

# ***DJI's Internationalization Path and Strategies Facing Challenges from the Perspective of Economics***

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**Abstract:** With the acceleration of globalization, cross-border trade is becoming more and more important, and the overseas market expansion of technology enterprises has attracted much attention. As a representative of Chinese technology enterprises, Shenzhen DJI Sciences and Technologies Ltd (DJI) has performed outstandingly in the field of drones and successfully gone international from domestic market. As an emerging technology product, drones have broad application prospects and growing demand. DJI faces market competition and challenges in cross-border trade, such as political risks, technical barriers, and trade frictions. However, it actively responds through innovation and optimization. While developing new technologies, it is also constantly improving the security system for users. This study analyzes DJI's internationalization path and its strategy to deal with the pressure of the United States from an economic perspective. It has played a good role in the overseas development of Chinese science and technology enterprises. Its successful experience is of referencing significance for the overseas expansion of other technology enterprises.

**Keywords:** innovation, internationalization path, US pressure

## **1. Introduction**

With the acceleration of the globalization process, cross-border trade is playing an increasingly important role in the world economy. Among many industries, the overseas market expansion of technology enterprises is particularly remarkable. As a representative of Chinese technology enterprises, Shenzhen DJI Sciences and Technologies Ltd (DJI) has become the focus of global attention for its outstanding performance in the field of drones. As an emerging technological product, drones have broad application prospects. From the military field to the civilian field, the demand for drones is constantly growing [1]. DJI has rapidly occupied the global drone market by its advanced technology and innovative products. In this process, DJI faces not only competitive pressure from the market, but also various challenges in cross-border trade. However, DJI actively responds to various problems in cross-border trade through continuous innovation and optimization. Its successful experience and coping strategies are of great significance for the overseas market expansion of other technology enterprises. Therefore, studying how DJI goes from domestic to international and its way of handling cross-border trade challenges has important practical value.

The internationalization path of DJI is unique. First of all, its products quickly open the international market with high cost and excellent performance. Data shows that DJI has as high as 70% market share in the global drone market [2]. Through continuous technological innovation and

independently developed flight control systems, DJI's products are in a leading position in terms of stability and intelligence [3]. In order to make the drones stay in the high altitude for 30 more seconds, its team has spent months on research and development (R&D). This extreme pursuit of product performance makes DJI's drones not only powerful in functions, but also capable of sensing obstacles and following subjects smartly. In dealing with pressure from the US, DJI has shown resilience and wisdom. The United States has blocked DJI on the grounds of threatening national security and implemented a series of pressure measures such as imposing tariffs [4]. DJI transfers the increased costs to US consumers in a way of raising the prices by 13%. This strategy makes the US government realize the irreplaceability of DJI products. The successful experience of DJI sets a good example for Chinese technology enterprises. Through the research on DJI, it is hoped that Chinese technology enterprises can go more steadily on the road of internationalization and make greater contributions to the development of China's economy.

## **2. Internationalization Process**

### **2.1. Rise of the Domestic Market**

The technological research and development process of DJI in China is full of hardships and challenges. In the early days of its establishment, DJI's innovation team put a lot of energy into the R&D of drone technology [5]. In terms of flight control systems, DJI has invested a large amount of resources, which they have successfully developed a system with independent intellectual property rights. This technological breakthrough has laid a solid foundation for DJI's rise in the drone market. At the same time, DJI has also made remarkable achievements in image transmission technology. They have developed a high-definition and stable image transmission system. This technical advantage has been widely used in fields such as aerial photography and film and television production. In addition, DJI also pays attention to the development of smart-drones, greatly improving the convenience and safety of using drones.

DJI has overcome these challenges through a number of initiatives. First of all, DJI pays attention to product quality and performance. They ensure that every drone leaving the factory can reach a high-quality standard. At the same time, DJI continuously conducts technological innovation and launches drone products with higher performance and more functions. Secondly, DJI actively carries out marketing activities. DJI conducts brand promotion and product publicity through multiple channels. DJI also cooperates with major media and social platforms to carry out advertising and content marketing. In addition, DJI establishes a complete sales channel and after-sales service system to provide users with convenient purchase channels and high-quality after-sales service. At present, DJI's market share in China has exceeded 80% and has become the leader in the domestic drone market.

### **2.2. International Expansion**

In the process of moving towards the international market, DJI has adopted a comprehensive global market layout strategy [6]. In the North American market, DJI has quickly occupied an important position. Data shows that DJI's market share in the United States exceeds 50%. DJI has established an exclusive retail cooperation relationship with Apple. Its products meet consumers in more than 400 Apple Store retail stores around the world. DJI actively expands markets in countries such as the United Kingdom, Germany, and France, increasing market coverage and promoting customized products. DJI's market share in Europe is about 30%. Although the Asian and Australian markets are still in the development stage, DJI formulates products and marketing strategies according to the characteristics of audiences in different countries in the Asia-Pacific market.

DJI pays attention to international brand building. First of all, DJI continuously launches innovative drone products, for example, the “Mavic 2” series of drones. DJI’s drone products are not only in a technologically leading position, but also unique in design and are deeply loved by users. Secondly, DJI has put effects into marketing on multiple social media platforms such as Instagram, YouTube, and TikTok. DJI cooperates with many well-known technology experts, photography bloggers and other social media influencers. Through various forms such as product evaluations, unboxing videos, and usage demonstrations, DJI recommends its products to global consumers. In addition, DJI sets up offices in multiple locations around the world. Through these measures, DJI continuously improves its brand image and expands its international market share.

### 3. DJI’s Cross-Border Trade Strategy

#### 3.1. Product Strategy

DJI’s products are significantly differentiated in the market. First of all, DJI continues to invest in technological innovation and continuously introduces innovative features [7]. For example, DJI’s drone products are equipped with advanced obstacle avoidance systems, which greatly improve the safety of flight. At the same time, DJI is also unique in product design. DJI’s drones are sleek, compact and portable, and at the same time use high-quality materials for good durability. For example, DJI’s Mini-series, which weighs only 249 grams, are very light and portable, allowing users to easily carry them out for photographing. In terms of functionality, DJI’s drone products cover multiple fields such as ordinary consumers, the professionals, and industrial applications, meeting the needs of different users.

Standardized production has brought significant cost control benefits to DJI. On the one hand, DJI has improved production efficiency and reduced production costs by establishing a standardized production process and quality control system. On the other hand, standardized production helps DJI achieve economies of scale. With the expansion of market share, DJI can reduce the R&D cost, production cost, and sales cost per unit of product through standardized production. At the same time, DJI can obtain more favorable prices and reduce production costs by purchasing raw materials and components on a large scale. In addition, by establishing a global sales network, DJI can reduce the cost of sales per unit of product and improve the market competitiveness of its products.

#### 3.2. Marketing Strategy

DJI has adopted a diversified approach to international marketing and has achieved remarkable results. In terms of advertising and marketing, DJI is good at using hot news events for brand promotion. DJI never uses straightforward advertising, but constantly refreshes people’s perception of drones in the form of news hotspots [8]. In addition, DJI has astutely harnessed the potential of social media as a crucial facet of its comprehensive marketing strategy. With a pronounced and active presence across leading international social media platforms such as Instagram, YouTube, and TikTok, DJI has successfully forged strategic collaborations with a diverse array of esteemed technology experts, accomplished photography bloggers, and other highly influential social media figures. Products are deftly introduced and recommended to consumers spanning the globe, thereby bolstering brand awareness and market penetration on an international level.

DJI has also made great efforts to expand its sales channels and established a complete online and offline sales channel system. In terms of online sales channels, DJI’s official store and flagship store cover a wide range of product lines, and users can shop for all kinds of accessories. There are also wonderful activities such as aerial photography lectures and test flight experiences waiting for users to participate. In terms of offline sales channels, DJI has a variety of stores. Premium experience stores and general sales store allow consumers to experience the functions and performance of

products on the spot, and purchase a variety of DJI products for sale. In addition, DJI works with agents around the world. Agents can provide professional product consultation and purchase services for customers in different fields. Through diversified marketing methods and perfect sales channel expansion, DJI has continuously expanded its brand influence and market share in the international market, and has become a global leader in the field of drones.

#### **4. DJI's Strategy to Deal with US Pressure**

DJI has been actively leveraging legal weapons to safeguard its rights. In response to the unreasonable identification of it as a “military-involved enterprise” by the United States, DJI has filed lawsuits in local courts. By focusing on product technology and strengthening the core technological barriers, DJI maintains its market competitiveness. Moreover, DJI unites forces both within and outside the industry, devotes itself to industry alliances, collaborates with dealers and users to raise their voices to legislators, reveals the harms of restrictive measures, and strives for a favorable market development environment to resist the pressure from the United States.

##### **4.1. Technological Innovation and Independent R&D**

DJI's flight control system is 100% self-developed and loosed-source, which ensures it a very high technical advantage in the field of drones. In addition, DJI has also implemented closed-source code on key components such as motors and smart batteries, and by mastering all the source codes of all systems of the whole machine, DJI drones can achieve stability and image transmission effects that are difficult to achieve with other products. According to the data, DJI has more than 5,000 core patent projects around the world, which cover various technical fields of drones, building a solid technical barrier for DJI, making it difficult for competitors to easily imitate and surpass.

DJI spares no effort in R&D investment and innovation mechanism. DJI invests a lot of money in R&D every year, and according to statistics, DJI's R&D investment is more than 2 billion [9]. In terms of innovation mechanisms, DJI encourages internal innovation. DJI has a high-quality R&D team, of which about 20% are R&D engineers. In addition, DJI also focuses on cooperation with universities and scientific research institutions to jointly carry out R&D projects to accelerate technological innovation and market application. DJI's founder, Wang Tao, devotes 80 million yuan every year to initiate and host the National Collegiate Robotics Competition (RoboMasters), providing a stage for young people with innovation and design dreams like himself to present themselves and create future engineers and scientists. This innovative mechanism has injected a steady stream of impetus into DJI's continued development.

##### **4.2. Market Diversification Strategy**

DJI is actively expanding into emerging markets, with its sights set on Africa, Latin America, and Southeast Asia. In Africa, DJI's drone products are widely used in agriculture, surveying and mapping, and wildlife conservation. Data shows that DJI's market share of agricultural drones in Kenya is increasing year by year, and now accounts for more than 30% of the local agricultural drone market. In Latin America, DJI has partnered with local film and television production companies and news outlets to provide them with professional drone shooting solutions. In Brazil, DJI's drones are used to shoot major sporting events such as the World Cup and the Olympics, and their high-quality results have been recognized by audiences around the world. In Thailand, DJI's drones have become a must-have for travel enthusiasts, who use DJI drones to capture unforgettable travel moments. In Indonesia, DJI's drones are used in disaster monitoring and rescue efforts, providing timely and accurate information to local governments to help them better respond to natural disasters.

DJI is constantly innovating and optimizing its products to meet the needs of different customer groups. For professional photographers and film and television production companies, DJI has launched high-end, professional-grade drone products, such as the Inspire series and Zenmuse series. These products have the characteristics of high image quality, high performance and high stability, which can meet the strict requirements of professional users for shooting quality. For casual consumers and amateur photographers, DJI has launched lightweight, easy-to-operate consumer drone products such as the Mavic series and the Spark series. These products are small and portable, affordable and powerful, making it easy for more people to enjoy the fun of drone shooting. For industry users, DJI provides customized solutions to meet their specific needs in agriculture, construction, security, and other fields. In the agricultural field, DJI's agricultural drones can accurately spray pesticides, fertilize and sow seeds to improve agricultural production efficiency [10]. In the construction field, DJI's drones can monitor and map construction sites, providing accurate data support for engineering construction. In the field of security, DJI's drones can conduct patrols and reconnaissance to improve the level of public safety. In short, through its market diversification strategy, DJI has actively expanded into emerging markets to meet the needs of different customer groups, reduced its dependence on a single market, and strengthened its ability to resist risks. In the future, DJI will continue to innovate and optimize to provide better drone products and services for users around the world.

## 5. Conclusion

This article has comprehensively analyzed DJI's journey from its domestic roots to its international success, focusing on its cross-border trade strategies and responses to challenges, particularly from the US. The study is important as DJI's experience offers valuable insights for other technology enterprises aiming to expand globally. The article's purpose is to examine DJI's development process, product and marketing strategies, and its ability to overcome obstacles.

DJI's success lies in continuous technological innovation, product differentiation, standardized production, and effective marketing. DJI's flight control system and other core technologies give it a competitive edge, and its diverse product range caters to various customer needs. In the face of US pressure DJI's resilience and strategic responses, such as technological innovation and market diversification, have been crucial. Similar technology companies can learn from DJI's emphasis on innovation, quality, and marketing. Other industries facing international market challenges can also adopt DJI's strategies of product differentiation and market diversification. Governments can support enterprises by providing a favorable policy environment and promoting international cooperation. Enterprises should focus on core competencies and continuous innovation. The society can encourage the cultivation of innovative talents.

However, the article has some limitations. It does not cover all aspects of DJI's operations in detail, and the article lacks quantitative support. Future research could further explore DJI's long-term growth strategy, its impact on the global economy, and potential challenges it may face in the future. In addition, it is possible to conduct more in-depth research on the application of DJI technology in different industries and regions.

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