

A Case Study on the "Sinicization" of Business Development of Medical Enterprises – Medtronic

Wanrui Yao^{1, *}

¹Business Management, Missouri State University, Missouri State, 07081, USA

*Corresponding author: yao22785@live.missouristate.edu

Abstract. Although in recent years, people think that the health care industry development has a great prospect, but with the development of the outbreak, and more and more enterprises start to the discovery of this huge medical demand in China, the Chinese medical market has great just need not be met, the Chinese medical market will be in the future will not only become the world's largest medical device market, and it will certainly become one of the most important sources of innovation for medical devices worldwide. More and more foreign medical companies want to enter the Chinese market. However, there are many obstacles in the process of realizing localization, and the transformation of many companies has not achieved significant effects, and the performance of the Chinese market has declined rather than increased. This article will be the world medical industry giant - Medtronic medical company as a case study, analysis of the current situation, put forward some suitable for China's national conditions of the medical development road, in order to seize more market share, to achieve economic value increase.

Keywords: Medtronic Corporation; Medical company; Medical economic benefits.

1. Introduction

As the world's population ages and chronic diseases increased, the healthcare sector presents great opportunities. However, it also puts competitive pressure on different healthcare companies, different healthcare systems, healthcare. Insurance companies and hospitals are competing to offer cooperative medical products. In some developed countries, such as the United States, the share of health care in GDP continues to rise. In some developing countries, medical companies are hampered by the different needs of governments, societies and patients. Because of the global outbreak of COVID-19. The medical industry has been forced to cut costs to maintain profits, so many companies lack technology research and development because new machines are expensive to make and highly skilled. COVID-19 has become a serious new infectious disease, and has spread to at least 124 countries and regions. The disease has the potential to overwhelm the health care infrastructure, placing special and ongoing demands on public health systems. Medical companies want to use integrated resources to build a set of services together. However, on the way to realize the localization of each country, they will find problems such as resource mismatch and resource integration. With the development of medical informatization, there is a crisis of trust between patients and doctors, and hospitals in many places are forced to modify service prices, which also hit the original medical product suppliers.

Through previous research, I found that there is no literature that completely describes the problems encountered by a medical enterprise in the development of globalization in China and puts forward some solutions. Originally, more articles tended to focus on the technological innovation of medical companies, the development under the epidemic, the change of personnel structure, and the promotion for the Chinese market. You don't put these things together. There are also some medical companies in recent years to pay attention to the Chinese market and put forward some attempts also have some differences. However, since medical companies have not continuously studied the Chinese market in a short period of time, it is difficult to give specific suggestions on the development path of a certain enterprise in China. This led to the gap.

This paper takes Medtronic, a world medical giant, as a case study. By analyzing the company's long-term development history, corporate culture, and current situation under the epidemic, this paper diagnoses some problems encountered after entering the Chinese market from the perspective of

supply chain, and puts forward some suggestions. Although just one medical company does not represent all companies, Medtronic has a relatively complete enterprise sector structure, strong investment sources, and can represent certain characteristics of the medical industry.

2. Medtronic's background and prospects in the Chinese market

2.1 The founding and development of Medtronic

In 1949, Earl Bakken and His Brother-in-Law, Palmer Hermundslie, Founded Medtronic in Minneapolis, Minnesota. It started as a small medical equipment repair shop. In 1958 Medtronic had a breakthrough invention, making the world's first commercially produced implantable pacemaker [1]. With a growing global presence, the company will be headquartered in Minneapolis, Minnesota, USA, and is dedicated to providing lifelong healthcare solutions to patients with chronic diseases worldwide. Today, the company is present in more than 150 countries and became the world's largest medical device company in 2015. The global medical machinery market is growing at an annual rate of about 5%, and it is estimated that it will reach a market size of \$800 billion within five years. There are a lot of diseases around the world, such as heart disease, cancer, lung disease, stroke. This lifestyle disease is particularly common in India and China. In 2016, Medtronic surpassed Johnson & Johnson Healthcare for the first time to become the world's No. 1 medical device company with revenue of \$28.8 billion. Since 2022, Medtronic has maintained its position as the world's largest medical technology company with sales of nearly \$40 billion [2]. The average CAGR from 2015 to 2022 was 4.7%, far exceeding the estimated growth rate of the medical technology market. This led to a rumor that every five seconds, a patient in the world is cured by a Medtronic product. According to a survey by Business Week, Medtronic is the 54th largest company in the world in terms of stock market capitalization. In recent years, Medtronic has been listed as one of the 40 most innovative companies in the world by developing and implementing dynamic insulin pumps, Parkinson's treatment devices, and providing treatment solutions for many chronic diseases. But now that governments around the world are demanding lower costs, the industry is facing downward pressure on prices. Research data show that at present, all major hospitals, especially developed areas, are using intelligent systems. Artificial intelligence systems are improving the efficiency of hospital nursing and management activities, and are actively welcomed by healthcare providers [3].

2.2 Analyze the current medical industry and the position of the Chinese market in the global medical market

Medtronic is well aware of the high cost of medical care, despite the seemingly rosy outlook for the medical device industry. Hospitals in the medical system hope to reduce the expenditure on medical devices and achieve better treatment results. Coupled with the participation of new forces, the future pattern of the industry is likely to change. Therefore, in order to maintain their own status, they must maintain the leading equipment and solve medical problems. Its business model integrates smart technology into products and services, thereby actively strengthening the connection with customers, patients and consumers. Enterprises urgently need to get rid of the role of traditional manufacturers, smart data, service and product combination, to provide consumers with overall solutions. While introducing the business-to-consumer model, it is also necessary to consolidate the business-to-business model and reach strategic alliances and cooperation. Bring down health care costs by increasing new revenue streams and lowering fees. China's healthcare sector is expected to spend \$1 trillion in 2020, up from \$300 billion in 2011. China is clearly one of the most attractive markets in the world for both pharmaceuticals and medical products [4]. In China, e-health and telemedicine in the medical industry, there are high hopes to resolve the conflict between limited medical resources and patients. However, with the promotion of reform, the company's organizational culture in China has not been unified, and the employee turnover rate has increased. As an important region in the global development of Medtronic, China must have a unified organizational culture and attract high-tech talents, so as to optimize the system structure and achieve business growth.

3. Diagnose Medtronic's "Sinicization" problems

3.1 Medtronic's transformation path has had some problems in China

Medtronic has been doing business in China since 1989 and opened a factory in 1996. However, China accounts for only about 1% of the company's sales, which is grossly out of kilter with the size of China's healthcare industry in the world. Currently, Medtronic's transformation path has some problems in China. First, there is no strong combining force between the leadership and the middle management of the company. The middle management does not understand the significance of enterprise innovation, which does not play the role of connecting the preceding and the following. There is not a close combination of corporate culture and contemporary human resources, there are a lot of formalism, empty slogans, but not implemented. In this corporate culture change, the company set up a leadership training camp for the core leadership team to strengthen the leadership role of internal managers and ensure that the management can clearly communicate the company's direction and follow-up actions to employees. Medtronic, in particular, is in urgent need of a new understanding of the corporate culture as a whole in order to adapt to the epidemic environment and adjust to the changes in business policies in China. For example, when many multinational companies come to China for localization reform, they will abandon some common global practices and replace them with practices with Chinese characteristics. Medtronic will also need to localize if it is to reverse China's share of global sales. Bill George has instilled an innovative learning culture in Medtronic that has produced amazing achievements [5].

3.2 Medtronic's transformation path has had some problems in China

Medtronic fell into a serious crisis of trust in China and was punished by Chinese regulators. The anti-monopoly penalty imposed on Medtronic by China's National Development and Reform Commission exceeded 100 million yuan. It is the first case of a medical device company being prosecuted for monopoly in China. Because Medtronic has reached a monopoly agreement with the platform on the heart, blood vessel, diabetes and other businesses. An imported product with a factory price of several thousand yuan can soar to tens of thousands of yuan by the time patients use it. Such an unusual price increase is due to the markup business model of these distributors and the behind-the-scene price monopoly. After the rectification measures of the National Development and Reform Commission of China, Medtronic completely abolished the resale price restriction, allowing the platform to sell directly to the terminal, and no longer restricting the dealer to sell to the buyers across the region. As Medtronic moves forward with changes such as removing resale price restrictions altogether and allowing direct sales from the platform to the terminal, the company has had to lower the price of relevant devices to gain a competitive edge with other companies. At the same time, Medtronic could see holes in China's health care system, where life-saving medical devices such as pacemakers are not easily covered by health insurance, so it could persuade the government to improve the system and cooperate to strengthen its market share. There are so many Chinese substitutes that Medtronic may one day be forced out of the Chinese market if it keeps its prices high. However, Medtronic made some sort of price sacrifice and didn't get the results it wanted, reporting only \$1.147 billion in revenue in the second quarter of 2021.

3.3 Serious problems in corporate supply chains

The supply chain is disrupted. The supply chain includes the planning and management of all activities in purchasing, transformation and logistics. It also includes coordination and collaboration with channel partners, which can be suppliers or third party service customers [6]. "The global supply chain and pandemic restrictions in China had a significant impact on our fourth quarter results." Medtronic CEO Geoffrey Martha said on an earnings call. One of the most affected is the shortage of semiconductor materials, which affects the production and supply of blood vessel walls and devices, and China, the world's largest market for cardiovascular patients, has a high demand for this product. In response, Medtronic's global executive Committee sent an urgent email to the company's China

headquarters requesting that the supply of this core component be resolved as soon as possible. In February, Medtronic announced an investment of hundreds of millions of yuan in Shanghai, China, to build a vascular device-related product line, which also marks the era of foreign high-end medical products being developed in China. But it's unclear whether Medtronic's investment in China will have a positive impact, given the pandemic and China's Ministry of Health's restrictions on hospitals from importing high-end medical equipment that doesn't match patients' needs.

3.4 Existing technology cannot be converted into economic value

Medtronic is currently unable to convert its technology holdings into economic value in China. After the marketing of price reduction, the company gained market share, followed by an increase in the number of products for patients, but was then required by the regulatory department to lower the price again, forming a circular pattern. Lower prices can also lead to economic pressure on material suppliers. Take Shanghai, China as an example. Due to the epidemic control, its original technology cannot meet the market demand. Therefore, Medtronic is improving production capacity, epidemic prevention operation and other aspects in a timely manner, and improving the original technology. Medtronic previously worked for China. The renal care field was laid out, but because of the outbreak control. Medical devices related to kidney health do not reach hospitals or other target markets in a timely manner. It affects the patient's treatment experience and the overall clinical effect, and also cuts off the economic income of this aspect.

4. Suggestions for the future development of Medtronic

4.1 Establish a foolproof industrial chain

Covid-19 is a global catastrophe that has a human life and affected existing supply chains and the way they are managed. Ensure that the company USES the supply chain grid to achieve multi-objective, multi-level, multiphase, multi-cycle, hybrid supply, and the result of the war depends on the quality of logistics. Similarly, business companies compete for a complete and efficient supply chain as a supply. The company can pass the consumer demand of the hospital, and inform the manufacturer and supplier, so that the production work can be done faster, the production line can be quickly adjusted, the reasonable arrangement of human resources, logistics transportation and other work, reduce the cost, timely supply. Second, to ensure the safety of all employees, the problem of logistics and transportation in the environment of the epidemic, the success of transporting high-tech products to hospitals or other treatment centers to ensure the quality and safety of the patient's life. In addition, a top leader can be set up in various processes, as well as the role of the coordinator and the coordinator, and the work arrangement and the reward and punishment measures to ensure the efficient operation of the real logistics chain.

4.2 Strengthen cooperation with local governments in China

For each region in China, Medtronic should strengthen ties with local governments and communities, and strengthen localized cooperation and innovation. Especially in this environment, where the Chinese government is deepening healthcare infrastructure reform and local medical device brands are growing rapidly. Medtronic should comply with the anti-monopoly regulations of China's medical device regulatory authorities, refuse to implement vertical restrictions on sales objects and sales regions, refuse to restrict dealers from selling competing brand products, and refuse to use products with a fixed platform gross margin and a fixed resale price. It is also important that many multinational medical companies bribe local officials and doctors in order to obtain regulatory and prescription approval in the host country and expand their sales [9]. If you want to expand your profits, you should not just limit your sales to some specific areas in a first-tier city, but expand its sales market. One of the noteworthy measures is the establishment of a hemodialysis system and insulin pump system production project in Chengdu in 2014, which has promoted the high-end development of local biomedicine and also improved the productivity of high-end medical products in China. In

the past, Medtronic has focused on first-tier cities such as Beijing and Shanghai, but this expansion into second-tier cities such as Chengdu also proves that the Chinese market still has huge untapped potential. Free product self-testing is carried out within employees, and free physical examination is provided for employees with their own resources.

4.3 Actively listen to the suggestions of Chinese consumers

The Medtronic website can be navigated in Chinese so that visitors can quickly find relevant information, taking into account the user experience in different regions of China. Medtronic Greater China consists of three regional markets, China, Hong Kong and Taiwan, as well as other business units. We should actively give play to the advantages of each region, ensure the overall growth trend, realize the operation optimization across regions and departments, and at the same time carry out market innovation, realize the integration of resources across departments, and help the balanced development of all departments. Because of the importance of the Chinese market, it is necessary to increase investment in the Chinese market. The formation of a stable customer group in the Chinese market, customer loyalty may contribute greatly to the stable and long-term development of enterprises, so we must pay attention to website operation and customer feedback [10]. The company can be equipped with after-sales service personnel and customer service in various provinces, timely accept suggestions, and actively improve their own product improvement programs.

4.4 Attract high-end technical talents and invest in medical robots

Improve employee benefits and rewards, to attract top talent in China into is also a good way, into the Chinese market of Medtronic China department should strengthen education training, training local talents to set up training center, then use their own compensation packages and retain talent generous welfare system, to provide staff also can imitate the United States department of company shares, set up the specialized financial team, Assist employees in financial management. Medtronic's Health Month is a self-initiated health activity in China. It held every year the seminar or interesting sports, to strengthen the internal staff's sense of team cooperation ability, at the same time will attract more and more people concerned about the health of the company project, analysis of each person's story from different angles and health secret, lead more people to live events, can also enhance the brand awareness from the side. The pandemic has been bad for Medtronic's medical devices in areas such as cardiovascular surgery. The rapid development of the market today, medical robots in the Asia-Pacific region, some robots can overcome physical limitations, and the advantages of high precision, the operation is more stable is used as a high precision requirement of the surgery, the department of Medtronic China can increase the investment in medical robots, replacing part of the low technical content but high pay to labor.

5. Conclusion

Since 1949, Medtronic has spread to more than 150 countries and regions, becoming the world's largest medical device company. This growth is rapid and the scale is huge. The company has faced downward price pressure in recent years as governments, especially in developing countries, have demanded lower costs for medical products. At the same time, a number of low-cost medical products companies have emerged in China. The competition in the Chinese market is becoming increasingly fierce, and the technology improvement is imminent. However, medical robots and artificial intelligence systems require high investment. Products related to cosmetic ophthalmology and cardiac care of many companies can be purchased directly in the health service market, such as hospitals [11]. Therefore, it is worth paying attention to how Medtronic can reduce the price while improving the technology, better seize the market, reach cooperation with hospitals, and strengthen the relationship with consumers. By analyzing and developing strategies, health data can be significantly improved, especially in middle-income countries, where it is necessary to achieve long-term localized development, strengthen innovation and cultivate local technical talents [12]. In addition, the

leadership of the company should play a strong role of combination, play the role of connecting the previous and the next, the effective combination of contemporary human resources and corporate culture, to ensure that the goals can be clearly communicated to employees, adapt to the changes of localization policy. The middle management strengthens the participatory management of the enterprise, which can help the organization's innovation performance and help employees put forward promising innovative ideas [13]. Medtronic should partner with local government hospitals in China to increase market share and comply with the National Development and Reform Commission's reform measures for the medical industry. As the pandemic sweeps the world, the potential for supply chain disruptions should be reduced. China has the largest market for cardiovascular patients, and supply chain disruption will not only have a serious impact on the performance, but also affect the reputation of Medtronic cardiovascular products [14]. Because medical technology is a key factor in the expenditure of medical enterprises, it is also worth considering how Medtronic can convert the existing technology into economic value, so the improvement of production capacity and technical improvement should be put on the agenda as soon as possible [15].

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