

Research on the Company Competitive Strategy: A SWOT Analysis and Five Forces Analysis in DJI Drones

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Abstract

In recent years, with the continuous development of technological innovation, the frequency of the combined application of Unmanned Aerial Vehicles (UAVs) with various industries has been on the rise, and the development of the UAVs industry has become an inevitable trend. This report will provide an industry analysis for the UAV industry. We will first give an overview for UAV industry, then discuss the attractiveness and potential of the industry, and using the Five forces analysis and the SWOT analysis to demonstrate the strength and weakness of the DJI Technology Co., Ltd as a leading company within the industry. By analyzing the case of DJI and introducing its current development status and product innovation points, this paper explores how DJI maintain its competitiveness by innovations and strategies. Based on those analysis, this paper aims to study what corporate strategies DJI adopts to enter overseas markets and become an outstanding enterprise in a highly competitive environment. This paper hope to provide experience and inspiration for the development of new enterprises that want to enter or have already entered the drone market in the future, namely core technological innovation, differentiation strategy, and achieving cost advantages. Furthermore, we also provide suggestions for DJI's future development direction.

Keywords

five forces analysis, SWOT analysis, technological innovation, differentiation strategy

1. Introduction

Unmanned Aerial Vehicles, commonly known as a drone and referred to an airborne vehicle carried by an unmanned aircraft that operates using aerodynamic power, is an aircraft without a human pilot aboard (Fan et al., 2020). It is commonly abbreviated as UAVs. In recent years, with the rapid development of science and technology, UAV market has shown a strong growth trend worldwide, demonstrating huge market potential and application value. In China, the low-altitude economy has emerged as a new economic form, driving the continuous development of the UAV market (Shi and Zu, 2025). Drones have evolved from their past military missions to their current applications in agricultural pest control, logistics distribution, cultural and entertainment consumption, environmental monitoring, ecological patrols, and more, and are now comprehensively transforming our production and lifestyle.

1.1 Overview for the Drone Industry

At the beginning of the 20th century, the Wright Brothers in the United States first developed the manned aircraft "Sky One", marking the beginning of the exploration of UAVs, which were widely used to complete

military missions. Subsequently, the introduction of GPS technology further promoted the development of military UAVs and spurred the emergence of civilian UAVs. In 2003, DJI Drone Company was established. In 2009, 3DRobotics, a drone company, was established in California, USA. Since then, consumer-grade drones have emerged and been widely popularized in fields such as aerial photography and entertainment. The phantom series of drones launched by DJI has had a profound impact worldwide. In the future, with the development of AI and 5G technologies, drones will provide more efficient and convenient services for various industries, and will show the directions of intelligence, miniaturization, safety, and clustering, further expanding the application scenarios of drones.

From the perspective of the enterprise life cycle, this theory is used to explain the sources and dynamic evolution process of comparative advantages in international trade. Its development trajectory shows the phased evolution characteristics of the introduction stage, growth stage, maturity stage and decline stage (Federal Aviation Administration and Transportation Security Administration, 2025). At the introduction stage, enterprises are small in scale and limited in resources. they focus on product research and development, market expansion and team building. At this point, enterprises have an urgent need for funds and often face the predicament of high risks and difficult financing, as well as strong financing constraints and high operational uncertainties. During the growth stage, the business scale of enterprises expands rapidly, their market share gradually increases, and their profitability is somewhat enhanced. However, with the expansion of scale, enterprises' demand for funds further increases, presenting the characteristics of capital-intensive expansion. It is necessary to optimize the efficiency of fund raising and the investment return mechanism. Mature enterprises have stable business operations, strong profitability, relatively abundant cash flow, and possess strong market competitiveness and risk resistance capabilities. However, with the increasingly fierce market competition, enterprises urgently need to seek new breakthrough points to maintain their dominant position. During the recession period, enterprises are confronted with severe challenges such as shrinking markets and declining profitability, leading to increased operational difficulties and greater financial risks. At this point, the top priority for enterprises is to adjust their strategies, achieve value recovery through cost control and asset divestiture, and seek opportunities for transformation and development. The UAV industry is currently in its infancy. The technology of UAVs is not yet mature, and there are problems in aspects such as stability and endurance. The market demand is mainly concentrated in some professional fields, such as military and scientific research, etc. The understanding and demand of ordinary consumers for drones are very limited.

1.2 The Macro-Environmental Impact

1.2.1 Policy Factors:

Looking globally, most countries in North America and Europe have already introduced relevant policies for the drone market, providing support for the legal operation of drones and further promoting the healthy development of the drone market. The United States announced a new rule "Normalizing Unmanned Aircraft Systems Beyond Visual Line of Sight Operations" last month, which will speed up drone deployment, enhance safety, and bring us closer to the future of aviation (Federal Aviation Administration and Transportation Security Administration, 2025). This is also attributed to the fact that drones first began to develop in the European and American markets. In China, the development of drones started relatively late. However, since the 21st century, the development of drones in China, represented by DJI, has begun to show explosive growth. At the same time, with China's introduction of the strategic guideline of low-altitude economy, the low-altitude economy is a new economic form centered on civil aircraft, relying on multiple low-altitude flights to drive the integration of related fields, laying a foundation for the development of UAV in the Chinese market. Even though no relevant policies for unmanned aerial vehicles have been issued, the "Draft Amendment to Civil Aviation Law" clearly incorporates low-altitude economy into the legal framework and releases the "Guidelines for the Infrastructure Framework of Low-altitude Economy" to promote the standardization of infrastructure.

1.2.2 Market Factors:

With the improvement of economic levels, drones have expanded from the military field to commercial and consumer markets. Consumer-grade drones are usually used for personal needs such as entertainment and aerial photography, while commercial drones are used for public service tasks such as agriculture, logistics,

and inspection, promoting the synchronous development of related industries. According to the 2024 Global Drone Market Insights Report (SG Market Research, 2024), the drone market size is estimated at 35.28 billion US dollars in 2024 and is expected to soar to 67.64 billion US dollars by 2029, with a growth rate approaching 200%. In the same year, the global sales volume of UAVs is expected to reach 8.19 million units. It is projected that the sales volume will reach 9.5 million units in five years, among which the sales volume of the Chinese UAV market is expected to reach 3.7 million units. From the perspective of different regions, the North American market has the highest share in the drone market, reaching 38%, and has always held a leading position. Meanwhile, the US drone market holds a dominant position in the North American market, especially in terms of the number of consumer-grade drones used, which far exceeds that of other countries. The European drone market focuses on the application scope of commercial drones. The increasing demand for drone delivery services in the market has made retail commodity delivery services the main market driver of the European drone industry. In the Asia-Pacific region, the market size of UAVs is growing at the fastest rate, especially China, which has become the world's largest exporter of UAVs.

2. DJI

2.1 Overview for the DJI

DJI Innovation Technology Co., Ltd. was established in Shenzhen, China in 2006. It is a globally leading manufacturer of independent research and development of UAVs, dedicated to providing UAV users with high-performance and user-friendly intelligent UAV products. Since its establishment, DJI has been committed to becoming a world-class brand错误!未找到引用源。(Pereira, 2021) and has always adhered to the model of technological innovation to promote product production. With its high-quality product quality and precise product positioning, DJI has quickly entered overseas markets and gained wide recognition. With its high-quality product quality and precise product positioning, DJI has quickly entered overseas markets and gained wide recognition. In 2024, DJI's market share in the global consumer drone market will exceed 70%, and in the commercial drone market, it will exceed 50%. DJI's core business mainly involves manufacturing commercial drones for aerial photography and video shooting. At the same time, it is extending drones to fields such as agriculture, sports events, rescue, and inspection, continuously expanding the application scenarios of drones.

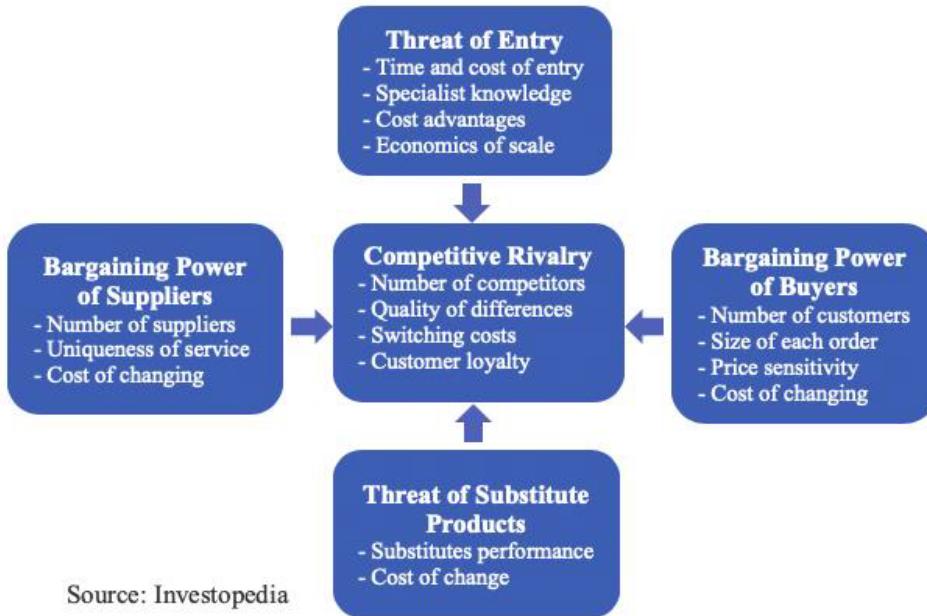
Based on the characteristics of the drone market in different regions, DJI has adopted a stratified layout in its market strategy, dividing the global market atmosphere of its products into three levels (Fan et al., 2020). The primary market is targeted at the North American market, which is also DJI's main market. The secondary market is aimed at the European market. The tertiary market is targeted at the Asian market. At present, with the improvement of Chinese consumers' awareness of drones and the strong support of the Chinese government for drones, coupled with the tariff barriers and a series of flight ban threats from the United States, DJI's sales volume in the Chinese market has grown at the fastest rate. DJI is gradually shifting its market focus to the Chinese market. When DJI launched the Mavic 4 Pro in March this year, it deliberately avoided the US market. American consumers were unable to purchase DJI's latest products on the US official website.

From the perspective of the enterprise life cycle theory, DJI has completed the transition from the start-up stage to the growth stage. DJI not only increased its investment in the research and development of drone technology, constantly improving the performance and stability of drones, but also actively explored the application of drones in different fields, such as aerial photography and agricultural plant protection. Meanwhile, DJI showcases the charm and application scenarios of drones to consumers by holding drone shows and shooting exciting aerial videos. It also strengthens cooperation with the media to carry out popular science publicity and enhance consumers' awareness of drones. In addition, DJI has also established cooperative relationships with some related enterprises. For instance, it has collaborated with camera manufacturers to launch drones equipped with professional cameras, catering to the needs of aerial photography enthusiasts. Through the implementation of these strategies, the UAV industry has gradually passed the start-up stage and entered a period of rapid growth.

2.2 Five Forces Analysis

Harvard Professor Michael Porter developed an analytical model to understand the competitiveness of industries by identifying and assessing “five forces” that shape and drive the industries. As shown in Figure 1, marketers and business managers can better understand the industries and the businesses, so that they can find out any necessary changes they need to make. Here we apply Porter analysis to the Drone industry.

Figure 1. Porter's Five Forces Analysis



Source: *Investopedia*

2.2.1 Competitive Rivalry (Moderate)

The following factors are the most significant considerations in assessing of this force:

- 1) Medium number of companies in the Drone industry (moderate force), and
- 2) Medium variety of company types (moderate force).

At present, the application scenarios of UAVs are constantly expanding, and the market has huge development potential. The competition among existing competitors is extremely fierce.

2.2.2 Threat of Entry (Moderate)

The following factors are the main considerations in assessing of this force:

- 1) Low switching costs of customers (moderate force), and
- 2) Moderate to high cost of brand development (moderate force).

UAV market, as an emerging market, has huge potential for development, especially in the areas of consumer and commercial UAVs. However, due to the high requirements for scientific research and development and the rapid pace of technological updates and iterations, the entry threshold is high. For new entrants, if they want to develop in the drone market, they need to invest a large amount of research and development funds to find their own core competitiveness to build a strong brand.

2.2.3 Bargaining Power of Buyers (Moderate)

Drone industry is mainly subject to the following external factors:

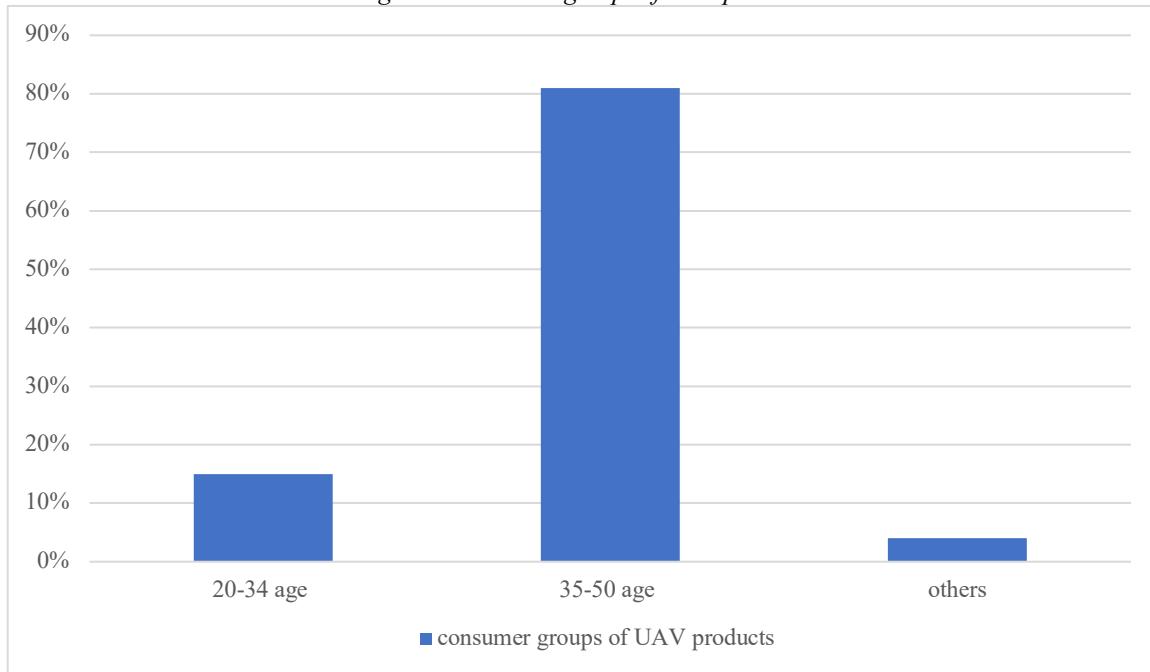
- 1) Medium size of individual purchases (moderate force),

- 2) Medium diversity of customers (moderate force), and
- 2) Medium price sensitivity of customers (moderate force).

There are numerous brands and models in the drone market, and many drones that can be consumed in different application scenarios have been launched. Consumers can easily compare different products based on price, performance, brand reputation and user reviews. At the same time, for users, the price advantage is very important. They generally tend to look for products with high-cost performance. This indicates that the company must be able to offer competitive price advantages while ensuring product quality to better attract and retain customers.

As shown in Figure 2 (Qianzhan Industry Research Institute, 2020), the main consumer groups of UAV products are high-income groups, so customers tend to be in 35-49 age group (81%) using drones as a professional tool, 20-34 age group (15%) using drones as an entertainment tool. And the report found that buyers could be price sensitive and high-cost performance, but larger groups showed brand loyalty.

Figure 2: consumer groups of UAV products



2.2.4 Threat of Substitute Products (Moderate)

The following factors impose the moderate threat of substitutes to the industry:

- 1) Medium availability of substitutes (moderate force),
- 2) Medium prices of substitutes (moderate force), and
- 3) Medium attractiveness of substitutes (moderate force).

With technological innovation, substitutes of drones includes other types of photography and video equipment, such as go-pro cameras and action cameras, can also offer functions similar to those of drones. In addition, the development of VR and AR technologies can also offer new forms of entertainment, thereby reducing the demand for drones.

2.2.5 Bargaining Power of Suppliers (High)

The following are the main assessment factors in assessing of this force:

- 1) High switching cost of companies (high force),
- 2) Low population of suppliers (high force), and

3) Low availability of supply (high force).

Drones are assembled from many different components, and different components perform differently in the market. However, as a high-tech product, the core component market of drones is an industry with highly competitive barriers, so their bargaining power is high. For other common accessories, there are many supply enterprises in the market and the competition is fierce, so the bargaining power is weak.

Currently, the drone industry is competitive, with one force is strong, four are moderate. For DJI, it is now almost in a monopolistic position in the drone market. First, it entered the industry before the market demand for drones emerged, gradually increasing the demand for the drone market. Secondly, DJI's commitment to the concept of independent innovation and its pursuit of technological innovation have enabled its products to maintain a price advantage while meeting high quality requirements, thus earning the recognition of a large number of consumers. Thirdly, DJI actively expands into new market areas and continuously delves into various industries instead of remaining complacent.

2.3 SWOT and Competitive Advantages Analysis for DJI

Based on investigations and key findings about DJI, using the SWOT analysis method to analyze the internal and external environment of DJI Company can provide a deeper and more comprehensive understanding of the company's development strategies and competitive advantages. As shown in Figure 3, the SWOT analysis method analyzes this company from four different aspects: strengths, weakness, opportunities, and threats (Teoli et al., 2023).

Figure 3. SWOT Analysis

Favorable	
I n t e r n a l	Strengths
	Weaknesses
E x t e r n a l	Opportunities
	Threats

Strengths

- Strong brand name
- Innovative business model
- Good cost control system
- Strong technology competencies
- Comprehensive Risk management system

Weaknesses

- Relies on third parties for supply
- Has a limited operating history
- Operates based on a new business model
- Depends on online payment method

Opportunities

- Expands core businesses
- Diversifies into new growth businesses
- Make profitable new acquisition
- Take advantage of good food market condition

Threats

- New competitors enter the industry
- Online/offline grocery competition
- Difficult to maintain or increase demand
- Foreign currency fluctuation

DJI ranks at the top of the drone industry. Since its establishment, DJI has been committed to technological innovation. Relying on the competitiveness of its core technologies, even though it has set up branches in overseas markets, it has performed outstandingly in the international market and has been widely recognized by consumers. The Genie series, launched in 2011, holds epoch-making significance in the drone market and provides a strong guarantee for stabilizing overseas markets. At the same time, the continuous update and iteration of existing products, along with the continuous expansion of other drone application scenarios, have enabled DJI to always remain in a leading position.

While DJI is promoting technological innovation, it is also confronted with high R&D costs and constantly changing international regulatory compliance challenges. For the company, in the face of unknown challenges, it is necessary to constantly adapt and adjust product strategies to meet the diverse needs of consumers and continue to hold a dominant position in the drone market. Especially for price-sensitive customer groups, they will be more inclined to choose products or brands with better cost performance, thus losing their customer base.

Based on the huge potential of the drone industry and the exploration of diverse application scenarios for drones, DJI has been provided with a vast space for development. Especially in China, the strategic positioning of the low-altitude economy will drive the rapid development of unmanned aerial vehicles in the Chinese market. With the popularization of drone technology and the increasing awareness of drones among consumers, more and more consumers will purchase drone products. The development of AR and VR technologies has also provided DJI with opportunities to enhance product performance and develop new features.

The continuous influx of competitors into the drone market will increase DJI's market competition risks. In particular, the development of different demands and functions of drones, as well as the crisis of technological updates and iterations, will pose a threat to DJI. While focusing on technological research and development, DJI also needs to fully understand the technological advantages and market positions of its competitors, accurately identify its own technological strengths, and conduct product research and development in combination with market demands.

3. Conclusion

With the continuous increase in economic level, the constant improvement of living standards and the continuous innovation of scientific research level, there is huge development space for the market demand of the unmanned aerial vehicle industry. When analyzing the DJI case, through the Five Forces model and the SWOT analysis tool, it was clearly recognized that technological innovation and product positioning play a crucial role in the development process of high-tech companies. With the trend of economic globalization, the international market takes product strength as the first criterion. Technological innovation has become the core competitiveness for a company to stand firm in both domestic and international markets. Only by mastering independent core technologies can a company ensure its sustainable development. Therefore, for new enterprises that want to enter the drone market, the core technology of drones belongs to high-end science and technology. Thus, before entering this industry, it is necessary to develop the core technology first. To this end, it is necessary to have a clear understanding and high insight into the entire industry and be good at devoting oneself wholeheartedly to the research and development of core products in terms of the future development direction and potential space of our industry. Because the research and development of UAV products requires a large amount of capital investment, if the preliminary investigation and acute market analysis are not done well, it is very likely to lead to the waste of funds. The second is a differentiated strategic positioning. It is not very feasible to completely replicate DJI's business path. DJI, relying on its core technologies and product positioning, was the first to gain recognition in overseas markets. Without sufficient financial support, successful core technologies and a loyal customer base, it is very difficult for new enterprises to occupy a market position in the market share held by leading enterprises with inherent advantages.

Therefore, in addition to focusing on technological innovation, it is also necessary to conduct thorough market research to identify potential and unexplored niche markets for development, rather than blindly following the practices of leading enterprises. In this regard, enterprises can precisely target the market and meet consumers' diverse demands by offering highly differentiated products and services. This not only enables enterprises to stand out in the highly competitive market, but also enhances customer stickiness and increases market share. First, in terms of product differentiation, new products are launched by integrating drones with other functions and applied in professional scenarios, such as the Lanthanum Shadow R6000 drone launched by United Aircraft. As the world's first 6-ton tiltrotor aircraft, the Lanthanum R6000 is designed with the concept of "safety, ease of use and low cost". It adopts a unique rotor tiltrotor design and is a "new species" that combines the advantages of helicopters and fixed-wing aircraft. With its unique rotor tilting design, it can freely switch between vertical takeoff and landing and high-speed horizontal flight without the need for airport runways, significantly reducing its reliance on infrastructure. It has broad application prospects in high-value cargo transportation, business travel, emergency rescue and other fields. Second, from the perspective of service differentiation, enterprises can offer customized solutions, such as providing value-added services like drone flight mission planning and data processing and analysis based on customer needs. For instance, in the field of urban air traffic, we offer UAV manned flight services and tailor diversified application scenarios such as air Tours and air logistics for our clients to enhance the service experience. The third is to enhance the corporate image and market competitiveness through brand building. Enterprises should focus on shaping brand stories, promote their brands through various channels, and actively participate in social public welfare activities to enhance their brand's sense of social responsibility. For instance, enterprises can leverage

platforms such as social media, industry exhibitions, and professional forums to showcase their strength, product features, and application cases, thereby enhancing brand exposure. Or actively participate in public welfare activities such as earthquake relief and environmental monitoring, which can not only help solve practical problems for society, but also enhance the brand's reputation and social image.

For DJI, in the face of an increasingly fierce competitive environment and constantly innovative science and technology, if it wants to continue to consolidate its position in the industry and increase its market value. The first is a differentiated strategy. DJI has always adopted a differentiated strategic positioning, which is reflected not only in its independent innovation ability in product research and development, but also in its innovative direction of combining drones with other functional modes. In the future, it will continue to explore the research and development of new models of products. The second is to achieve a cost advantage. DJI was established in Shenzhen, China, which is the center of China's manufacturing industry, providing DJI with the inherent conditions to achieve cost advantages. In the future, based on ensuring mid-to-high-end products, the company can shift to launching products with higher cost performance, expand the consumer base, further enhance the breadth of the consumer drone market, and increase the company's market value.

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Conflicts of Interest

The authors declare no conflict of interest.

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