

Strategies for Fuyao's market problems and nonmarket problems

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Abstract:

The glass market in the U.S. has evolved from hand-made production in colonial times to modern machine manufacturing, significantly influenced by World War II and post-war economic growth, especially in the construction and automotive sectors. This article uses case analysis to explore the current U.S. glass market, focusing on Fuyao's operations. It highlights Fuyao's substantial market share and competitiveness while identifying challenges related to geographical, cultural, and market competition differences. The study further examines deep-seated economic, political, and cultural reasons behind these challenges and proposes strategies to enhance Fuyao's business approach and overall competitiveness in the U.S. market. In this regard, the conclusion of this article is that Fuyao should enhance employee welfare, establish risk defense mechanisms, actively cooperate with government investigations, and pay attention to environmental protection during production. The results of this paper not only have theoretical research value, but also can provide experience reference for the future development of Fuyao Glass in reality.

Keywords: Fuyao Glass; Nonmarket strategy; American market

1. Introduction

The glass market in the United States has been changing since its development. From hand-made manufacturing in the colonial period to machine manufacturing in the 19th century, and then to the single-layer float glass and triple-layer safety glass created by continuous technological innovation in the 20th century, human needs have been met in continuous innovation. The major changes in the entire market came from World War II. The post-war economic prosperity drove all walks of life, such as the

construction industry and the automotive glass industry, and the order volume also increased. At the same time, under the influence of modernist architecture, people want to use large glass windows in buildings, and also want to install glass in cars that can better ensure the safety and comfort of drivers. Therefore, new technologies such as self-healing glass are also constantly developing. For such a prosperous market, major glass companies also hope to enter the US market to increase orders and expand market share. Therefore, in recent years, with the continuous improvement of globalization, large companies like

Fuyao have begun to expand their business overseas, but this process is often not smooth, not only because of the unstable global situation, but also because of the huge differences between the cultures of various countries, which can easily put companies in trouble. Based on this background, this article will use the case analysis method to study the US glass market and Fuyao's own situation, and conduct an in-depth analysis and discussion of the market problems and non-market problems encountered by Fuyao in the US market. The whole article first studies the development history and current situation of the US glass market, and then analyzes the overall situation of Fuyao's business in the United States, and finds that Fuyao has a large market share and competitiveness in the United States. It also analyzes the market problems and non-market problems encountered by Fuyao in the US market due to differences in geography, market competition, culture and other aspects. Finally, it analyzes the deep-seated reasons for Fuyao's encountering these problems, such as economic reasons, political reasons and cultural reasons, and provides a complete solution for the above analysis, committed to improving Fuyao's business strategy and enhancing its own competitiveness.

2. Basic facts analysis

2.1 Overview of the Development of the Ameri-

can Glass Industry

The US glass market has undergone significant evolution driven by technological innovation and market changes. In the colonial period, the glass industry was dominated by hand-blown craftsmanship; in the 19th century, with the emergence of machine-made glass technology, the production capacity and technology of the US glass industry began to change. Throughout the 20th century, from single-layer float glass to safety glass with a three-layer structure (two layers of glass and a layer of PVB film) [1]. These technological innovations have brought greater development to the glass market and met the safety performance requirements of the automotive and construction industries. After World War II, the US economy prospered, and the construction and automotive industries ushered in rapid growth, which also led to a demand for glass. In particular, the emphasis on large glass window design in residential and commercial buildings under the influence of modernist architecture has greatly increased people's demand for glass. The same is true in the automotive industry, where people are constantly improving the safety of automotive glass and the comfort of drivers. Now, the entire market has made great technological progress and has been influenced by the concept of sustainable development, so technologies such as self-healing glass have begun to be developed, which will be a new era for the glass industry.

2.2 The current status of Fuyao Glass Company

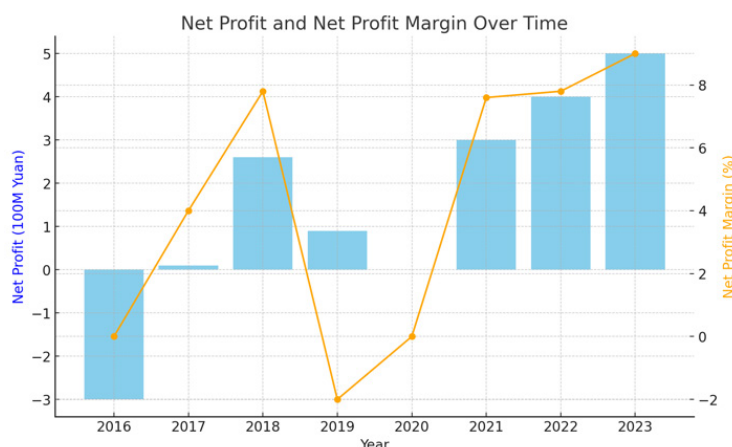


Fig. 1 Net profit and profit margin of Fuyao US plant

As shown in figure 1, the net profit generated by the factories established by Fuyao in the United States has maintained a stable positive growth from negative in 2016 to 2019. After experiencing losses due to the epidemic in 2020, the net profit continued to rise, at around 400 million yuan per year, and reached a peak of 500 million yuan in 2023. Therefore, it is proved that Fuyao's expansion in

the US market by opening factories is a correct move [2]. Fuyao Glass was registered in Fuzhou in 1987, with an annual turnover of 21.1 billion yuan, specializing in the production of automotive glass and industrial technical glass. In 2014, Fuyao entered the US market to seek new development opportunities and acquired the former General Motors plant in the Moraine area of Dayton, Ohio,

and transformed it into a glass design and manufacturing plant.

To be more successful in business competition, Fuyao Glass has invested heavily in the US market to establish and expand its manufacturing base. A key example is their plant in Ohio, which began operations in 2016. This plant was built to produce automotive glass locally. Fuyao continues to expand this plant, making it one of the largest automotive glass manufacturing facilities in North America. Based on their own experience, the establishment of the factory can bring great benefits to the company. Also, the plant was chosen not only because of its central location in the United States but also because of its proximity to major automotive manufacturing centers.

In addition, in order to build a competitive position in the US market, Fuyao uses its manufacturing expertise and scale to offer competitive prices. By establishing a local production facility, the company reduces costs related to import tariffs and transportation, thereby gaining a favorable position among local competitors.

Fuyao has already become China's largest automotive glass production supplier with the highest technical level and the largest export volume [3]. In 2023, Fuyao Glass's share of the global automotive glass market is about 34%, and it has reached about 25% in the North American market. Also, it has more than 400 authorized patents, including innovative UV-proof glass technology. It is understood that the company has business organizations in Hong Kong, China, the United States, Europe, and other countries, becoming a veritable multinational company. At the same time, the company's products are certified and selected by major automakers such as BMW, Toyota, and Ford [3]. For example, Fuyao provides automotive glass for many Ford models, such as Mustang and other best-selling models, which has established a good reputation and strong competitiveness for Ford.

In the construction industry, Fuyao wants to develop more business. Its subsidiary Fuyao Engineering Glass Co., Ltd. produces and sells Low-E, tempered, glazed, bulletproof safety glass and other products for architectural decoration [4]. The research and development of various products makes Fuyao highly competitive in the field of industrial technical glass and can also provide customers with high-quality products.

3. Overview of Fuyao's Treatment

3.1 Market treatment

The automotive glass market is evolving. In the past, there were many small and local suppliers in the automotive glass market. But in recent years, the US automotive glass

market has become increasingly concentrated: Saint-Gobain, AGC Automotive, Fuyao Glass, and PPG Industries have occupied most of the market share, resulting in very fierce industry competition. These companies not only need to provide differentiated products, but also compete fiercely in the high-end market. At the same time, with the impact of globalization, the price competition among automotive glass suppliers will become more and more fierce, because the procurement of raw materials may come from the low-priced Chinese or Indian markets, the processing may come from Southeast Asia, and the final products will be shipped to Europe and the United States. Therefore, it is very important for suppliers to have their own production and distribution channels.

Not only many multinational companies will compete with Fuyao, but American companies are also taking different measures to cope with market competition. For example, Oceanside Glasstile is a company that specializes in the production of architectural decorations. According to its brand image, its company focuses on the high-end market, and its products are also known for their unique designs and exquisite craftsmanship, and are suitable for residential buildings and hotels in high-speed sections. These artistic decorations are not just building materials, but works of art, which sets Oceanside Glasstile apart from other suppliers in the market. Another company, PPG Industries, is a leading global supplier of coatings and specialty materials with operations in more than 70 countries around the world. Its company continues to develop specialty glass. PPG's commercial solutions help protect buildings and extend their life. As a leader in specialty materials, PPG achieved significant financial results in 2023, recording sales of \$18.2 billion and playing an important role in the construction industry [5].

3.2 Nonmarket treatment

The game between China and the United States has always existed. When formulating policies, countries tend to optimize policies based on the potential behavior of the other party and their own interests [6]. Since 2016, Fuyao has experienced many twists and turns in the US market and has received many unfair treatments and challenges from the US government.

In 2016, Fuyao faced its first challenge. The US Occupational Safety and Health Administration (OSHA) issued a \$226,000 ticket for safety violations at Fuyao Glass. After negotiation, the amount of the ticket was eventually reduced to \$100,000. Fuyao Glass subsequently reached an agreement with OSHA to establish a comprehensive safety management system.

In 2017, Fuyao faced a fierce union campaign launched by

the United Auto Workers (UAW), which aimed to improve employees' working conditions, increase wages and benefits to cope with the rising cost of living, and standardize working hours to avoid fatigue and strengthen the rights of employee representatives. At the same time, many employees complained that their working conditions were poor and their personal safety was not guaranteed. Former employee James Martin said that the company exposed him to irritating chemicals, causing blisters on his arms and reduced lung capacity [7]. These problems were confirmed in the results of the Occupational Safety and Health Administration's inspection of Fuyao.

Until July 26, 2024, several law enforcement agencies, including the U.S. Department of Homeland Security, investigated Fuyao Glass America in Moline and raided several homes in the Dayton area. OSHA stated that their investigation focused on financial crimes, labor exploitation, and human trafficking. During the inspection by law enforcement officers, Fuyao's business had to be suspended, which reduced the company's production efficiency and brought greater burden to the company. These measures to artificially reduce Fuyao's production capacity are undoubtedly a blow to Fuyao and thus protect American companies.

At the same time, Fuyao is also facing some market barriers and technical barriers. First, the US automotive glass industry has very strict legal standards. Fuyao needs to constantly upgrade and adjust, such as meeting the standards of the National Highway Traffic Safety Administration (NHTSA). If it does not meet the standards, it will face legal proceedings. In terms of trade policy, fluctuations in Sino-US relations will lead to changes in tariffs. For example, the US government once imposed anti-dumping duties on automotive glass made in China, which will inevitably affect Fuyao's market performance. In terms of technical barriers, the standards of the US market may be different from those of the Chinese market for automotive glass. For example, the United States pays more attention to environmental protection in the production process than China. Fuyao needs to constantly adjust and invest in research and development.

4. Discussion

4.1 Cause Analysis

Economic aspect: As a large multinational company, Fuyao attaches great importance to the goal of maximizing profits with the lowest cost control. This fundamental goal will lead to Fuyao's insufficient protection of employee welfare and employee production safety. The clear promotion channels and compliant working hours

required by the US labor union are directly related to the living standards and quality of life of all employees. However, the direct reason why Fuyao is short-sighted in these aspects is to save more costs.

Political aspect: The US political system has very strict requirements for business operations. The Family Labor Relations Act, the Fair Labor Standards Act, the Occupational Safety and Health Act, the Family and Medical Leave Act, the Americans with Disabilities Act and other relevant laws and regulations have protected the lives of employees. These laws stipulate that, for example, overtime pay must be paid for working hours exceeding 40 hours, and eligible employees can receive up to 12 weeks of unpaid leave. Companies must comply with regulations to avoid legal risks and protect the rights and interests of their employees. Although Fuyao often prioritizes its own interests when designing and implementing welfare programs, and therefore provides lower benefits, this is essentially competing with the US legal system, which will inevitably bring huge obstacles to the operation of the company [8].

Cultural aspect: American unions emphasize employee rights and welfare protection, play a decisive role in striving for better employee treatment, and will seriously consider employees' human rights issues. In contrast, China's business environment rarely uses unions, which are usually regulated by the government and enterprises. Therefore, the American union culture that emphasizes employee autonomy and the Chinese business philosophy that tends to rely on enterprises to maintain their own stability are bound to conflict. In addition, American unions have played an important role in American history. They have given workers the right to collectively bargain, overturned many labor laws, and promoted the establishment of employee welfare [9]. These achievements reflect the importance of unions in American culture. In China, unions are more used to maintain the stability of the national economy, so cultural conflicts in dealing with such issues will arise.

4.2 Future outlook

Regarding the union movement, strict supervision of the US market and market barriers. Some market and non-market strategies can help Fuyao make improvements and respond. For Fuyao, it is extremely important to establish a professional, complete and positive image in the production process and corporate operations, which lays the foundation for Fuyao's further development.

One strategy is to focus on creating compliant production and living conditions to cope with the control of the US government. In response to the union movement's

attention to employee safety and inhumane management models, Fuyao can start by improving labor conditions and creating a safe workshop environment: such as keeping the lighting and ventilation of the workshop for a long time, purchasing complete medical insurance and accident insurance for employees, and ensuring that every employee has protective equipment, etc. With such guarantees, Fuyao will be much less likely to receive fierce criticism from employees, and will also reduce the attention of the US government to its factories. In addition, Fuyao can also conduct employee opinion surveys within the US factory to collect constructive suggestions from all employees. Because if the suggestions of employees who work in their shoes every day can be adopted and effectively improved, this is the simplest and most efficient management method for Fuyao. Then, Fuyao needs to try its best to establish a good relationship with the industry associations, so that Fuyao can get the latest monitoring information and the fastest insight into the changes in the legal environment. This will help Fuyao reduce losses and maintain its position as a leading enterprise. Finally, what Fuyao can do is to do its best to cooperate with the investigation of the US authorities. The government's control over local enterprises is inevitable, and at the same time, the shutdown caused by the inspection is also something Fuyao cannot change. If Fuyao tries its best to cooperate with the investigation, submit its own information and ensure that the company's operations are in a state of harmony and development, it will also minimize the losses as much as possible.

Another strategy is to establish a risk defense mechanism. Fuyao can establish a dedicated compliance legal team to regularly evaluate and review whether the company's operations are legal and compliant according to US labor laws, thereby avoiding potential legal risks, which can also illustrate the company's sense of responsibility for local laws. Fuyao can also conduct regular legal training to improve employees' awareness of labor rights and company strategies, and ensure that every employee will produce in accordance with legal procedures when working. At the same time, Fuyao can also establish its own risk assessment model to identify potential risks, including market risks, legal risks, operational risks, etc. Fuyao can conduct risk assessment based on its experience in dealing with OSHA and other agencies in recent years, and develop strategies for each risk. Finally, based on theoretical analysis, Fuyao can prepare a detailed contingency plan to deal with possible union movements and sudden inspections to ensure the continuity of the company's operations. For technical barriers, Fuyao should continue to increase the amount of funds invested and focus on technological innovation to maintain its leading position in the US mar-

ket. It is understood that Fuyao has established a research and development team of more than 4,500 people and spends more than 4% of its annual revenue on innovative research and development. Through such investment, Fuyao can develop high-value-added products with independent intellectual property rights, such as lightweight ultra-thin glass, coated heatable glass, and smart panoramic skylight glass. Fuyao should continue to maintain such innovation to cope with market development. Fuyao also needs to conduct in-depth market research and user analysis. By deeply studying the product needs and development trends of the US market, Fuyao can better develop targeted exhibits and through in-depth cooperation with local automakers, Fuyao can better understand market dynamics to adjust its services.

The production of glass needs to face a large number of industrial emissions, which is very different from the US-led environmental governance, and also has great hidden dangers for the long-term development of enterprises [10]. Therefore, for Fuyao Glass, it should increase investment in environmental governance, implement low carbon control in the whole process of procurement, production and distribution, and build large advanced equipment for waste treatment, which can not only meet the needs of environmental protection in the United States, but also promote the green development of enterprises from a long-term perspective. It can also obtain a higher assessment of ESG from the capital market and obtain more corresponding financing.

5. Conclusion

By studying the performance of Fuyao in the American market and the entire American glass market, this paper not only has an understanding of the current situation and strategy of Fuyao, but also analyzes the pressure and problems that Fuyao is facing from different markets. We discussed the crisis brought to Fuyao by the differences in culture and management methods and the fierce market competition. Finally, we conclude that Fuyao Company can improve its predicament by focusing on employee welfare and environmental protection issues.

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