

The Study of Company Competitive Strategy under new Manufacturing Industry-Taking DJI as an Example

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Abstract: This paper mainly focuses on how companies use their risk management and strategic development to achieve sustainable success. To explore the market value of enterprises, this paper takes the DJI Technology Co., Ltd as an example, through the various stages of development and strategy analysis, recognizing that DJI has become the most outstanding UAV company in the international market. The SWOT analysis, differential strategy, and PEST analysis are measured in this paper to demonstrate the strength and weaknesses of DJI in their development. Based on the data, industry background, finance, product features, and results, companies' development plans in the international market are investigated. This paper shows that DJI keeps its competitiveness based on its innovations, strategies, and differentiated positions. Innovations on every product DJI has made, strategies on some of the crucial decision making DJI has experienced, and differentiated marketing DJI has put on its strategic development. Through these strategies, DJI is now the monopoly company in the international UAV market. It has controlled the vast majority of the technologies of the UAV, DJI's products are overall leading the world's other products. The sales and income are going rapidly high over the past few years and it is going to rise in the next few years as well. DJI now is one of the most famous and popular high-end manufacturing companies in China. The most important thing is that DJI entered the market at a comfortable timing and had top technology. This paper is of great significance in studying how the company uses strategic development to earn sustainable success in the market.

1. Introduction

Unmanned Aerial Vehicles (UAV), known as drones, have become a trending choice among photographers and people who wish to improve working efficiency with aircraft. Reportedly, UAV exhibits broad application prospects in many fields like agriculture, manufacturing industry, service industry, and national defense. Apart from that, some distinctive advantages of drones reflected in social services and family services will put UAVs in a position that can change people's lifestyles around the world. [1].

In PEST Analysis, UAV was in a regulatory blank area in China before 2009. However, the related laws in UAV field were successively issued after 2009. For example, the 'High-end Equipment Manufacturing Industry Twelve-Five development Plan'. The country has finally realized the importance of UAV as an emerging market. Civil UAV has a wide market demand including in agriculture, forestry, police, surveying and mapping, and other industries, which have a wide application prospect. In China, with the huge population size, UAV helps in disaster prevention and control.

DJI is one of the companies that change the game in drone industry, which is a famous company that catches up with the time and needs of global trends. DJI benefits from technology innovation. One

thing that DJI was proud of was its graphic algorithm engine developed independently by DJI. In addition, DJI designed a systematic Vision Motion Camera System which grants it infinite capacity in the Motion Camera market. As a powerful technology company, DJI has made great achievements in many areas of products. For instance, promotion camera, camera image stabilizer, drone camera accessory. However, DJI was currently the strongest competitor with the marketing-leading Go Pro. The advanced image stabilization system developed by DJI was favored by numerous customers. Especially, Robin-S image stabilizer was the best choice for professional filmmakers and photographers. As it has several unique features: cost-effective, reliable, and high-performance. DJI is proud of its drone image transmission function, stable and reliable drone design, making DJI the number one in the drone market. Although DJI has been in a dominant position for a long time, data from various parties in recent years have shown that the registration of drone-related companies has shown a gradual increase. We have reason to believe that under the impetus of new technologies and rapid changes in society, latecomers may still surpass industry leaders. Looking back at the open UAV market, the first batch of UAV products entered Western countries, and China's UAV R&D and production responded late during this period. Moreover, compared with the U.S.'s timetable for the future development of drones, China does not yet have a sound policy to restrict users. These national policies have brought great uncertainty to the development of DJI. Although the restrictions of laws and regulations are constantly improving, the development of DJI has been in a stage of steady growth.

In this article, we review the company's capitalization and industry valuation to examine DJI's corporate value; in addition, we evaluate DJI's potential through SWOT analysis and differentiation strategies. This means that we must not only pay attention to the statistics related to DJI, but also analyze the prospects of this company and its drone industry.

2. Data and method

2.1 Data

DJI Technology was founded in Shenzhen, China 2006. Shenzhen is the manufacturing center of China. In this context, the Shenzhen Municipal Government encourages the development of SMEs so, DJI came into being. Shenzhen is also the most important technology research and development and labor market in South China. This unique condition provides a solid foundation for the development of DJI. On the one hand, sufficient talents have promoted the development and progress of science and technology, and sufficient labor has made large-scale production possible. Besides, excellent products and low cost make DJI quite competitive in the Chinese market. DJI helps enterprises to scale production. Manufacturing drones is not a simple task. It requires an in-depth understanding and mastery of production, including processes that require precision machining, as well as high-level engineering and tools. Second, DJI can achieve high-quality levels while maintaining low costs, especially because the company can find skilled labor and use the same technology platform for consumer and enterprise solutions, leading to cheaper and faster releases. The goal for DJI at the very beginning was to build a Chinese global technology brand [2]. To do that, they started with high-end markets in both Europe and the United States and hope to build up real world-class UAV to reach brand globalization.

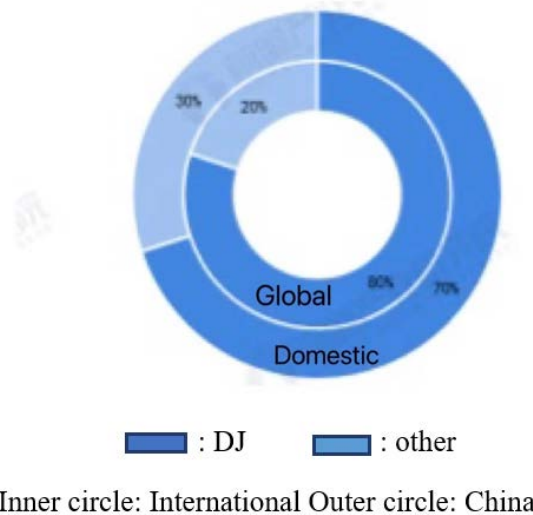


Figure 1.: DJI UAV market share in the global and domestic market [3]

According to Qianzhan Industry Research Institute [3], DJI had over 80% of civilian UAV market internationally and had over 70% civilian UAV market in domestic. It is undoubtedly the most famous UAV brand and monopolizes the international UAV market. DJI products have reinterpreted the meaning of Made in China to the world with first-class technology, continuously innovated products, and provided solutions in more cutting-edge fields, which have been respected and recognized by the global market. What's interesting is that although the U.S. government bans the promotion and use of DJI in the U.S. military, it is inevitable to use DJI when performing missions, because of DJI's influence in the market, as well as its technology and manufacturing capabilities. DJI's drones have reached a perfect balance between performance and price. Even if the U.S. vigorously suppresses its opponents, DJI still has its core technologies. Although DJI Group was established in 2006, it has only developed for 15 years in a relatively short period. However, with its super cost-effective and high-quality services, DJI has not only successfully developed the consumer drone market, but has also become the world's most popular consumer drone brand.

2.2 Method

Since DJI is not a public listed company, we need both quantitative data and qualitative analysis to fully investigate the true market value of DJI. For the quantitative data, it is relatively difficult to access the financial position of the company, hence we choose to look more at the market share of DJI from sources outside the company. For the qualitative analysis, we choose to use SWOT analysis to discover the performance at both the current level and future; also, differentiation strategy is used to reveal the corporation's path and its overall strategy.

The origin of SWOT analysis has been debatable but mostly credited to Albert Humphrey in the 1960s, which has become one of the most trending research tools used in assessing corporation strategy. It is composed of four parts from two perspectives, "strengths" and "weaknesses" from internal perspectives: "opportunities" and "threats" from external perspectives [4]. At the level of industry-leading corporations where DJI currently sitting, its strengths can be specifically divided into advantages, industry status, and influences outside the industry. For weaknesses, DJI's flaws and possible improvements are the two most important parts. From the external perspective, opportunities mainly arise from the growing application of drones in all sectors in our economy, while threats DJI may face are coming from a side of regulation and legislation. For example, the U.S. and Canadian governments have issued the latest UAV Act, which restricts the range and area in which UAV can be used. At the same time, the drone industry is required to be standardized and legalized. Consumers need to obtain the corresponding license before they can use it. However, this decree is also regulation of the legalization of the drone industry. With the improvement of policies and laws, drones will enter consumers' homes more often.

Secondly, the differentiation strategy [5]. The companies' goods and services must have specialties and unique features to attract customers in the market. In DJI's case, the civilian aerial camera is the feature to attract customers because its products are the world's first aerial cameras for sales. It is inevitable for companies to carry out differentiated competition. Through differentiated market competition, companies can make reasonable prices according to the actual situation of market competition and occupy a favorable position in the competition [6]. The company should have a product policy, reasonable analysis of sales status, and service status to carry out effectively integrate various personalized products and services to meet the needs of consumers. Enterprises must carry out reasonable investigations in the process of product price adjustment to maximize their own value [7].

To carry out product research and development, and gradually make themselves in the industry in the field of the dominant position. The higher the degree of differentiation of enterprise products, the less affected by other enterprises in the industry, the fewer resistance enterprises will face in competition. Differentiated competition can ensure that enterprises have higher market performance, so as to effectively adjust the frontal conflicts between different market competitors and achieve better-integrated development [8].

3. RESULT and discussion

In the first stage (2006-2010), DJI had launched the helicopter control system: XP 2.0 in 2007. Based on that, in 2008, DJI built their first automatic electric unmanned helicopter: EH-1, and system: XP 3.1. When they built XP 3.1 ground station and ACE ONE came out in 2010, their sales went greatly high. Although at this time, DJI did not set up overseas company, their products were accepted by the customers and sold overseas. The successful sales strategy and well-performed products gave DJI opportunities to expand its business into foreign countries.

In the second stage (2011-2014), DJI had a lot of products faced to the world including the world's first All-in-one aerial camera: Phantom. In 2012, Phantom had led an aerial boom in the world, moreover, DJI had a good accumulation of international human resources. They introduced these products to the world and gained 4 times sales income than 2010. At this time, DJI had established a branch company in North America and moved even further to open overseas markets. When more customers were attracted by aerial and DJI's products were monopolizing the market, the company's market value in the global UAV market was rising rapidly.

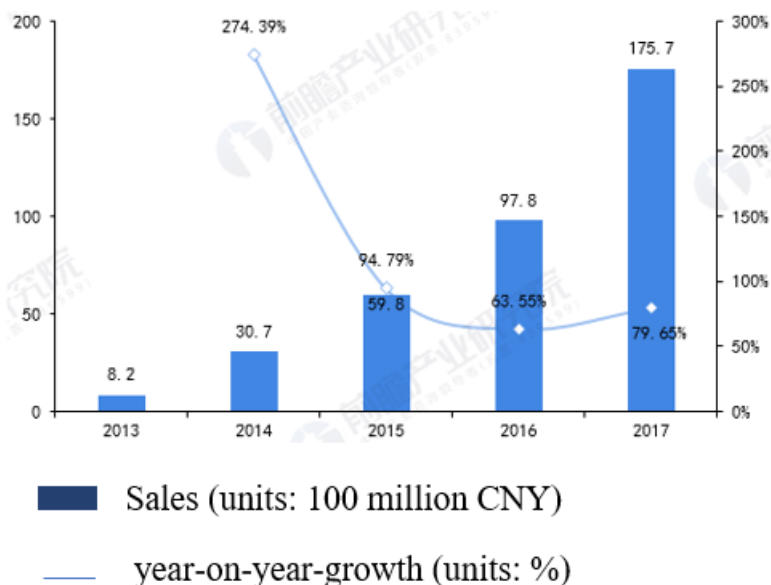


Figure 2. DJI's Sales and Growth Rate (2013-2017) [3]

In the third stage (2014-), DJI had basically monopolized overseas markets and received 75 million dollars investment from Accel in 2015. Then, DJI had released 8 new products including aerial camera

Phantom 4, Phantom 4 Pro, RONIN-MX, and new Freefly Movi. etc in November 2016. It accelerated DJI's product developing period and broaden the range of the products. The data had shown that DJI had 0.82 billion CNY revenue in 2013, but in 2017 the revenue was ascended to 17.57 billion CNY. The revenue had raised over 200 times in only 4 years. Nowadays, DJI still has new products released every year. Every new product released will attract millions of customers and make a huge splash in the UAV market.

Since 2012, DJI has completed 7 rounds of financing. Venture capitalists have invested hundreds of millions of dollars in drone companies to take advantage of the huge consumer drone market and the rapidly growing commercial drone market [9]. The newest financing has reached 1 billion U.S dollars. It is the highest financing in the UAV market.

3.1 Advantages

The first advantage is the super-high value with a competitive price. Before, UAVs are mostly used in professional areas such as the military. The cost of the product is relatively high, and the price is not comfortable for most consumers. But DJI goes for broadening the market, so the price of the UAV must reach the consumers' level of consumption. The price of Phantom 1 is less than 5000 CNY, the lower selling price help DJI's UAV to be the first choice to most of the UAV consumers and especially young consumers. Therefore, DJI's UAV makes formerly expensive UAV affordable to ordinary consumers. For different families and needs, DJI has launched six models: DJI Mini, DJI Air, DJI Phantom, DJI Mavic, DJI Inspire, and DJI Professionals. They cover children, photographers, military, geographic surveying, and other professional industries. The price ranges from 1500RMB to 100,000 yuan. Product division allows people with different needs to quickly find the products they are targeting.

The second advantage is that all parts and core technologies are independent research and development, which means DJI does not care about any other companies' technology blockade. Wang Tao, the CEO of DJI refuse Go Pro company to be the exclusive camera supplier of DJI's UAV in 2013. Even though this decision may lead DJI into pressure, however, DJI has kept their absolute control on their cost. It helps DJI to not restrict by others in the future development so that lost the company will not lose the competition.

The third advantage is that DJI keeps going. Although DJI has many high-value competitive products, it still not giving up the high-end market. Instead, building normal products accumulate much technical experience. It constantly developing new technologies leads them to have their own space in the high-end market. The UAV used by the U.S military are made by DJI, which is a recognition of their quality.

3.2 SWOT Analysis

3.2.1 Strengths

In risk management, DJI is currently leading the drone and platform industries globally. As they stated that their products are "redefining industries", DJI is the trending brand with the most drone sales in household market and helps people to reshape their ways to work. Apart from drone products, DJI's platforms are exerting more and more influence in both household markets and professional areas. One advantage is the lower price, which brought UAV's selling price down to a comfortable level for normal consumers. This helps them take over 76% of the market share globally until last year [10]. Another strength DJI is holding is its independence in product research and development. DJI is capable to develop all parts used in the UAV, hence, to prevent risks of technology blockade from other companies. For instance, Wang Tao, the CEO of DJI refuse Go Pro company to be the exclusive camera supplier of DJI's UAV in 2013. Which is proved that independence on development helps DJI to keep controls on the costs in the long run.

3.3 Weaknesses

The weakness of data security in DJI has been reported by researchers from cybersecurity firms Synacktiv and Grimm, though DJI claimed these reports are "hypothetic". The reports show that DJI's

Android-based App, which collects large amounts of user data, can be exposed to other parties. Another paper indicated that DJI is still exposed to GPS spoofing, jamming, and other vulnerabilities. Based on this evidence revealing data security problems, DJI could be targeted to scrutiny in data security [11].

3.4 Opportunities

Drones bring more efficiency to agriculture, hence are more widely used, and will see quite decent growth in the near future. So, it is not hard to forecast broader applications of drones in other fields, namely public safety, energy resource exploration, aerial surveying, and infrastructure maintenance. As the leading power in drone industry, DJI is accessible to these new opportunities within massive demands hence further expanding itself. In fact, DJI has launched its “Enterprise” products to match all these growing needs and is also reshaping ways to work in other industries. Apart from that, research and development on the technologies used in these fields can be a strong technique barrier to protect DJI’s leading status or be extended to benefit other fields quickly.

3.5 Threats

Most threats that could harm DJI will come from legislation. Regulating and licensing aircrafts is proposed by governments for safety reasons. Also, in terms of privacy, drone is one of the least regulated vehicles that combined abilities to get video and audio sources easily. One research mentioned the need for further regulation for drone use in the US, and how the national institution has recognized such problems [12]. This is a growing concern for DJI as it has been walking in front of the regulations where were blank in many countries. The potential incoming legislation may strike on enthusiasms from DJI’s customers and slow down the growth of the corporation. Apart from that, data security can be one weakness in the future that brings legal issues to DJI.

4. Conclusion

UAV technology is a type of high technology competition. DJI always puts technological innovation and product quality first. DJI’s technical research and development team is pursuing the ultimate in excellent product patent rights because patent protection technology innovation can separate the market [13]. For the high-tech enterprise DJI, in the development process, it focuses on both product innovation and public innovation. The differentiation strategy helps DJI to earn consumers’ loyalty. Therefore, even DJI may face other competitors’ substitutes threats, it would always stay in a better position than its rivals in the market.

Each company will face different degrees of differentiated competition, which is also an inevitable trend in the process of company development and plays a certain role in promoting the development and transformation of the company. Companies should compare the advantages and characteristics of products, clarify their differentiated value, and carry out value segmentation; Then, corporations should make reasonable market positioning, constantly improve their cost control ability, carry out active product innovation, pay attention to cultural construction and management, and better maintain the differentiated corporate image. The company should do a good job in risk prevention and control, carry out product management at all stages of product development, constantly improve the overall competitiveness of enterprises, help enterprises improve economic benefits, and achieve better development.

However, under a background of growing concern about privacy and data security, DJI, facing its flaws in products and operating systems, may receive more criticizes from society and pressure from regulators. We recommend DJI develop a self-check system and cooperate with third-party researchers, aiming to identify and fix possible leaks on its products. And to actively communicate with legislation institutions, to regulate air crafts more spontaneously.

For innovative technology company DJI, drones have gone down the road of becoming more popular, but they are still just professional tools and geek toys. How to make it a tool and a toy for the public is the key problem for DJI to solve. DJI has a long way to go to achieve national brand

recognition. In general, the brand strategy of DJI during its rapid development period was very successful. DJI has a firm philosophy of technological innovation and brand development, and at the same time, it has established a good brand image. Therefore, under the premise of clear goals, it also effectively guides the direction of brand communication. The most noteworthy is that DJI is committed to creating products that consumers around the world love. DJI deepens consumers' awareness of the brand and becomes the leading role in film implantation [14]. DJI UAV products continue to innovate and iterate to reduce the difficulty of product use and improve user experience. The Mavic series can be cleverly folded, such as the palm-sized Spark series, and the industrial protection and flying platform M200, the gimbal camera OSMO POCKET that can be put in the pocket. DJI has continuously innovated technology and product making DJI become the first Chinese brand to explore the global emerging UAV consumer goods field.

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