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Risk Analysis of National Automobile Brands' Overseas Expansion Based on Multi - Index Factors

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Abstract: Against the backdrop of deep adjustments in the global automotive industry landscape, going global has become a key strategy for Chinese auto brands to expand their markets and enhance their international competitiveness. But the complex international market environment is fraught with many risks. This paper comprehensively analyzes the risks of ethnic automobile brands' overseas expansion from four primary dimensions—trade policies, market demand, technical standards, and brand building—and 11 secondary dimensions. The study aims to assist enterprises in formulating scientific overseas expansion strategies and facilitating the steady development of international markets.

Keywords: National automobiles; Trade policies; Overseas expansion risks; Overseas expansion strategy.

1. Introduction

During the period from 2017 to 2020, the scale of domestic auto exports remained relatively stable, with the annual export volume roughly maintained at around 1 million units. In 2020, the pandemic swept the world and dealt a heavy blow to manufacturing, while China seized the opportunity in manufacturing by taking advantage of being the first to resume work and production. At the same time, Tesla started the process of mass production and delivery in China. Driven by a combination of these factors, domestic auto exports jumped sharply in 2021, doubling from the previous year to 2.19 million units, thus entering a new track of explosive growth. In 2023, domestic auto exports performed particularly well, with 5.22 million vehicles exported throughout the year, surpassing Japan for the first time and securing the top spot as the world's largest auto exporter. In 2024, China continued to lead the world in auto exports, with exports rising to 6.41 million units [1-2], a significant gap from Japan, which ranked second with 4.21 million units. China's whole vehicle export volume and growth rate from 2017 to 2024 are shown in Figure 1.

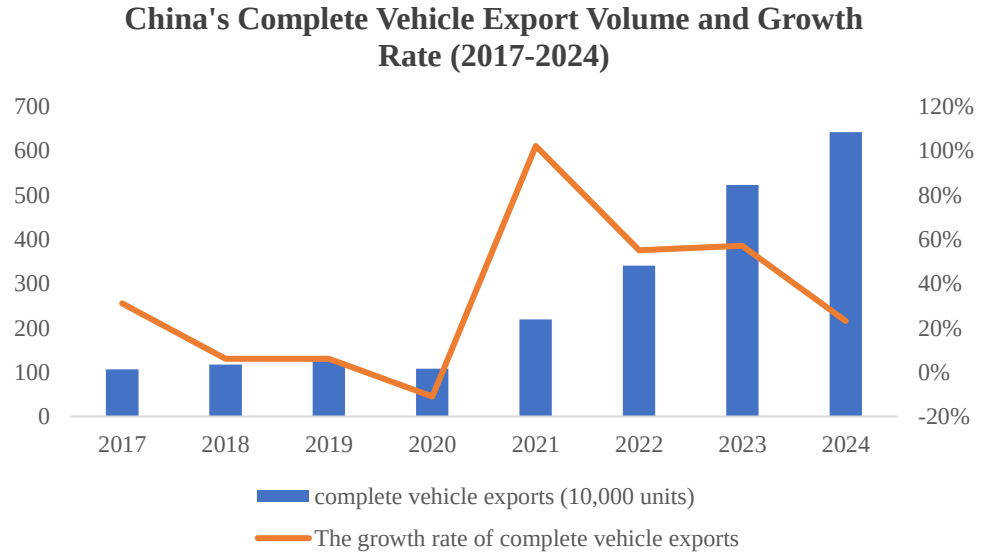

Figure 1. Shows the volume and growth rate of China's whole vehicle exports from 2017 to 2024

The excellent performance in 2024 is inseparable from the efforts of ethnic automobile brands such as BYD, Chery, Great Wall, and Geely in actively expanding overseas markets. They have participated in international competition through various means, including product exports, overseas factory establishment, and technological output. However, it cannot be ignored that the international market environment is volatile and the overseas journey of domestic auto brands is not smooth. The overseas expansion of Chinese auto brands is accompanied by real problems such as surging waves of trade protectionism, numerous technical and standard barriers, insufficient international brand recognition, and diverse and changeable market demands. Therefore, this paper introduces multi-factor indicators to analyze the risks of Chinese car brands going global.

The multifactorial index analysis is often used to study

optimal paths. The literature [3], in order to study that renewable energy is an important way to achieve "carbon peak and carbon neutrality", uses the HOMER model to configure the system capacity in different regions, and conducts a multifactorial analysis and comprehensive evaluation of the systems in different regions from the economic, technological, environmental and social aspects. The results of the study can be used as a reference for the development of hybrid renewable energy in other remote areas with similar conditions. To explore the fire risk characteristics of vehicle-mounted power lithium batteries under multiple influencing factors, the literature [4] employed an assessment method based on the multi-index entropy weight cloud model. The results indicated that the membership degree of the selected power lithium battery under risk level III was 0.684, and the overall risk was within a controllable range; The three risk factors that have the greatest impact on the fire risk of power lithium batteries during the operation of electric vehicles are high temperature, overcharging, and accident impact. It can be seen that the effect of multi-factor index analysis promotes the development of related fields.

In this context, an in-depth analysis of the risk factors faced by Chinese auto brands going global is undoubtedly of great strategic significance and practical value for promoting higher-quality internationalization of China's auto industry.

2. A multi-Indicator Factor System

The multi-factor indicators in this article include four first-level indicators: trade policy, market demand, technical standards, and brand building; Among them, trade policy includes trade frictions and tariff barriers; Market demand includes demand diversification, market competition and economic fluctuations; Technical standards include patent technology protection, automotive safety standards and fuel vehicle emission standards; Brand building involves brand awareness, brand positioning and brand image [5-7] building. The multi-factor indicator system of this article is shown in Figure 2 below.

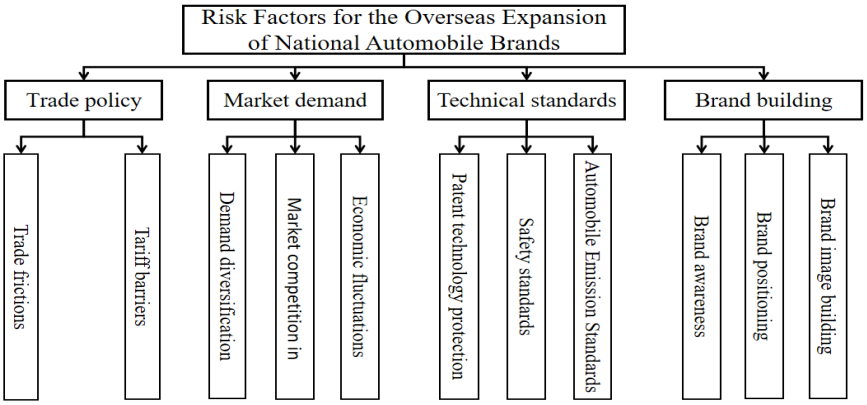

Figure 2. The multi-factor indicator system of this paper

3. Analysis of Factor Indicators

3.1. Trade Policy Analysis

(1) Trade frictions

With the rapid growth of China's auto exports, international trade frictions have become more frequent and complex. In addition to the traditional anti-dumping and anti-subsidy investigations, new areas of friction such as intellectual property disputes and technical barriers are constantly emerging. For instance, the EU's anti-subsidy investigation against Chinese electric vehicles and multiple countries' intellectual property lawsuits against Chinese automakers have significantly increased the uncertainty of Chinese national auto brands going global. Such frictions not only threaten the short-term interests of enterprises, but may also damage the global reputation of Chinese auto brands, leading to higher market entry barriers, narrower export channels, and ultimately hindering their internationalization.

(2) Tariff barriers

Tariffs are an important factor in the cross-border export trade of automobiles, and Tariff rates vary significantly between countries and regions. To protect the domestic auto industry, some countries have imposed high tariffs or temporary countervailing duties on automobiles, especially new energy vehicles. For instance, Brazil reimposed import tariffs on new energy vehicles in 2024 and plans to gradually increase the rates, which directly increased the cost for Chinese new energy vehicles to enter the Brazilian market and weakened the price competitiveness of the products. The EU's imposition of provisional countervailing duties on Chinese electric vehicles has forced the prices of Chinese electric vehicles to rise and squeezed their market share in the EU market. This has directly pushed up the prices of Chinese vehicles in overseas markets, severely weakening their price competitiveness, squeezing market share and even causing them to miss market opportunities.

3.2. Market Demand

(1) Demand diversification

The global automotive market is highly segmented, with consumption preferences varying by region. Global automotive market demand is diverse. Consumers in different countries and regions have different preferences in terms of exterior design, interior style, functional configuration, power performance, etc. European consumers prefer small cars and new energy vehicles, and value environmental protection and technology; The Middle East market favors luxury SUVs, seeking power and comfort; In Southeast Asia, constrained by road conditions and economic conditions, there is a preference for small, fuel-efficient vehicles. For national car brands to succeed in going global, they must study the characteristics of each market and develop and market precisely. Products that are out of touch with local needs will eventually fail to win over international consumers.

(2) Intense competition in the market

The competition in the international auto market is extremely fierce, and national auto brands are under pressure

from major global auto brands. Traditional giants in Europe, the United States, Japan and South Korea dominate with their technological accumulation, mature channels and brand advantages; International new energy brands, represented by Tesla, have gained global influence. Meanwhile, the rise of local automakers in emerging markets has further squeezed the competition space. Under this pattern, national brands can only gain a foothold in the international market by comprehensively enhancing their core competitiveness (including key aspects such as product quality, technological innovation, cost control and after-sales service).

(3) The impact of economic fluctuations

The fluctuations in the global economic situation have a significant impact on the demand for automobiles. During periods of slower economic growth, consumers' purchasing power shrinks, and the demand for automobiles shrinks accordingly, as evidenced by the global auto market crash after the 2008 financial crisis. Chinese brands going global are also affected by this cycle, especially in emerging markets where economic development is unstable and exchange rates fluctuate sharply, where consumers' confidence in buying cars is more likely to be shaken. Economic shocks not only hit sales but also trigger price drops and inventory overstock, significantly amplifying the overseas business risks for Chinese brands.

3.3. Technical Standards

(1) Technical patent protection

In the field of automotive technology, many international automotive giants have built up strong technical patent barriers by virtue of their large number of patented technologies. National car brands are likely to get into legal trouble over patent infringement when they carry out technological research and development. Some international automakers have already established an advantageous position through patent layout in key technology areas such as intelligent driving and new energy batteries. For domestic car brands to break through technological bottlenecks and achieve technological innovation, they not only need to invest huge amounts of research and development funds for independent research and development, but also have to be very careful not to infringe on others' patents. Technical patent barriers are like shackles, which not only restrict the pace of technological upgrading of national car brands, but also may have adverse effects on the market expansion and international cooperation of enterprises.

(2) Differences in safety standards

There are significant differences in vehicle safety standards among different countries and regions. Safety certification systems such as Euro NCAP in Europe, IIHS and NHTSA in the US have strict rules for crash tests and active safety features. Europe, for example, places particular emphasis on pedestrian protection and side crash safety performance of cars, while the United States focuses more on frontal crash and rollover tests. When venturing into international markets, national car brands must ensure that their products meet local safety standards. If the safety performance of the products fails to meet the standards, it may lead to vehicle recalls, consumer complaints and other situations, causing serious damage to the brand's reputation. Some domestic car brands are relatively slow in safety technology research and development, making it difficult for them to quickly meet the high standards of the international market, which undoubtedly increases the difficulty of their products entering the international market.

(3) Differences in emission regulations

Regulations on exhaust emissions from fuel-powered vehicles are becoming increasingly strict. Take the European Union as an example. Its Euro VI emission standards set extremely strict limits on emissions of pollutants such as nitrogen oxides and particulate matter; California's CARB regulations are also leading the world in terms of emissions control.

In the field of new energy vehicles, the European Union has also made clear regulations on battery recycling and carbon emissions for electric vehicles. For national car brands, there is a huge challenge of emission regulations in overseas markets. If they fail to keep abreast of and comply with local emission regulations in a timely manner, they may face risks such as hefty fines and product bans. It is worth noting that some developing countries are also gradually raising emission requirements for vehicles, so national car brands need to keep a close eye on the dynamics of emission regulations when exploring emerging markets.

3.4. Risks in the Construction of National Automobile Brands

(1) Low brand awareness

For a long time, brands from traditional automotive powerhouses such as Europe, America, Japan and South Korea have dominated the international automotive market, and consumers have a high level of recognition and loyalty to these brands. In contrast, national car brands are relatively less well-known in the international market, and many consumers have insufficient knowledge or even cognitive biases about Chinese car brands.

In the European and American market environment, consumers prefer car brands with a long history and deep brand heritage, and have a lower acceptance of Chinese brands. This disadvantage in brand recognition makes it difficult for national car brands to promote themselves in overseas markets, and they need to invest more marketing resources to enhance brand awareness and reputation.

(2) The brand image is difficult to build

For national car brands, building a good brand image is one of the core tasks in going global. However, constrained by multiple factors such as product quality, technical strength and marketing capabilities, it faces numerous challenges in building its image in the international market. Some national car brands opened up the international market with a low-price strategy in the early days. Although this model quickly captured a certain market share, it also created a stereotype of "low price and low quality" in the minds of consumers.

Although national brands have made significant breakthroughs in product quality improvement and technological innovation in recent years, consumers have a strong inertia in their inherent perception of brands, and it is by no means an easy task to reverse this impression. Rebranding requires long-term investment and continuous efforts by enterprises, covering multiple dimensions such as product quality control, brand communication strategy optimization, and social responsibility practice. Any oversight in any of these links may have a negative impact on the establishment of the brand image.

(3) The brand positioning is inaccurate

A precise brand positioning is the foundation for a brand to gain a firm foothold in the market. Some national car brands have failed to fully consider the consumer needs, cultural

differences and competitive landscape of their target markets, resulting in brand positioning deviations. Some brands, when venturing into international markets, simply and mechanically copy their domestic market positioning, but fail to make differentiated adjustments in line with local market characteristics.

In some emerging markets, consumers' demand for cars leans more towards practicality and value for money; In mature markets such as Europe and the United States, consumers place more emphasis on a brand's high-end image and technological innovation. The imprecision of brand positioning makes it difficult for national car brands to target precise customer groups in the international market, which adversely affects their market performance and competitiveness.

4. Conclusions and Recommendations

4.1. Conclusions of this Paper

This paper conducts a comprehensive and in-depth analysis of the risks faced by Chinese auto brands going global from multiple indicator dimensions, including four first-level indicators and eleven second-level indicators. The study shows that in the process of expanding overseas markets, Chinese auto brands need to deal with various risks and challenges such as trade policies, technical standards, brand building and market demand. These risks are interrelated and interact with each other, adding many uncertainties to the overseas development of Chinese auto brands. Specifically, trade policy risks will directly affect the import and export costs of products and market access thresholds; Technical standard risk requires enterprises to continuously enhance their technological strength to meet international standard requirements; Brand building risk is related to the brand's popularity and reputation in the international market; Market demand risk tests a company's ability to adapt to market dynamics.

4.2. Response Suggestions

To effectively deal with the risks of Chinese national auto brands going global, the following suggestions are made.

(1) Strengthen policy research and response mechanisms: Enterprises need to establish a dynamic international policy monitoring system to closely track the evolution of global political and economic situations and trade policies. It is suggested that professional policy research teams be formed to accurately assess the potential impact of policy changes on business operations through regular analysis, risk warnings, etc., and to develop graded and categorized response plans. In addition, enterprises should actively integrate into the process of formulating and revising international trade rules, and use platforms such as industry associations to systematically sort out and actively respond to their demands in order to safeguard their own legitimate rights and interests. When encountering trade frictions, enterprises should adopt a proactive defense attitude, strengthen the coordination and linkage mechanism with the government and industry associations, and pool the strength of all parties to jointly resist the impact of trade protectionism.

(2) Deepen the breakthrough of core technologies and the construction [8-9] of an innovation ecosystem: Enterprises need to systematically increase their R&D investment in core technology fields such as automotive safety protection, green emission control, intelligent driving systems, and new energy power. They should continuously enhance their independent innovation capabilities through measures such as setting up special funds and optimizing R&D incentive mechanisms. At the same time, actively build collaborative innovation platforms that deeply integrate industry, academia and research, establish long-term strategic cooperation with domestic and foreign universities and top research institutions, and open up the entire chain of technology research and development, achievement transformation and product application to accelerate the transformation of frontier scientific and technological achievements into actual productive forces. In addition, enterprises should actively participate in the formulation and revision of international technical standards, deeply integrate into the global technical standards system, and enhance their say and influence in the international technology field. Through continuous technological innovation drive, constantly optimize product performance and quality, precisely match the strict technical standards and diverse demands of the international market, and build a competitive barrier in overseas markets with technological advantages.

(3) Build a refined international brand development system [10]: Enterprises need to formulate a systematic brand globalization strategy, conduct in-depth research on consumer demand characteristics and cultural differences based on the target market, and precisely anchor the brand positioning. On this basis, implement differentiated brand communication strategies, and through localized creative planning and precise media placement, deeply integrate the brand concept into the local market [11]. At the same time, we will continue to increase investment in brand marketing resources, actively participate in top international auto shows, hold immersive brand experience events, and carry out integrated online and offline marketing to enhance the brand's international influence in all aspects. With excellent product quality and considerate service as the foundation, actively engage in public welfare, practice the concept of sustainable development, and shape a brand image that combines professional strength and humanistic care. Establish and improve brand protection mechanisms, make early preparations for international trademark registration and intellectual property protection, build a tight brand rights protection network, effectively resist infringement risks, and build a solid safety line for the brand's international development.

In conclusion, it is a process full of opportunities and challenges for China's national car brand to go global. In the face of the complex and volatile international market environment, Chinese auto brands need to fully recognize the risks they face, take effective countermeasures and continuously enhance their core competitiveness in order to achieve sustainable development in the international market and make greater contributions to the internationalization of China's auto industry.

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