

ISBN 978-974-625-956-9

RMUTR & RICE International Conference 2022, pp. 249-263,

22-24 June 2022

© 2022 Rajamangala University of Technology Rattanakosin, Thailand

doi: 10.14457/RMUTR.res.2022.19

Received 25.04.22/ Revised 10.05.22/ Accepted 27.05.22

Analysis of Dajiang Innovation's (DJI's) Development Based on SWOT Model

Chaojing Zeng^{1,*}

Qi Yao²

¹ Master of Journalism and Communication, School of Literature and Journalism

² Network and New Media, School of Literature and Journalism

Chongqing Technology and Business University

*E-mail address: zzenchaojing@163.com

Corresponding author

Abstract

The civilian drone industry has developed rapidly since 2015, drones have gradually received more and more attention from the public. According to a report released by DRONEII in 2019, Dajiang Innovation, along with other six Chinese companies, were among the top 20 commercial drone manufacturers in the world. DJI, as the No. 1 drone company, now has become a leader in the global consumer drone industry through innovative ideas and high-quality and well-designed products. It also made 'made in China' win recognition from all over the world. This paper attempted to find out the crucial factors that contributed to DJI's rapid development and success. Then it provided some suggestions to small and medium enterprises (SMEs) and entrepreneurs in the early stage of entrepreneurship. Based on the SWOT model and life cycle theory, this study divided DJI's 16 years of development into three stages: initial start-up stage, stage of stable development, and breakthrough stage. At the initial start-up stage, DJI concentrated on product research and the development of consumer-grade drones, which helped the company find the proper market. In the second stage, because of the optimistic drone market prospect, more and more companies entered the market and the competition became fiercer. At a breakthrough stage, DJI has gone further in the field of product-based value-added services to expand the market, for example, DJI applies its product to agriculture, energy, public safety, etc. However, DJI officials didn't have a listing plan in the short term; as a result, the capital will be a challenge in the process of new product design. Finally, through the above analysis and conclusions, some advice will be provided for SMEs. It is suggested that DJI needs to identify the market. The SME needs to find out the target market and customers in the beginning. Second, SMEs should seize the opportunity, especially the official policy, like 'Made in China 2035'. Finally, developing core competencies is the key to success. For high-technology companies, research and development are critical that the company should always focus on.

Keywords: *Dajiang Innovation, SWOT Model, Small and Medium enterprises*

1. Introduction

At present, the economy in China is becoming more stable including that the growth rate is slowing down; the economic structure is optimized and upgraded continuously and the motivation is changing from factor-driven and investment-driven to innovation-driven. To promote China's better development, the state puts innovation in an important position. It has proposed "mass entrepreneurship and innovation", and later pointed out that "innovation is the first driving force for development and it provides strategic support for building a modern economic system", which greatly stimulates and inspires people to be creative. Many people tried to start their businesses, however, just a small number of companies will survive and fewer companies will be developed further.

Drones, as the product of high-tech in the information era, have great value to human beings, for example, they can replace human beings to complete dangerous operations high above the ground. With the development of technology related to drones, the manufacturing cost has been reduced, so drones have been widely used in various fields, including military, agriculture, electricity, geology, environmental monitoring, and the film industry. And the market is still expanding rapidly. Drones are easy to buy with real-name registration but there are many limitations to the place they can appear. Drones that are available in the market are mainly for entertainment, especially for taking pictures and videos. The drones that are used in the military are monopolized by the government, and drone companies usually focus on other fields complying with the national security act. Chinese companies play an active role in the drone industry. According to a report released by DRONEII in 2019, Dajiang Innovation, along with other six Chinese companies, were among the top 20 commercial drone manufacturers in the world. DJI, as the No. 1 drone company, now has become a leader in the global consumer drone industry through innovative ideas and high-quality and well-designed products. Many factors contributed to the success of these extraordinary companies, especially DJI.

Founded in 2006, DJI, as the leader in the global consumer-grade drone industry now, is a typical successful case from scratch with its well-designed and high-quality products, and innovative ideas in the past 16 years. The number of staff has also increased from a dozen to more than 12,000 coming from different countries and operating multinational businesses. DJI's high-quality products changed the bad image of "made in China", and show a good image to the world.

Regarded DJI Company as a typical successful enterprise in high technology, this paper hopes to analyze its growth, figure out the crucial factors that contributed to DJI's rapid development, and provide some advice to SMEs.

This article will use the SWOT model and case analysis method to analyze why DJI can be successful. It will be divided into five chapters. The first one outlines the background and drone industry's development in China. The second chapter provides some information about DJI. The third chapter will give a brief introduction to the SWOT model and stage division. Then SWOT and DJI will be combined to analyze three stages, and suggestions for future development will be estimated. The fourth part is to provide some advice for SMEs which will be useful to promote their development. And finally, there is a conclusion about the whole paper, and the improvement needs to pay attention.

2. An Overview of DJI

In this Chapter, some detailed information about DJI will be given, including the profile, and the development.

2.1 General Profile

Shenzhen DJI-Innovation (DJI), established in 2006 by Wang Tao, is a leading developer and manufacturer of drone control systems and drones in the world. The market scope covers more than 100 countries and regions around the world. Flight control technology and graphic transmission technology, as drones' core technologies, are far ahead. In DJI, the continuous development of the R&D team, technology and technical product innovation provides strong support for both domestic and foreign markets. DJI focuses on the drone industry, trying to provide industrial users and professional aerial photographers with products of good performance and high quality to reshape people's life and enjoy the convenience brought by technology.

2.2 The Development of DJ

There are four parts in this section that will describe DJI's performance, including history, sales revenue, products, and market share.

2.2.1 History

In 2006, Wang Tao founded DJI with two of his classmates and they moved it to Shenzhen soon. At first, they developed the helicopter flight control system and sold it to other companies.

In 2008, the first relatively perfect helicopter flight control system XP3.1 developed by DJI was successfully launched. This system enables the micro helicopter to achieve autonomous standby flight in an unmanned situation. Subsequently, DJI successively launched a variety of aircraft control systems like "ACEONE".

In 2012, DJI launched a mini-integrated machine named "PHATOM" with a flight control system, four-rotor body, and remote control.

In 2013, the camera that can be used to take pictures and videos when the drone is flying was firstly launched in the world. And PHANTOM 2 VISION, regarded as the best seller, led global aerial photography to a boom.

In 2014, DJI launched the world's first transformable aerial camera INSPIRE 1 with a 4 K camera and LIGHTBIDGE, a full HD digital image transmission system. And it developed the three-axis handheld PTZ system, named RONIN SDK.

In 2015, the US famous business magazine "Fast Company" selected the top ten consumer electronics innovation companies in 2015. DJI was the only Chinese company, ranking behind Google and Tesla. And in December 2015, MG- 1, an agricultural plant protection machine was officially launched, which means that DJI

officially entered the field of agricultural drones (Official website of DJI, 2022).

On November 8, 2017, based on the great influence it brought, DJI was selected to the China business case top 30.

Although DJI has been one of the leaders in the drone market, it hasn't stopped moving forward. Instead, it still focuses on product innovation across industries from 2018 to 2022, launching many practical and excellent products, like DJI Pocket, DJI Mini, DJI Mavic, DJI Action, DJI OM series.

2.2.2 Sales Revenue

DJI developed rapidly in the drone industry. In 2013, DJI's sales revenue was only 820 million RMB, and its sales in 2014 reached a four-fold increase, reaching 3.07 billion RMB. From 2015 to 2017, the sales of DJI were 5.98 billion RMB, 9.78 billion RMB, and 17.57 billion RMB respectively, and the growth rate was maintained at more than 60 percent. (Official website of DJI, 2022)

As seen in Figure.1, in 2020, DJI's sales revenue reached a higher level of 26 billion RMB. According to the prediction of the board of directors, DJI's revenue will reach 170 billion RMB by 2022.

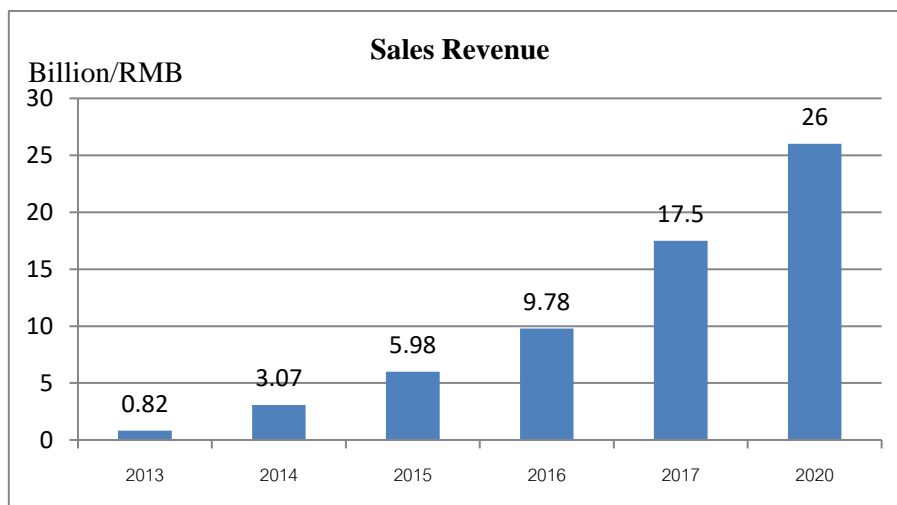


Figure.1 DJI's Sales Revenue from 2013 to 2020

DJI's achievement is obvious all over the world. At present, there are still many competitors in the civil drone industry, but DJI is the leader, others are far behind. When it comes to drones, many people will say DJI.

2.2.3 Product

The drones in DJI are mainly consumer-grade and industrial-grade. DJI is a giant in the field of consumer drones. In 2017, the DJI consumer-grade drones' operating income reached 14.93 billion RMB, accounting for 85% of the whole; DJI's industrial

drones achieved 2.64 billion RMB, accounting for 15 %. (Qianzhan Research Institution, 2018)

Because DJI doesn't confine its products to traditional aerial photography, now it has various product lines through constantly exploring. The management concentrates on improving the practicability of products and then applying drones to public safety, electricity, surveying and mapping, agriculture, and even epidemic prevention and control, which has virtually improved DJI's reputation.

2.2.4 Market Share

According to a report about the drone industry status and development trend released by the Forward Inc. in 2020, DJI has a clear competitive advantage in the domestic and foreign markets with its representative technical strength.

The products of DJI account for 80% of the total global market, and its market share is up to 70% in the domestic market.

In terms of market size and growth rate, DJI's continuous efforts in products have led to the continuous expansion of the market size. As seen in the Figure 2 from 2015 to 2020, the market size of DJI drones has soared from 2.29 billion RMB to 20.73 billion RMB and the growth rate has always remained above 50%. (Qianzhan Research Institution, 2021)

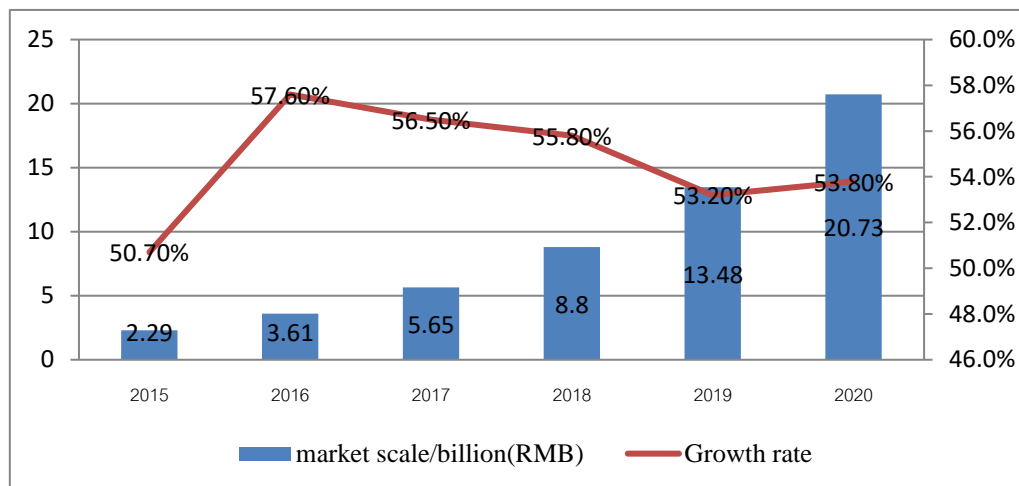


Figure.2 DJI's market size and growth rate from 2015 to 2020

3. SWOT Analysis on Developments of DJI

In this part, the SWOT model will be combined with three stages to find out DJI's advantages and disadvantages. Then results and suggestions for the future will be given.

3.1 Introduction to SWOT Model

SWOT Analysis is the integration of industry and value structure proposed by

Professor Kerry of the San Francisco University in the early 1980s. It is a structured planning method used to evaluate the strengths, weaknesses, opportunities, and threats of enterprises. SWOT helps enterprises understand the internal and external factors clearly. It is an effective tool for enterprises to carry out strategic planning (G. Houben, K. Lenie & K Vanhoof, 1999)

Each letter in the SWOT has a different meaning. S stands for strength, which means one company has more or better resources than competitors, mainly including leadership, talents, corporate culture, the ability to innovate, and technology. W indicates the weakness, such as lack of competitive technology, talent loss, and excessive idle resources. O represents opportunity, that is, all external factors that contribute to the development of the enterprise, like political environment at home and abroad, mergers and acquisitions of enterprises. T indicates threats and external factors that hinder the development of the enterprise, such as market competition, market saturation, demand, and improvement of competitors' competitiveness.

3.2 Division of Three Stages

Enterprise life cycle theory holds that companies have the same process as human beings from birth to death, from prosperity to recession (Bell, J. 1995). At different stages of the cycle, companies have different characteristics and face different problems, requiring different methods and strategies to solve problems (Miller, D. & Toulouse, J. M. 1986: 1389).

According to the enterprise life cycle theory, the division of the DJI's growth stages is as follows: (1) the initial stage is when the company is in a situation of market exploration. It is still unknown and the types of products and sales are relatively small. From its establishment in 2006 to 2010, DJI mainly focused on remote control helicopter control systems, and continuously developed new products. It mainly used domestic and foreign forums as sales channels. At this time, the most important goal of the company was to survive. Combined with the above characteristics, 2006-2010 will be divided into the initial stage. (2) The development stage is mainly characterized by obvious product features, sales volume and market expansion, and steady development trends. From 2010 to 2014, the famous product PHANTOM was a great success in the international market. What's more, DJI established the North American market as a branch, showing steady development. (3) The mature and breakthrough stage refers to the stage of trying to find a breakthrough in the market. Despite the large market share of DJI's products in the global market, the consumer drone market was saturated due to the continuous participation of other drone companies. Faced with the saturated market, DJI, on one hand, continued to improve its original consumer-grade drones; on the other hand, DJI launched agricultural plant protection machines, marking the entry of industrial-grade drones, which will be benefit to keep its place. In a word, DJI entered the breakthrough stage since 2015.

3.3 Analysis of Different Stages Based on SWOT Model

According to life circle theory, DJI's history has been divided into three parts. What are the advantages and disadvantages of these stages?

3.3.1 Initial Start-up Stage

(1) Strength

Entrepreneurship: Wang Tao, the founder of DJI, is full of passion for aircraft and dreams of starting a business (Xia Guanxiang, 2021). He was very interested in aircraft from a young age. When he was a postgraduate student, he started his entrepreneurial journey with the goal of “Let the model be able to hover freely”. It was his passion that made the great DJI.

Emphasis on technology: Selling products is very important for a new company to get into the market and make money. However, in the first two years, DJI didn't launch its product, because Wang Tao with his workmates, pursuing perfection, concentrated on technology research and development, preparing for a perfect system. Finally, the mature helicopter control system XP3.1 was released, at the end of 2008.

Patent: DJI's patent competition strategy in the early stage focused on the basic core technology and the control system of the drone (Cheng Dan, 2018). In terms of patent layout, DJI regarded the control system and the related technology of the drones' cradle as the key in the early stage. It tried to solve the aerial photography problem based on solving the flight control and the drones' cradle. This strategy helped DJI to apply limited money and resources to technology development in more critical areas. In this way, DJI saved energy to support the operation and development.

(2) Weakness

There was a little investment in advertising. And DJI didn't establish a relationship with customers, so there was no stable customer base, and there was no efficient data collection method. The limited resources made DJI develop slowly. (Chen Dandan, 2017).

At this stage, DJI sold flight control systems only. There were some substitute products, so customers can betray DJI easily and use others. This resulted in low customer loyalty and an unstable customer base.

At the beginning of its establishment, the company lacked a vision, so a lot of initial entrepreneurs were lost, causing the talents loss and slow development (Huang Hua, 2020).

(3) Opportunity

Target market: DJI focused on consumer drones. This market was almost blank in China. Even if there were drones, they belonged to the rich at an extremely high price. DJI tried to make affordable drones and the market potential was great.

Policy and geographical location: The initial registration was in Hong Kong. The biggest advantage is the tax incentive, which is the lower tax rate, simple tax system, high tax exemption, and no capital gains tax. After the company moved to Shenzhen, this had great meaning to DJI. Because DJI targeted the consumer-grade drone market, in other words, DJI tried to make more people have an opportunity to enjoy the joy of drones, the most important way was to reduce costs and achieve cost advantages. Shenzhen seemed to be a natural manufacturing city. It can easily form industrial clusters, which will reduce time and money. In addition, labor costs are relatively low, which helps enterprises to carry out large-scale production.

(4) Threat

Capital: Because the company was unknown during the start-up period, the channels and volume of raising money are limited.

Demands: In the initial stage, domestic consumers have very little understanding of drones, and even they didn't realize what a drone can do, so domestic demand was small and DJI started its business abroad.

Resources: At that time, a small number of companies and individuals developed drones as hobbies, which means the drone industry was blank and lacked talents and resources (Wang Qingyu, 2016).

3.3.2 Stage of Stable Development

(1) Strength

Technology: The vice president of DJI said: "If you want to analyze the reasons for the success of DJI, the most important one is that he always keeps a sincere and cautious attitude toward the product." The products were constantly improving at this stage, and the development in software and hardware made the independent part to be a kit. There were some outstanding products. For example, the SDK. It was software that consumers can combine with other technologies to meet their different needs. In terms of hardware, they launched the products named M100 and Guidance, which were flexible flight platforms and visual sensing navigation systems. Before the camera drone named PHANTOM 1, the vibration of the aerial camera system of the aircraft directly caused the bad quality of the video, even after the adjustment by the post-stabilization software; it was still difficult to obtain smooth images. After two years of research, the product "Zenmuse" was successfully developed which provided better stabilization. It has brought a revolution in the field of drone aerial photography. In a word, DJI relies on the high-quality experience of its products to win the recognition of users at home and abroad.

Products: Like the initial start-up stage, Wang Tao has always focused on technology research and development. Besides, the product is continuously upgraded, based on the user's experience feedback (Zhou Yingfen, 2017). The reputation has formed because of technology development, cost reduction, and user experience optimization.

Operation: DJI organized online and offline activities trying to be closer to customers. At the end of 2014, "DJI Forum" was launched, providing a platform for aviation enthusiasts and drone application developers to communicate around the world. The most notable one is the "Skypixel", which is a platform for aviation enthusiasts to display and communicate with their works. In the process of mutual communication, the drones' potential in the aerial photography is continuously explored and promoted, forming a major driving force for the promotion of products and related value-added services. Users had a deep discussion of DJI's product and services in the active communities. During this process, a community identity and emotional connection between customers and DJI has been built. As a result, the loyalty of old users were gradually increasing, the demand for value-added services was also increasing, and new users continued to join, which also increased the sales revenue.

Patent: During the development period, DJI paid attention to the accumulation of peripheral technology. Between 2010 and 2014, the number of the patent in DJI increased significantly, from 2 to 151, indicating that DJI started to adopt an offensive patent competition strategy (Wang Mansi, 2018). In this period, DJI chose to obtain patent rights through a large number of research and development patents, and then applied these to new products, so it quickly got a large market share and obtained a monopoly position in the consumer drone market. In the development period, the focus of the enterprise competition strategy is to give full play to the company's advantageous resources to increase the patent research and development rate and obtain research and development advantages.

(2) Weakness

Advertisement investment and market strategy were not enough. Besides, the conflict with the former head of North America led to the loss of a large number of North American employees, who joined 3D Robotics. And then the competitor developed similar products.

(3) Opportunity

The opening of markets around the world: At first, the DJI's target market was consumer-grade. (Zhang Fuyin, 2017). It aimed at the US market initially, because American consumers have natural preferences for the new practical product. After they solved the vibration problem of the aerial camera system, they found there were opportunities in US film and television manufacturing. Because there were also a lot of aerial photography needed in the US drama, in addition to the scenery in the studio. However, artificial aerial photography needed the helicopters, pilots and photographers, all these salaries needed were more than 60,000 RMB a day. Using drone aerial photography can not only get good-quality images but also save costs greatly. After drone aerial photography was put into use, it gained many good reputations. And then the "Avengers", "Modern Family" and "Homeland Security" experienced the product. Many Hollywood stars mentioned DJI's products in relevant reports. DJI's reputation has spread, and sales have gradually increased. The way that opened the domestic market was the same. The entertainment events like, Wang Feng used the DJI's drone to propose, have played an active role in publicizing. DJI became popular all over the world immediately.

(4) Threat

Market: The market prospects of drones are becoming more and more optimistic, so followers are increasing. Competitors include 3D Robotics, co-founded by Colin Quinn former North American governor of DJI, Chris Anderson, former editor of "WEIRD" magazine, and Parrot, a French drone manufacturer.

Partner Relationship: DJI should have been a complementary partnership with Gopro, a camera supplier. However, they argued with each other. Finally, the cooperation relationship was broken and Gopro started to enter the drone industry, becoming one competitor.

Policy: While the markets around the world are open, the policies have not been completed and it is still in the exploratory stage. However, the state's regulation of the

low-altitude area is a problem that must be considered in the past and the future (Shang Tiantian, Miao Xiaoming, Liu Hanlong, Xin Xiaohua, 2021).

3.3.3 Breakthrough Stage

From 2015 to now: After a long period of technical R&D, DJI gradually found some opportunities which were worthy of deep exploration.

(1) Strength

Entrepreneurship: Constant reflection and the corporate culture of focusing on technology have played an important role. Wang Tao developed a nice reward mechanism to motivate staff. Employees' welfare was very good, for example, the Mercedes-Benz and other luxury cars were handed out to technical R&D personnel.

Products: In 2015, based on the accumulation of previous technology and application data, DJI established the Industry Application Department, focusing on value-added service innovation. At present, professional solutions with their characteristics have been launched in the fields of agriculture, energy, public safety, cultural creativity, and infrastructure. One product, named MG- 1, a drone used to solve the problem of pesticide spraying has made great success. It can intelligently and personally solve the problem of pesticide spraying in different agricultural environments, and greatly reduce the harm of artificial spraying on workers' health, and the cost of agricultural spraying. After it came to the market, more than 1,000 units were sold in less than five months.

In the original series of product lines, DJI continues to upgrade and optimize products to improve product performance and allow users to obtain a better experience. At the same time, DJI continues to make innovative attempts and carry out multi-field exploration, such as professional-grade movie machines.

Market expansion: As Wang Tao, said: "The consumer-grade drone market is a niche market, and it will never be a market with a large number of users." As the number of users will eventually reach a limit, DJI has gone further in the field of product-based value-added services now. The professional solutions in the agricultural and film industry are eye-catching, especially in professional film and television cameras. Due to the data accumulation over the years, DJI has been able to monopoly in certain segments and provide customers with a personalized, high-quality, and intelligent service experience. In addition, DJI established long-term strategic partnerships with industry giants in these fields to provide them with long-term technical support.

Patent strategy: During this period, the core patents and related peripheral technologies of the enterprise have been perfected, and the enterprise market foundation has been relatively solid (Wang Mansi, Zhou Xiang, Zhang Yanping, 2018). In the high-end consumer-grade drone field, the technical fortress has gradually formed. Since 2015, the patent application rate has decreased compared with previous years. At this stage, DJI chose a combined technology strategy. The combined patent strategy is highly flexible and can help companies select the right competitive strategy in a complex and volatile environment.

In the mature stage of technology, the patent technology strength has become more complete, focusing on the maintenance of patents and markets, and also coping with

the ever-changing technological and economic environment. Therefore, the combined strategy had a focus on patent R&D and market development based on the combination of core technology strategies, enabling companies to make progress based on current industry leaders. According to Qianzhan Research Institution, DJI ranked first with 2.11% in the list of Chinese domestic drone-related patents until August 18, 2020.

(2) Weakness

Capital: Wang Tao insisted that he would not take large-scale financing actions for the time being. DJI officials said that there may be no listing plan in the short term (in the five years), however, a proposal of a new product will challenge the capital chain.

(3) Opportunity

The market prospect is broad. Although the consumer drone market has shown a saturated state, there are still some blanks in the primary industry and secondary industries. If some additional functions are added, such as the Internet, it will be a groundbreaking design.

Consumers: After the gradual formation of buying habits, DJI's products have established a wide user base in certain segments, but it is unlikely to continue to expand the user base. Therefore, users are highly sticky and the loss rate is low.

Technology: With the continuous development of big data and intelligence technology, DJI can provide users with intelligent service module integration, to realize personalized service, just like a smart housekeeper provides considerate and high-quality services, allowing users to rely on.

Policy: On May 8, 2015, the drones in the "China Manufacturing 2025" signed by Premier Li Keqiang were listed as development areas. And the Chinese government has made it clear that it will continue to support the development of high-tech industries in "Made in China 2035".

(4) Threat

Policy support and optimistic market prospects in the drone industry make the competition increasingly fierce. DJI has been imitated by more and more companies, especially by ZEROTECH. 3D Robotics, the biggest competitor in the North American market, has taken the same approach in marketing as DJI did when it expanded the market. And it focused more on localization, which poses a threat to DJI.

3.4 SWOT Analysis Results

The success of DJI is the result of a combination of internal and external factors according to the above analysis. First of all, the blank of the drone market in the early and mid-term provides sufficient space for DJI to survive and develop. In the breakthrough stage, the drone market is saturated due to its small capacity, but at the same time, new market opportunities have emerged, such as the logistics industry, agriculture, and aerial photography. Secondly, DJI can seize opportunities and succeed in a broad market; this is mainly because of the right analysis of the market by senior management, especially its CEO, Wang Tao. The development strategy planning also plays an important role. Then, from the beginning to now, DJI always remembers that the core competitiveness of high-tech products lies in advanced technology. Senior

Management firmly holds this idea and has spent a large number of resources on R&D. With high-quality products and excellent word of mouth, the market has gradually opened. It has been in a position that cannot be shaken in the field of drones. Nowadays, with the release and implementation of the related policy, the development of DJI will be even more powerful.

3.5 Estimates and Suggestions for Future Development

Technology: There is still a lot of space to improve the core technology. Flight control technology and power system are the crucial parts of drones, which is also the key to occupying the market. The emergence of various related technologies has greatly reduced the development cost of drones and reduced the restrictions of the industry. In the future, DJI will continue to focus on product research and development to continue to maintain its position as a leader.

Products: Products tend to be intelligent. The rapid development of high technology makes modularization, generalization and serialization possible. In the future, drones will develop in a multi-functional, modular, long-time, miniaturized, intelligent, and fully invisible direction.

Application Field: Demand drives the development of the drone industry. Demand drives supply and drone development, and the market scale is gradually expanding to other industries. From the research and development of MG- 1, it can be seen that DJI is not satisfied with the status quo. Drones can be taken into use in many areas with large demand, such as network connection, logistics and distribution, agriculture and forestry plant protection, intelligent aerial photography, etc. Automatic home monitoring, drones + VR; drones + short-distance logistics and so on will be important areas for the development, and DJI will gradually expand its market in these areas in the future.

Competition: The competition in the drone industry is mostly homogenized. There are a large number of Shanzhai drone manufacturers that do not have core technology. These companies without R&D and just rely on the copy are difficult to survive, and finally, they will be abandoned by customers. However, DJI, which has the core technology and innovative capabilities, has a strong ability to survive the fierce competition.

4. Inspirations to SMEs' Development in China

4.1 Identify the market

SMEs often face a dilemma before starting their businesses, that is, the mainstream market has been occupied by big companies. However, no matter how big a company is, there will be niche markets that he cannot cover. This requires SMEs to recognize market differences, seize market opportunities, give full play to their flexibility, and make accurate judgments and quick responses to the market. Then they should combine their advantages to seize market opportunities.

4.2 Size the opportunities

In addition to the internal efforts of small and medium-sized companies, it is also

very important to seize external opportunities throughout the development process. In the early days of its establishment, DJI moved its headquarters to Shenzhen, taking advantage of the government's preferential tax policies, reducing the burden, then investing more funds in research and development. The Chinese government encourages young people to start their own businesses and to be innovative. The consideration for small and medium-sized enterprises shows in various aspects, such as support for the entity economy and the manufacturing industry in "Made in China 2035". All the benefits can be get by SMEs to reduce the burden, thus promoting development. This requires small and medium-sized companies to be familiar with the country's policies and guidelines, and keep abreast of the arrangements of relevant departments.

4.3 Core Competencies

Core competence is the advantage for the company's sustainable competition and the key to the company's survival and development (Wang Kai, Sun Miao and Shen Deyu, 2016). Every company that can survive in the market has certain competitiveness, but it maybe does not have core competencies. The cultivation of core competencies requires enterprises to concentrate a variety of resources on a specific point and conduct in-depth research to achieve the advantages that other enterprises cannot catch up with. Core competencies are found in the niche market. The establishment of a core competence equals to the company's re-establish, which means the enterprise will obtain further development with this advantage.

5. Conclusion and Future Research

5.1 Conclusion

This paper combines the SWOT model with DJI, and finds out and summarizes the crucial factors that contributed to DJI's success. First, a blank but potential market provides a foothold for DJI to survive and DJI changed its market with time. It aimed at consumer-grade drones at the beginning. However, when the consumer-grade drone market became saturated, it expanded the market to the agricultural field. Second, in the whole process, DJI always focused on research and development to hold the core technology of drones in its hand. This is mainly because the senior management attached great importance to technology innovation and according to the different patent strategies adopted, DJI's senior management had a clear strategic plan and understanding of the direction of the company's development. Finally, the spirit of pursuing high-quality products is very important on the way to success. In the first two years of establishment, DJI concentrated to develop a relatively perfect control system which showed that it had a serious attitude toward the products and was responsible for the products. Finally, DJI's success proves that energy and money pay off. Based on

DJI's development, this paper provides some suggestions for SMEs. The first one is that SMEs, especially the senior management, should have the insight to discover customers' needs and satisfy them. Although so many big companies' business has already covered many aspects, there still exist some niche markets. The SME needs to find out the target market and customers in the beginning. Second, SMEs should seize the opportunity, especially the official policy, like 'Made in China 2035'. Finally, developing core competencies is the key to success. For high-technology companies, research and development is critical that the company should always focus on.

There are many limitations to this study. First of all, DJI belongs to the high-technology industry, so a lot of information is confidential and is not supposed to let externals know. Besides, there are just 13 years from its establishment to now, the time for a company is short and the related research is not rich. In China, many researchs focus on the products only, and a few tries to analyze DJI's development, while in foreign countries, because of the limited resources and capabilities. Several articles talking about Wang Tao and DJI's products. Many data are collected from the network, so the data may not be very comprehensive and representative. In addition, DJI is a company that heavily relies on technology and innovation. However, every industry has its features and differences which means this paper mainly talked about high-tech SMEs but did not discuss those in other fields. The application field is just limited to some high-tech companies. And companies should make development plans based on the different and specific situations. The SWOT model is clear and straight to analyze a company's development. However, it regards that every company is not dynamic which will cause some results which are not accurate. Finally, this paper just uses only one specific case to get the above results and suggestions for SMEs development, the depth is not enough.

6. References

- Bell, J. (1995). The Internationalization of Small Computer Software Firms —A Further Challenge to 'Stage' Theories, Britain: *European Journal of Marketing*, 299(8): 7-27.
- Chen, D, D(2017). Based on the development strategy analysis of Shenzhen DJI Innovation Technology Company, *The Financial Times*, (26),107+113.
- Chen, D, Zhou, Y, T(2018). Study on the competitiveness of DJI's patent strategy change, *Technology Trend*, (16),7-9.
- G. Houben, K. Lenie, K. Vanhoof,(1999). A knowledge-based SWOT- analysis as an instrument for strategic planning in small and medium sized enterprises, Netherlands: *Decision Support System*, (26): 125- 135.
- Huang, H, (2020), Management breakthrough of high-tech manufacturing enterprises -- A study on organizational and technological innovation based on typical cases, *Henan Social Sciences*, (05),56-63.

- Miller, D. & Toulouse, J. M. (1986). Chief Executive Personality and Corporate Strategy and Structure in Small Firms, *New York: Management Science*, 32(11): 1389- 1409.
- Official Website of DJI <https://www.dji.com/cn/products/consumer>
- Qianzhan Research Institution <https://bg.qianzhan.com/>
- Qianzhan Research Institution (2018). 2018 UAV Industry Status and Development Trend Report, Qianzhan Research Institution, 5-8.
- Shang, T, T, Miao, X, M, Liu, H, L, Xin, X, H. (2021). Research on Disruptive Innovation Process Mechanism under Resource Constraints, *Forum on Science and Technology in China*, (01),35-43+54.
- Wang, S, M, Zhou, X, Zhang, Y, P. (2018). From product orientation to service Orientation: The strategic renewal of traditional manufacturing enterprises -- Based on the case study of DJI, *China Soft Science*, (11),107-121.
- Wang, Q. Y(2016). A preliminary study on the development of Domestic UAV technology based on patent analysis -- a case study of Shenzhen DJI, *New West*, (14),57+41.
- Xia, G, X(2021), The growth of "Chinese UAV" -- A case stu.y of DJI, *Modern Radar*, (08),101-102.
- Zhou, Y, F, Xu, M. (2017). Enlightenment from the breakthrough innovation of DJI drones, *China Strategic Emerging Industry*, (40),42-43.
- Zhang, F, Y, Mo, Y(2017). Research on the brand communication strategy in the DJI's development, *Journal of Brand Research*, (05),64-70+63.