created high turnover with the help of innovative technology, a vertically integrated market strategy, and a strong brand image. To for the weakness of insufficient production capacity, it has built factories in China for increased productivity.

Besides Tesla and BYD, many brands with in Chinese market, such as Azera and Ideal, have developed and have come to control part of the market share. However, compared with Tesla and BYD, these brands have disadvantages such as insufficient funds and low brand recognition. As strategies improve and such disadvantages are remedied, these brands may also become competition and threats to some extent. Besides, Fuel Cell Vehicles such as Volkswagen and Honda still account for most of the market. Consider Volkswagen, China is its largest single overseas market; Volkswafen’s business stratgey in China combines both standardization and localization. Volkswagen has always emphasized the gradual reduction of fuel-vehicle sales in the global market, especially in Europe, where the entire product lineup is scheduled to complete the transition to electrification by 2030 owing to government regulation. However, the Chinese market is different in this regrad. China’s firs- to thrid-tier cities are developing rapidly; however, other cities are not developing as fas, making the government policy and the nature of the demand for vehicles more diversified. Therefore, Volkswagen cannot completely stop fuel vehicle sales in the Chinese market, but will work to provide the market with new energy vehicles. Recently, Thomas Schäfer, CEO of Volkswagen, stated that Volkswagen was actively adapting its product strategy to market changes. China has undergone

rapid development in intelligent electric vehicles, and Volkswagen needs to strengthen local R&D given that China’s needs differ from those of the United States, Europe, and other markets. Therefore, it is only logical to develop features that meet local needs in the local market. Owing to the complexity of the Chinese market, most automotive brands have adopted a strategy that combines standardization and localization. In the face of fierce competition, many companies seeking to transform themselves and develop new energy vehicles; but what remains unchanged is that they are all committed to providing users with high-quality products and are flexibly adjusting their business strategies to this end.

**4.3. Tesla Motors in Korea**

Tesla opened its first store in Starfield Hanam, Hanam, Gyeonggi Province, on March 15, 2017 (Figure 3). At the time, Tesla stores were crowded because of the lack of space for displaying or selling electric cars. A store was later built in Cheongdam-dong, Seoul, and a service center was opened in Deungchon-dong. By 2022, Tesla had sold 28,3000 units in Korea. Tesla entered the Korean market for the following reasons: First, the Korean market is incredibly attractive. In 2015, the Korean automobile market was the fourth largest market in Asia (1.8 million units) after China (24.5 million units), Japan (5.0 million units), and India (3.4 million units). Additionally, the Korean market has a larger sales volume of luxury cars than the total automobile market. Second, Tesla aimed to expand its international business network. Before entering the Korean market, Tesla had already entered the European and Chinese markets. Driven by such international experience, Tesla then decided to enter the Korean market.



**Figure 3:** Tesla in Hanam, Gyeonggi-do, Korea

Similar to its entry into the Chinese market, Tesla chose a franchise entry model in Korea. Specifically, Tesla established a service and experience center in the Korean market. This center is directly managed by the head office and provides services such as test drives, car ordering, delivery, and after-sales services to customers. Tesla has five experience stores in Bundang, Hanam, Daegu, Busan, and Jeju, South Korea. However, Tesla is yet to build a gigafactory in South Korea because of two factors: First, the Korean market is relatively limited, and despite the growing demand for new energy vehicles, local Korean auto brands such as Hyundai and Kia are also developing new energy vehicles, and these brands have more robust host country advantages. Second, with the completion of the Shanghai Gigafactory, Tesla's production capacity has increased; given the geographical locations of China and South Korea, the supply and demand requirements can still be met.

In Korea, Tesla's major competitor is Hyundai-Kia Motors. As mentioned earlier, Kia Motors has stated that it will stop selling fuel-powered vehicles in the EU market by 2035 and completely electrify its international markets by 2040. Hyundai and Kia first released new energy vehicles in 2009 through their Sonata and K5 hybrid versions, respectively. From 2009 to May this year, the cumulative global sales of all Hyundai-Kia models reached 93,093,349,000 units. Hyundai-Kia is expected to achieve record sales of new energy vehicles this year in the context of sustained, high international oil prices and global carbon neutrality. Hyundai-Kia is also set to release new vehicles, such as the electric car IONIQ (Ani Krypton) 6, to accelerate the layout of the new energy vehicle industry.

The Hyundai-Kia Motors Group is the fifth largest automobile manufacturer in the world in terms of production. Hyundai-Kia Motor Company is the largest automobile company in Korea and one of the 20 largest automobile companies in the world. Since 2007, Hyundai-Kia Motors has developed a "local strategy model" for penetrating overseas markets. This strategy has worked well

by analyzing consumers' preferences in each region from the developmental stage and then reflecting such preferences in the products. The most prominent feature of Hyundai Motors' internationalization process is its direct overseas export strategy. Since its establishment, Hyundai Motors has been firmly committed to exports, and management has always emphasized that only overseas exports can guarantee Hyundai-Kia Motors' growth. However, to cope with the rapidly changing global market environment, Hyundai-Kia Motors is now actively forming strategic partnerships with Daimler Chrysler and other companies. Even in entering the Chinese market, Hyundai-Kia Motors has accelerated its entry by establishing joint ventures or using Kia Motors. In addition to its factories in Korea, the United States, China, Brazil, Russia, Turkey, and the Czech Republic, Hyundai-Kia has R&D facilities in Germany, Korea, Japan, China, and India. These facilities have significantly increased Hyundai-Kia's production capacity and contributed significantly to its business. Table 3 presents a comparison between Hyundai-Kia Tesla.

The comparison shows that Hyundai still holds a major share of the Korean market with its rich experience and wide range of choices, including conventional gasoline vehicles. However, this advantage will gradually diminish with the requirements of the times, such as sustainable development; therefore, Hyundai is now committed to developing new-energy automobile products. Meanwhile, Tesla has gained a certain share in Korea because of its innovative technology and strong brand image. Moreover, the construction of factories in China, such as that in Shanghai, has increased productivity, which can spread to the Korean market and increase the speed of supply.

In the Korean market, other than Hyundai-Kia and Tesla, established players such as Volkswagen still hold a market share. Volkswagen has set up Audi Volkswagen Korea (AVK) in the country to manage operations and sales of some of its brands. Over the past few years, AVK has aimed to restore customer trust as its highest priority. It has strengthened communication between its headquarters and the Korean government and improved the organization system, business processes, and overall management. Moreover, AVK has also achieved business growth by strengthening its human resource base and improving its internal culture. AVK also continues its CSR efforts in education and the environment and plans to increase its market share through product diversification. The Korean market is an indispensable market for many automotive brands, but due to the relative limitations of the market, many brands inevitably face more intense competition. Therefore, optimizing products and services is an essential goal for many automotive companies in Korea.



**Table 3: Tesla versus Hyundai-Kia**

	Tesla	Hyundai-Kia
Strengths	<ol style="list-style-type: none"> <li>1. Advanced and innovative technological advantages</li> <li>2. Vertically integrated market strategy</li> <li>3. Strong leadership</li> <li>4. High R&amp;D expense ratio</li> <li>5. Strong brand image</li> </ol>	<ol style="list-style-type: none"> <li>1. Extensive experience</li> <li>2. Wide range of customer choices</li> <li>3. Wide range of products, more selective</li> </ol>
Weakness	<ol style="list-style-type: none"> <li>1. Inadequate production capacity</li> <li>2. Single customer group</li> <li>3. Over-reliance on suppliers</li> </ol>	<ol style="list-style-type: none"> <li>1. Decline in product competitiveness</li> <li>2. The industry environment is changing, and competition is becoming fierce</li> </ol>
Opportunities	<ol style="list-style-type: none"> <li>1. Expanding demand from domestic and international markets</li> <li>2. Governmental support</li> </ol>	<ol style="list-style-type: none"> <li>1. Expanding demand from domestic and international markets</li> <li>2. National policy support</li> </ol>
Threats	<ol style="list-style-type: none"> <li>1. Threat of potential competitors</li> <li>2. Supply chain problems</li> <li>3. Barrier of habitual change</li> </ol>	<ol style="list-style-type: none"> <li>1. Threat of potential competitors</li> <li>2. Energy subsidies decline</li> </ol>

#### 4.4. Summary of Tesla’s Business Model

As revealed by the analysis of the segmentation, targeting, and positioning strategy, Tesla’s main markets are North America, Europe, and the Asia-Pacific region, where high-end EVs are in high demand, particularly among high-income individuals and environmentally conscious celebrities. Tesla uses direct sales to make its products available to its customers. Customers can test the products in physical stores, place orders, and pay deposits online. Tesla then coordinates the manufacture and delivery of the products to the customers using a logistics and distribution network. It also uses a flexible pricing strategy, the prices of its various EV models are adjusted according to government policies, market changes, and internal corporate decisions. As mentioned earlier, Tesla does not use a traditional dealership model, but operates its distribution process and handles its inventory. Tesla uses promotions at the end of each quarter to reduce inventory and maintain good financial figures. These upgrades include lowering prices and offering free charging services.

Tesla’s business model can be summarized as follows:

Phase 1: Cut from the high-end market and introduce expensive, low-volume vehicles to the affluent market. Launch the initial product at a premium price; but ensure that the product is of excellent caliber to make it desirable. Capitalize on the celebrity effect to receive free advertising.

Phase 2: Launch medium-priced, medium-mass-produced cars for the broad affluent market after gradually expanding to the mid-range market by using the profits made from the first phase.

Phase 3: Take over the low-end market and introduce inexpensive, mass-produced vehicles to the public. Introduce models for the middle and low-end segments after obtaining market acclaim driven by technological advancement and maturity (Liu & Meng, 2017).

#### 5. Analysis of Tesla’s competitiveness

##### 5.1. Internal Environment Analysis

**Products and services:** High-performance products and diverse options are Tesla’s core competencies. Since its establishment 20 years ago, Tesla has focused on the development of pure EVs and has developed and produced many EV models, including the Tesla Model S. These vehicles offer the advantages of extended range, flexible charging, energy efficiency, low ownership cost, high performance, aesthetics, and practicality. A wide range of models and prices provide customers with numerous choices. Thomas and Maine (2019) found that the key performance attributes of Tesla vehicles are their acceleration and range. In the automotive sector, a critical performance attribute perceived by consumers is vehicle acceleration with faster acceleration being closely associated with higher performance and indicating higher quality. Accordingly, Tesla produces different EV models to meet different acceleration requirements. Tesla Motors is also known for its remote battery EVs. By continuously improving its technology through incremental innovation, Tesla Motors has moved from the high-end market to the low-end market to meet the needs of different customers in multiple ways. Furthermore, Tesla’s development and innovation of autonomous driving technology provides a unique strategic advantage.

In terms of services, Tesla uses a direct model for selling its products. With this model, the selling price is more open and transparent, the professional services provided to consumers simplify the purchase process, while reducing intermediate costs, and the private customization services bring consumers diverse experiences.

**Corporate culture:** Tesla aims to accelerate the global transition toward sustainable energy. To achieve this

mission, Tesla is committed to developing new energy vehicles and sourcing and manufacturing products in the most environmentally friendly manner possible. Moreover, Tesla strives to build a sustainable product ecosystem that meets the global demand for clean energy production, storage, and transportation to achieve carbon neutrality across all Tesla factories. In 2022, global Tesla EVs, energy storage products, and solar panels helped customers reduce their carbon dioxide equivalent emissions by 13.4 million metric tons (Tesla Impact Report, 2023). Tesla is also committed to recycling manufacturing waste and end-of-life batteries. In 2022, 90% of the waste generated during the vehicle manufacturing process. Meanwhile, Tesla creates numerous jobs and is committed to creating the best employee environment. Tesla has also launched a series of initiatives, such as SafetyNet and Rethink, which aim to provide resources to employees experiencing difficulties, or families with children with learning, social or behavioral problems. These measures contribute to the sustainable development of society.

**Marketing strategy:** Tesla integrates specialization and differentiation into its product strategy. Specialization is reflected in Tesla's focus on the production of new energy vehicles, while differentiation involves providing different types of products at various price levels to meet the needs of other customers. In terms of marketing, Tesla does not invest much in advertising, and its staff sales and business promotions are minimal. Specifically, it strives to get the brand out of advertising and return to the products and consumers themselves. This innovative concept reduces publicity costs and enhances brand competitiveness. Tesla's publicity strategy is mainly promotion and introduction through news, online media, and social media. In particular, the "Netflix effect" has increased the traffic and exposure of Tesla's CEO, Elon Musk. The impact of this marketing communication is surprising and far exceeds that of traditional advertising channels.

**Financials:** According to its 2022 Annual Report, Tesla realized a revenue of \$81.46 billion, indicating an increase of 51.4% year-over-year; for this revenue, the automotive business contributed \$71.46 billion, indicating an increase of 51.3% year-over-year. Additionally, Tesla realized a net profit of \$12.56 billion an increase of 127.5% year-over-year. In terms of production and sales, Tesla produced 1.37 million units (+47% year-over-year) and sold 1.31 million units (+40% year-over-year). Overall, Tesla's volume and cost reductions have contributed to its performance growth, and the profitability of a single car has improved. Furthermore, Tesla's cash on hand was \$22.1 billion (+26.2% year-on-year), and its cash flows from operating activities was \$14.72 billion (+28.1% year-on-year). Good capital flow guarantees Tesla's daily operations and product

development activities, while the growing turnover indicates Tesla's good operation.

## 5.2. External Environment Analysis (Porter's Five Forces Model)

The five forces model was proposed by Michael Porter in 1985 and is widely used to analyze a company's competitive environment. Porter (1985) argued that five forces in the industry determine the size and extent of competition and combine to influence the attractiveness of the industry and the competitive strategy decisions of existing firms. These five forces are competition in the industry, potential of new entrants into the industry, power of suppliers, power of customers, and threat of substitute products.

**Industry rivalry:** Nowadays, the pure EV field is a monopoly, and each car company at home and abroad has delivered pure Evs. Competition is concentrated in the product series, price, advertising, after-sales services, and other aspects. With its advanced and innovative technological advantages, good strategic layout, and unique marketing strategy, Tesla is leading other new energy vehicle companies and is developing rapidly. In terms of products, Tesla has developed a wide range of models, including the Tesla Roadster, Tesla Model S, Tesla Model X, Tesla Model 3, Tesla Model Y, Tesla Semi, and Tesla Cybertruck. In terms of publicity, Tesla differs from other car brands as it has no advertising and strives to detach its brand from advertising and return it to the products and consumers. This innovative concept reduces publicity costs and enhances brand competitiveness. Moreover, humanized after-sales services improves Tesla's competitiveness to a certain extent.

**Threat of new entrants:** As countries vigorously promote new energy vehicles, an increasing number of companies are undergoing transformation. On April 3 this year, BYD announced its withdrawal from the fueled car market, becoming the first traditional car company in the world to promote the cessation of fueled car production. Toyota announced that it would stop selling fuel-powered automobiles in China, Europe, and North America by 2030, while Lexus would stop selling fueled vehicles altogether by 2035. Moreover, the growth of new energy vehicle brands is gradually increasing, occupying a particular market share. The products of these new businesses tend to be priced reasonably well. However, new energy vehicles belong to the high-tech industry, requiring companies to invest considerable R&D time, as well as financial and human resources. In the short term, Tesla cannot be easily replaced or surpassed.

**Bargaining power of suppliers:** Tesla Motors screens tier 1 suppliers that master core technologies to enhance

automotive manufacturing leadership. For lithium batteries, Japan's Panasonic Corporation and China's Ganfeng Lithium are Tesla's leading suppliers, with Panasonic being the exclusive supplier for Model 3. Other suppliers include Hitachi, Siemens, Taiwan Fukuta, BAIC New Energy, and BYD. Therefore, Tesla holds a great deal of initiative, and thus, its bargaining power can be further strengthened. However, Tesla currently has a strong dependence on suppliers, and its production is sometimes affected by the lack of a timely supply of parts; therefore, this aspect also needs to be improved.

**Bargaining power of buyers:** As leaders in the new energy vehicle industry, Tesla vehicles are loved by consumers worldwide and occupy a dominant position in terms of customer bargaining power. Tesla's products are popular among consumers because of their high-tech and humanized design elements. Moreover, Tesla has successfully tapped into customer psychology with its brand concept of leading the era, enjoyable driving experiences brought on by advanced technology, and positive brand image. Therefore, Tesla holds a dominant position in terms of the bargaining power of its customers.

**Threat of substitutes:** Tesla's core products are EVs, and alternatives are mainly hydrogen-powered vehicles, add-on electric cars, and conventional cars. The advantages of the first two are primarily in terms of charging time and price, while the benefits of traditional cars lie in technology, market, and infrastructure construction. Fully charging a hydrogen-powered car takes only a few minutes while charging an extended EV takes over three hours. Both vehicle types are also less expensive than pure EVs. In this way, such vehicle types pose a threat to Tesla. Meanwhile, traditional cars have a longer history, more stable technology and market, and more perfect infrastructure construction than EVs. However, these advantages will weaken with the gradual transformation of car companies. What Tesla needs to do is to further improve its infrastructure.

## 6. Discussion and Conclusion

### 6.1. Discussion

Predicated on the concepts of carbon neutrality and sustainable development in today's society, this study aimed to analyze the dynamics of the new energy vehicle industry through a case study of Tesla. Based on the existing literature, this study analyzes Tesla's overseas business strategy in the Chinese and Korean market using a qualitative research (case study) approach. By studying the development of the new energy vehicle industry in the

markets, Tesla's entry mode into these markets, and performing a comparative analysis with local brands, this study finds that high-performance products and diversified choices are the reasons for Tesla's competitiveness. In addition, Tesla's globalization strategy with its unique marketing strategy and business mode stands out in the highly competitive new energy vehicle industry. This is consistent with the studies of Mangram (2012), Hardman et al. (2015), and Akakpo et al. (2019) and, to a certain extent, completes the existing body of research.

In addition, this study provides a brief narrative on the strategies of other automobile brands in the Chinese and Korean markets. As an important market for many automobile brands, the Chinese and Korean markets possess unique characteristics and complexities, and automobile brands have chosen diverse business strategies that are appropriate for themselves and the market. For example, Volkswagen has chosen to combine standardization and localization in China, flexibly adjust the production and sales strategies of both electric and fuel vehicles by considering variations urban development; and actively adjust its product strategy in response to market changes. It also strengthens local R&D to meet the unique needs of local consumers. In the Korean market, the German Volkswagen Group established AVK for the entire sales operation of some brands. Besides, this study also adds further analysis of Tesla's competitiveness in terms of internal and external environment. The comprehensiveness of this study compensates for the potential lack of objectivity in the case study method, and greatly enhances its validity and reliability. Strategic analysis of other key players in the Chinese and Korean markets will help relevant companies and scholars understand industry dynamic more comprehensively.

### 6.2. Conclusion

Many countries are actively fostering the new energy industry for environmental protection and carbon neutrality. The new energy vehicle industry is expanding, and many companies are transitioning, promising to produce only EVs in the coming years. Tesla has emerged as a new energy vehicle industry leader. With its top-level innovative technology, distinctive marketing model, and extensive strategic model, Tesla holds the largest share of the new energy vehicle market. An interesting topic of study is the transformation and implementation of business strategies related to new energy vehicle companies to meet the needs of economic transformation and environmental development. By analyzing the case of Tesla, we obtain the following insights.

Hyundai-Kia Motors and other Korean domestic car companies, with their extensive experience in car

manufacturing, have tremendous advantages in laying down production lines, reducing production costs, and optimizing the assembly of complete vehicles. At present, Hyundai-Kia Motors still occupies a large share of the Korean and even overseas markets owing to its years of experience, excellent infrastructure, and loyal consumer base. However, the transformation of new energy vehicles is also essential for Hyundai-Kia Motors. Although it has recently been actively developing new energy vehicles, the competitiveness of its products has declined significantly as the industry environment is changing and competition is becoming increasingly fierce. Therefore, Korean companies such as Hyundai-Kia Motors need to actively improve the competitiveness of their products. Many consumers are still waiting and watching, especially because Tesla has had quality and safety problems; therefore, quality and safety remain the most critical issues for any company.

With innovative technology and reasonable prices, BYD and other Chinese domestic car brands have actively attacked the new energy market. In particular, BYD has increased its investments in scientific research and talent training. However, its brand recognition requires further improvement. Moreover, the Chinese market is significant. In addition to foreign car brands such as Tesla, the Chinese market has many new companies, such as Nio Inc and Chang'an Automobile. Therefore, competition must be considered. Therefore, Chinese automobile companies should improve product competitiveness, increase brand recognition, increase investment in scientific research, learn from Tesla's strategic model, and enter overseas markets gradually and systematically. They should also focus on precise market positioning while maximizing new media marketing and promoting the transformation of the new retail model for enterprises.

The analysis herein identifies some room for improvement in Tesla. Although Tesla is currently the leader in the new energy vehicle industry, owing to its advantages and ideal market environment, the industry environment is becoming increasingly competitive, and various car brands are actively transforming and catching-up. Therefore, Tesla must further improve its infrastructure to lay the foundation for its development; while maintaining its existing advantages. It should also improve the quality and safety of its products to improve its performance. Furthermore, it must implement preventive measures against the problems of long supply chains and dependence on suppliers.

This study draws these conclusions by analyzing the business strategy of Tesla, a leading new energy vehicle company, and comparing its market entry in China and South Korea. Based on the findings, this study makes the following contributions. First, the case study of Tesla enriches relevant research and can help relevant companies

and scholars understand industry dynamics more comprehensively. Second, through a comparative analysis of Tesla's China-Korea market operation strategy and the strategies of local representative automobile brands, this study derives Tesla's success factors, which provide a good reference for other companies, and accordingly puts forward reasonable suggestions. Third, such a case study, combined with the current environmentally friendly and carbon-neutral context, can raise awareness about the relevant industry and enhance its competitive advantage.

This study has some limitations. Although this study summarizes Tesla's business strategy, it only provides a comparative analysis of its entry into the Chinese and Korean markets, which may have geographical limitations. Moreover, although this study is representative through the comparison between Tesla and BYD and between Tesla and Hyundai-Kia, many automobile companies exist, and they may feature certain differences. Hence, a more comprehensive comparison is necessary. Therefore, the next plan is to analyze Tesla's market entry in other regions to extend the research scope and deepen the research results. Another important topic for investigation is corporate environmental, social and governance (ESG) management in the context of carbon neutrality and sustainable development, the ESG management strategy and performance of Tesla and other new energy vehicle enterprises require further analysis.

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