

Huawei's Competitive Performance: Analyzing of Competitiveness and Strategic Adjustments

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Abstract: The world is facing a slowdown in economic growth with the deceleration of global economic globalization, the accumulation of trade barriers across countries and the lack of domestic demand. In particular, the slower industrial recovery after the epidemic and the shift in the international investment boom have further tested the ability of companies and their supply chains to adapt to this complex market environment. Through a comprehensive analysis of Huawei, a leading Chinese high-tech company in the post-sanctions era, this paper provides new ideas for Chinese companies' development strategies to ensure their survival and sustainable development. This paper analyzes the four dimensions (policy, economy, technology, and society environment). It summarizes Huawei's competitive performance in these four dimensions to get some suggestions for the development strategy of modern enterprises, which are to pay attention to technological development, keep up with the pace of policies, and manage and control risks.

Keywords: Huawei, competitive performance, PEST analysis

1. Introduction

The world is facing the problem of slowing economic growth caused by the decline of economic globalization, the accumulation of trade barriers in various countries, and the lack of domestic demand. In particular, the slower-than-expected industrial recovery after the epidemic and the transfer of the international investment boom has further tested whether enterprises and their supply chains can adapt to this complex market environment.

Through the multi-faceted analysis of the performance of Huawei, a leading enterprise in China's high-tech field, after receiving sanctions. It provides Chinese enterprises with new ideas for enterprise development strategies, ensuring their survival and sustainable development.

This paper's research object is Huawei, the world's leading information and communication technology (ICT) solutions provider. Huawei has about 207,000 employees in more than 170 countries and regions, providing services for over 3 billion people worldwide. Committed to bringing the digital world into everyone, every family, and every organization and building a smart world with everything connected. At the same time, Huawei was among the first batch of companies included in the US export control entity list in the US trade war.

This article will use the PEST analysis method and analysis of Huawei's internal advantages to analyze Huawei's strategic adjustments after being sanctioned and evaluate its competitiveness by consulting Huawei's annual reports and related journals, articles, and announcements. Finally, discussions will be made based on the analysis results.

2. PEST Analysis

2.1. Policy Environment Analysis

Since 2018, a turning point has occurred in the relationship between China and the United States in science and technology. The relationship between science and technology has changed from complementarity to competition. The U.S. government has listed Science and technology competition as a key area of strategic competition between China and the US [1]. This move restricts scientific and technological exchanges and is a test for Chinese companies.

Renminbi settlement is gradually advancing, and more and more countries and regions have signed the "Memorandum of Understanding on Cooperation in Renminbi Clearing Arrangements" with China. Combined with the continuous interest rate hikes by the Federal Reserve for Chinese companies, the motivation to use RMB for settlement is far greater than their concerns [2]. The driving force is to reduce the risks and exchange costs brought about by exchange rate fluctuations. The concern is the appreciation of the U.S. dollar as the world's No. 1 currency under the Federal Reserve's interest rate hike. The interest rate of the U.S. dollar is very high and attractive for now. Entrepreneurs will also have more demand for US dollars to obtain higher returns. However, in terms of exchange rate stability in the eyes of enterprises, using stable currency transactions has always been the ideal transaction method for foreign trade enterprises.

China issued the "14th Five-Year Plan" National Science and Technology Popularization and Development Plan, which is one of the many special plans in the field of scientific and technological innovation during the "14th Five-Year Plan", which clarifies the ideas of China's science and technology popularization and development during the "14th Five-Year Plan" period, Objectives, Tasks and Guarantees. The state vigorously encourages technological innovation and strengthens the policy of supply chain resilience to speed up the resolution of the "stuck neck" problem. China's science and technology are actively advancing, reform and opening continue to strengthen, and high-quality progress has achieved new results. The meeting of the Political Bureau of the Central Committee held in 2021 pointed out that it is necessary to strengthen scientific and technological innovation and the resilience of the supply chain of the industrial chain, strengthen basic research, promote applied research, carry out special actions to strengthen the chain, speed up the solution to the "stuck neck" problem, and develop specialized New SMEs [3].

China is vigorously promoting the implementation of the "Belt and Road Initiative". As of January 2023, China has signed more than 200 cooperation documents on the joint construction of the "Belt and Road" with 151 countries and 32 international organizations, including 95 countries not along the route. Over the past ten years, 25 countries along the route have regarded China as their largest trading partner, and the routes along the "Belt and Road" have also become China's first choice for foreign investment [4]. The construction of the "Belt and Road" will bring more opportunities and sources of suppliers to Chinese enterprises. At the same time, it will improve the flexibility of the supply chain of Chinese enterprises.

2.2. Economic Environment Analysis

In December 2022, the Chinese government liberalized the control of COVID-19. It introduced a series of policies to promote economic growth, such as optimizing the policy of enterprises returning to work and reaching production capacity and a package of policy measures to stabilize the economy.

These policies have played an important role in economic recovery. According to preliminary calculations by the National Bureau of Statistics, China's GDP in the first quarter of 2023 will be 28499.7 billion yuan, according to Calculated at constant prices, it increased by 4.5% year-on-year and 2.2% from the fourth quarter of the previous year. In terms of industries, the added value of the primary industry was 1,157.5 billion yuan, a year-on-year increase of 3.7%; the secondary industry's added value was 10,794.7 billion yuan, an increase of 3.3%. The added value of the tertiary industry was 16,547.5 billion yuan, an increase of 5.4%. From the overall trend, it is stable and positive. But there are still certain hidden dangers. Because the domestic supply chain was previously disturbed by the epidemic in some areas, the resumption of work and production in ASEAN was accelerated. Southeast Asian countries represented by Vietnam, in Clothing, furniture and other fields have significantly replaced my country's exports. From the perspective of exports to G7 countries, Vietnam's exports in 2021 will continue to increase compared with 2018, while exports of some industries in China will decrease [5]. In the long run, under the great power game and the restructuring of the industrial chain, the transfer of some industries has become a trend, which will have a long-term impact on Chinese future export structure.

The recovery of the world economy has begun to show signs of lack of momentum; after entering 2022, due to unexpected factors such as repeated delays in the epidemic situation and escalating geopolitical conflicts, the downward pressure on the world economy has gradually increased, and international institutions have frequently lowered their growth forecasts. October 2022, The IMF estimates that the world economy will grow by 3.2% in 2022, a drop of 2.8 percentage points from 2021. International institutions such as the World Bank and the OECD have also lowered their forecasts for world economic growth in 2022 several times in the past year. The IMF estimates that the economic growth rate of developed economies will be 2.4% in 2022, down 2.8 percentage points from 2021.

Although the global job market will maintain a positive recovery trend in 2022, and the unemployment rate will further decline, the youth unemployment rate will remain high. In January 2022, the International Labor Organization (ILO) reported that the global job market will continue to recover in 2022, but it is still uncertain. The global unemployment rate is estimated to be 5.9% in 2022, a decrease of 0.3 percentage points from 2021. The specific performance is that the major Internet giants have launched a wave of layoffs. According to the latest data released by the website named Layoffs. Yi, as of July 2023, 839 technology companies worldwide have fired 216,328 employees. Among them, Google fired 12,000 employees, accounting for about 6% of its total number, Amazon fired 10,000 employees, accounting for about 3% of its total number of employees, Meta (Facebook) fired 11,000 employees, and the number of people fired Even accounted for 13% of the total employees.

2.3. Society Environment Analysis

Huawei adheres to the principles of integrity and compliance, abides by the laws of various countries and UN resolutions, and respects the extraterritorial jurisdiction of other countries. Huawei's product quality and safety are recognized in over 140 markets worldwide. Even with the sanctions, the supplier share in the global market has declined. However, according to a report released by Dell 'Oro Group, in 2021, Huawei surpassed Ericsson, ZTE, and Nokia in the supply of global 5G networks, and is the company with the highest share of global 5G network suppliers. At the same time, Huawei's 2022 annual report shows that Huawei's operator business has grown steadily due to the expansion of traffic usage, 5G, the acceleration of optical network construction, and the increasing investment of customers. The momentum of low carbon transformation and upgrading is accelerating and has rapidly grown; the terminal business is focused on HMS's global ecological construction and integration expansion. In 2021-2022, Huawei's revenue in Europe and the Americas has increased

the total business revenue. There is still a big gap between 642.388 million yuan and 891.368 million yuan in revenue in 2020. Still, the rising international business revenue also shows that the international community is constantly accepting Huawei's new business methods [6].

A strange phenomenon is that business revenue growth in the international community has not continued in Chinese society. Huawei's 2022 annual report shows that business revenue in China has dropped by 2.3 percentage points. According to the China smartphone market tracking report released by IDC China in the first quarter of 2023, Huawei failed to enter the top five smartphone sales in China, while Huawei was the number one smartphone sales two years ago [7]. Although the public feels sorry for what happened to Huawei, they have been facing a lack of support for self-developed 5G chips and the high pricing caused by the replacement of backup suppliers. Chinese consumers can only choose other more cost-effective mobile phone brands.

But in the same way, what happened to Huawei has caused some Chinese consumers to associate Huawei with "patriotic feelings". Many benefits are coming. Huawei's reputation in China has always been very good, and there are many potential consumers in China. If Huawei can produce new self-developed chips or cost-effective mobile phones, then these potential consumers will have a high probability of repurchasing Huawei cell phones. With the support of China's policies, new energy vehicles will also enter a larger market, and more small and medium-sized enterprises will join the competition [8].

2.4. Technology Environment Analysis

China regards innovation as the primary driving force for development and regards high-level scientific and technological self-reliance as the strategic support for national development. The government has adopted a series of policies and measures to promote the development of scientific and technological innovation. For example, the National High-Tech Research and Development Program (863 Program), the National Science and Technology Support Program, etc., provide financial and talent support for technological innovation. With the support of policies, China's scientific research level in some cutting-edge fields, such as particle physics, condensed matter physics, astronomy, space science, and life science, has quickly entered the international advanced ranks. For example, the successful launch of "Mozi" was the first time in the world Realized the quantum communication between the stars and the earth and established a quantum secure communication and scientific experiment system integrating space and the earth. It has greatly improved China's quantum communication technology and expanded its international leading position, realizing the leapfrog development of national information security and information technology.

In addition, various fields in China continue to develop and use big data. Regarding Internet companies, companies such as Alibaba, Tencent and Baidu are actively exploring and applying big data technology. Through the analysis of big data, consumers are provided with more personalized products and services; in the traditional manufacturing industry, through the integration of big data and production machinery and systems, unmanned factories are gradually realized, which improves the production efficiency of factories and reduces manual errors; at the government level, big data is widely used in social economy It provides strong data support for policy adjustments.

However, since the founding of the country was relatively late compared with the time when the old Western countries were developed and powerful in science and technology, the technical reserve and talent team are still insufficient, the technological level and output efficiency need to be improved, and the management system and mechanism need to be optimized. The supporting role of innovation and core technology output needs to be improved urgently, and there is still a big gap between the overall level and the goal of building a technologically powerful country and high-level self-reliance

[9]. Especially in semiconductor fields such as lithography machines and chip manufacturing, they are still "stuck".

ChatGPT set off a frenzy of artificial intelligence development, and companies worldwide have begun to invest in the research and development of artificial intelligence. As a result, global artificial intelligence development has continued to improve. According to McKinsey's global artificial intelligence survey conducted for five consecutive years, the AI usage rate of enterprises worldwide has increased significantly in the past five years. In 2022, 50% of companies have deployed AI, which is much higher than the 20% in 2017. Capital investment in AI has also grown substantially as adoption has increased. About 40% of companies invested more than 5% of their total budget in AI five years ago, and by 2022, more than half of companies will have invested in this proportion. It can be said that all walks of life are paying more and more attention to AI.

In addition, global technology also focuses on the development of sustainable green energy. In February 2021, Singapore announced the 2030 Singapore Green Development Blueprint, setting clear goals for promoting urban greening, sustainable living, and a green economy. In terms of energy strategy, Singapore proposes that all cars and taxis must use clean energy by 2030, and by then, vehicle exhaust emissions will be reduced by at least 6.5 million tons per year; the EU will promote green transformation as one of the core contents of the economic recovery plan. In the economic recovery plan formulated in 2020, totaling more than 1.8 trillion euros, 37% of the funds will be invested in areas directly related to the goal of green transformation, and it is planned to carry out energy-saving renovations on 35 million buildings in the next 10 years [10].

3. Huawei's Competitive Performance

3.1. Economy

Huawei has a complete financial system and strong risk-warning capabilities. In 2022, the United States will continue to raise interest rates and the impact of international factors such as the war between Russia and Ukraine. The exchange rate of RMB against the US dollar fluctuates greatly. Development has had a great impact. To control this risk, Huawei has increased its efforts in financial risk management. Based on the consistent foreign exchange risk management policy, it manages major foreign exchange exposures under careful consideration of market liquidity and management costs. It has established foreign exchange management policies, procedures, operational guidance, and other management mechanisms.

In addition, due to the impact of the trade war, how to select qualified customers and suppliers is the top priority. Huawei has formulated and implemented a globally unified credit management policy system, process, IT system and risk quantitative assessment tools. Each region and business unit has established a dedicated credit management organization and credit competence centers in Europe and Asia-Pacific. Use the risk quantification model to assess customer credit ratings, determine customer credit lines, quantify transaction risks, and form a closed-loop management mechanism by setting risk control points in key links of the end-to-end sales process. The credit management department regularly reviews the global credit risk exposure and develops corresponding IT tools to predict possible losses, accrues corresponding bad debt provisions, and activates risk treatment mechanisms for customers who have or may be in danger.

3.2. Technology

Huawei's continuous research and development capabilities are strong, and eight major research and development bases exist in China. Huawei insists on investing 10% of its sales revenue in research and development every year, and the accumulated research and development expenses in the past ten years have exceeded RMB 845 billion. According to the annual report, Huawei currently has about

107,000 R&D personnel, accounting for 54.8% of the total. According to the "2022 Annual Report" released by the State Intellectual Property Office, among the top ten domestic invention patent grants, Huawei ranked first with 5,805, which proves that its R&D capabilities and R&D investment are second to none. In addition, regarding technology research and development strategy, a "2012 laboratory" focuses on developing future strategic technologies, regarded as Huawei's innovation engine, leading the company's future product development.

3.3. Policy

Due to US sanctions, Huawei's transaction volume with European and American countries is similar to three years ago. However, the increase in RMB settlement allows Huawei to use RMB instead of the fluctuating US dollar. Through Huawei According to the data obtained in the annual report, every 5% depreciation of the US dollar will have an impact on the company's earnings of more than 1013 million yuan in 2022, which is much greater than the 899 million yuan in 2021 [10]. As a result, Huawei's earnings stability has improved. Secondly, the country's continuous development of domestic technology and the "Belt and Road Initiative" have brought about technology development in signatory countries, so Huawei's suppliers that were originally missing due to sanctions have other options. The controllability and localization of the entire supply chain will also be increased, which is very good for Huawei.

3.4. Society

Most countries are still open to Huawei Because of Huawei's good credit and the higher level of technology and new technology it has, but the United States and some European countries that used to be the main income still need to select Huawei. Even so, Huawei Being the world's largest 5G supplier makes it very competitive and attractive worldwide. In domestic society, the mobile phone business cannot re-emerge quickly. Therefore, Huawei changed its main business to ICT-based in the 2022 annual report. Facilities business, cloud computing business, digital energy business, terminal business, and smart car solution business. Huawei's transformation corresponds to China's demand for new energy and smart vehicles. These aspects are also industry-leading in China. In areas other than mobile phones, Huawei still has unique advantages.

4. Discussion

4.1. Science and Technology

Scientific and technological progress is decisive in economic growth and social development. In today's global economic downturn, enterprises should pay attention to the development of science and technology in different fields and invest accordingly. To better produce products and provide more comprehensive services. This Strategic awareness can enhance the enterprise's competitiveness and achieve better economic effects.

However, for most enterprises, it is a challenging task to keep up with the pace of the times all the time. The progress of science and technology is changing with each passing day, and the replacement within the industry is also very frequent. Therefore, enterprises need to clearly define technological innovation or pay attention to the key points of technological development fields and obtain support from various scientific and technological development channels. Enterprises can make full use of domestic and foreign papers, patents and other technical carriers, as well as the resources of teachers in scientific research institutions, master the research and development lines of the industry's technology, innovate ways of thinking, and give full play to universities and The intelligence and talent advantages of scientific research institutes can rapidly improve the research and development

level of enterprises; enterprises need to establish scientific research and development teams and invest corresponding resources in scientific research and innovation. The top leaders of enterprises need to mobilize all employees and resources to serve enterprises. The contribution of technological innovation. Explore the establishment of an incentive mechanism to effectively attract and use talents from the aspects of personnel, distribution, and rewards, strengthen the cultivation and use of talents with innovative spirit and innovative ability, and create conditions to attract outstanding talents to participate in the technological innovation of enterprises work; enterprises need to understand and position the importance of enterprise intellectual property strategy from the perspective of long-term development of the enterprise itself, from the strategic height of international market competition and global operation and development, and regard enterprise intellectual property strategy as an enterprise to participate in competition, seek survival and development The pioneer and strong backing of the company, improve the strategic awareness of intellectual property rights, especially the strategic position of patents.

4.2. Be Aware of Risk Management

The world situation is changing frequently, whether it is exchange rate fluctuations or trade barriers between countries, it will have a huge impact on the development of enterprises. As a modern enterprise under economic globalization, to avoid or reduce the losses caused by it, it should have management and control Risk awareness and put it into practice.

The development of an enterprise always needs to have a backup plan. The supplier selection strategy should be carried out through one main and multiple backups. It should not only consider the best brand raw materials and the most suitable suppliers now but also need to develop other alternatives. Brands and suppliers from other regions. Although this approach may increase the company's operating costs, this strategic awareness can ensure the company's sustainable development. After the backup options are cultivated and matured, the backup source of supply can also be used to restrict the main source of supply, reduce production costs and increase supplier cooperation.

Enterprises need to understand potential risks and increase risk assessment and planning capabilities. At present, the types of risks that enterprises may encounter are market risks, economic risks, legal risks, and technical risks. Only by understanding risks can targeted prevention and Control. In addition, enterprises need to estimate the probability of occurrence and the scope of impact of various potential risks and plan accordingly according to the results.

4.3. Keep up with Policy Going

The Chinese government will always introduce policies based on the situation in China and the world. Policies can provide enterprises with a stable, fair, just, and transparent market operating environment. Following the goals of the policy can effectively improve the stability and income of the enterprise. The enterprise needs to be more disadvantaged in interpreting the macro situation than the government. It is much better to follow the government's policy than to do things unthinkingly. At the same time, the policy is also playing a big role in regulating the behavior of enterprises. There are relevant regulations on environmental protection and the protection of the rights and interests of all parties, which promotes enterprises to follow social ethics. Many policies have been introduced to encourage exchanges in science and technology and foreign trade, such as incentives, tax incentives, and foreign investment. Etc., while improving the competitiveness of enterprises, promoting the development of the international economy and trade, and improving the country's overall competitiveness. Enterprises that do not follow the policy may reduce their influence due to environmental pollution, insufficient consumer protection, and declining scientific research

capabilities. Therefore, enterprises need to make auxiliary decisions based on policy trends, understand the current situation, and adjust based on the situation and their business conditions. The government should also be considerate of enterprises, grasp the hot spots of technology and the economy, and issue the most suitable policies for enterprises according to the situation. Enterprises and the government work together to create a stable and healthy business environment.

4.4. Stabilize the Basic Market and Regain Lost Ground

During the epidemic period, China's strict anti-epidemic policy caused some Chinese manufacturing companies to be severely hit. International companies have chosen to turn to China's surrounding areas to seek other manufacturing companies. The three years of the epidemic have made the cooperation between these Chinese surrounding companies and international companies closer and closer. Stable, once glorious Chinese manufacturing companies are in a very dangerous situation. Therefore, companies should continue to pursue market hotspots or create hot spots, increase investment in the international market, follow policy hotspots, and make efforts on the "Belt and Road." For the manufacturing market that has been lost, enterprises should improve their technological competitiveness so that they have some technological advantages and regain these markets through technological advantages or price advantages. These things must be completed in more than one or two years. Enterprises need to improve continuously. Only by investing in big technology research and development and market research, constantly breaking through technological blockades, and improving overall competitiveness can we succeed in the global market.

5. Conclusion

By analyzing the current environment in China and the world in the four dimensions of politics, economy, technology, and society, we can know that although the general theme of the world today is still peace and development, there are also opportunities and challenges of varying degrees. The expansion of the use of renminbi in the basket of currencies or the shake of the status of the world's factory. In these four dimensions, Huawei also has a corresponding competitive performance. These competitiveness performances once again emphasize the importance of technological innovation and development in the sustainable development of enterprises, corporate culture and image shaping has a strong influence on user and customer stickiness, awareness of urgency helps reduce operational risks and risk control of enterprises, and policy responsiveness brings auxiliary effects on the optimization and expansion of enterprise supply chains. These performances reflect the four factors affecting the survival and development of enterprises and can give some suggestions and inspirations for modern enterprises in survival and development strategies. It will help them to stand firm in this turbulent tide of the times.

The research object of this paper is the leading enterprise in the field of high-tech in China, which has a large volume, standardized and mature management system and has certain government support and public foundation. Therefore, the applicable objects of the research results have certain limitations and cannot be widely used in All modern enterprises. The research method of this paper is single, and the data are mostly second-hand data, so the timeliness cannot be fully guaranteed, and the reliability of the data cannot be fully verified.

Authors Contribution

All the authors contributed equally, and their names were listed alphabetically.

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