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Confirming The Positive Impact of International Trade Barriers on Enterprises

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Abstract. The United States has sanctioned Huawei, making it difficult for the company to continue its development due to the shortage of chips and other essential components. The purpose of this research was to explore the positive impact of international trade barriers on business. The United States sanctioned Huawei for use as a case study. By analyzing the growth of Huawei's scientific and technological strength, it is evident that the company has increased its R&D investment and adhered to a corporate strategy of independent innovation. Huawei should adhere to scientific and technological innovation, increase investment in research, and cooperate with other scientific and technological enterprises to develop together. By analyzing the success of Huawei's business layout diversification and localization, Huawei's business diversification and localization are successful because Huawei restructured its existing business, laid out new industries, and launched products needed by the local market to realize business diversification and localization. Huawei should continuously develop new companies and products to cater to market preferences. By analyzing the effectiveness of Huawei's efforts to strengthen international exchanges and cooperation and to change its business focus in overseas markets, Huawei has succeeded because it has focused its overseas business on the communications sector, cooperated with operators, and actively sought international cooperation and exchanges. To expand its overseas influence, Huawei should continue to strengthen international exchange, cooperation, and overseas business development.

Keywords: Huawei, Technological Capability, Business Diversification, Business Localization, International Cooperation.

1. Introduction

Global economic and trade indicators for 2019 point to slower trade growth, according to a report by the United Nations Conference on Trade and Development (UNCTAD). Following a sharp 9.7% increase in 2018, global merchandise trade is expected to decline by 2.4% to $19 trillion in 2019, while trade in services is expected to grow by 2.7% to $6 trillion, a sharp deceleration from the 7.7% increase in 2018 [1]. Commodity demand and prices began to fall sharply in early 2019 [1]. The global economy is under greater downward pressure, and growth momentum is slowing. The United States' trade war initiative has significantly slowed down global trade. Under this context, the U.S. government has frequently taken tough trade protection and restrictive measures, imposing tariffs on Chinese imports, suppressing the development of Chinese high-tech companies, and suppressing the development of Chinese technology companies through non-tariff trade barriers.

Trade barriers are impacting an increasing number of Chinese enterprises, causing a collapse in trade between China and the United States. China's exports to the United States fell dramatically following the US-China trade war, from $535.511 billion in 2018 to $449.878 billion in 2019, risking the global economy's stability and future growth [2]. Huawei is a Chinese technology company with a significant presence in the worldwide telecommunications equipment and smartphone markets. Following the United States' crackdown on Huawei, the company's mobile phone division witnessed a significant drop in market share. The scarcity of chips and components led to product shortages or downgrades, causing Huawei to lose competitiveness in both high-end and international markets. Faced with trade impediments, it is difficult to continue developing.

Academics are highly interested in the U.S. government's endorsement of Huawei. According to published sources, S. Hosain uses the U.S. prohibition on Huawei as a research instrument to forecast the consequences of the judgment and its potential ramifications for global commerce [3]. Academics are also keenly interested in studying the repercussions of the US-China trade war on businesses. Zhang Liping conducts research on the effects of the ongoing trade conflict between the United States and China on Huawei [4]. The study uses data from Huawei's annual reports over a period of ten years to analyze the company's present state after facing sanctions for four years [4]. Academics are highly interested in comprehending the repercussions of the US-China dispute on China's industry. Hwang and Zhang analyze the reasons behind the U.S. sanctions on Huawei and propose countermeasure suggestions to study how China's 5G industry can survive and develop under US economic policy [5]. They use the ongoing research on the impact of the U.S.-China dispute on China's 5G industry as their research object [5].

Although there is a lot of research on Huawei, most of it focuses on the impact of U.S. sanctions on Huawei, the anticipation of the consequences of international trade, and how 5G can survive and develop further under U.S. sanctions. However, there is a significant body of research addressing the question, "What are the positive impacts of international trade barriers on enterprises?" However, there is still a gap in the research on the topic, "What are the positive impacts of international trade barriers on businesses?". This research could provide other enterprises with ideas on how to adjust their strategies when facing international trade barriers, as well as the positive impact of international trade barriers on Huawei's development.

In order to address the aforementioned research issues, this article will initially use Huawei as a case study, incorporating the U.S.'s suppression of Huawei's international trade policies. Subsequently, it will amalgamate pertinent phenomena to examine the aspects of Huawei that have experienced a surge in growth despite the U.S.'s suppression, along with the factors contributing to this growth. Finally, based on the reasons shared, Huawei's actual strategic policies are combined, and the positive aspects are extracted for interpretation. Suggestions on how enterprises like Huawei can better adapt to the changing environment of the international trade market.

2. Case Description

Founded in 1987, Huawei is a leading global provider of information and communications (ICT) infrastructure and smart terminals, with 207,000 employees in more than 170 countries and regions and serving more than 3 billion people worldwide. In the 1990s, Huawei chose to devote itself to the research, development, and production of program-controlled switches, breaking the monopoly of foreign brands on the Chinese market and insisting on innovation to drive the establishment of its technology R&D system. In the 21st century, Huawei has continued to increase its R&D investment, actively expanding into overseas markets and gaining a foothold in the global telecommunications equipment market. In 2012, Huawei's sales surpassed those of Swedish telecom giant Ericsson, making it the world's number one telecom equipment supplier. Huawei has vigorously developed its consumer electronics business, and its smartphone business has risen rapidly. With the arrival of 5G technology, Huawei is once again at the forefront of global communications technology innovation and has become the world's leading telecom equipment supplier and smartphone manufacturer, with numerous patented technologies, significant achievements, and a market position in 5G technology as well as in several fields. Huawei has accelerated the development and promotion of its self-developed Hongmeng operating system following the restriction of the use of Google services in the United States.

Huawei has increased its investment in chip design and manufacturing, and its self-developed chips have promoted the development of the domestic chip industry. It actively invests in and cooperates with domestic semiconductor companies to promote independent R&D in advanced manufacturing and packaging technologies, while also striving to reduce its dependence on overseas supply chains. Huawei adheres to a high proportion of R&D investment in technological innovation in the fields of

communications, chips, AI, and cloud computing, as well as in the layout and research of cutting-edge technologies, to stay ahead of the technological competition in the future.

Huawei continues to promote the deployment of 5G networks in China and other friendly countries, becoming a major supplier of 5G base stations and equipment worldwide. Huawei maintains its leading position in terms of the number of 5G base stations, network coverage, and technical performance. Huawei continued to develop its communications business, helping many operators around the world to take the lead in LTE/5G network assessments. In a report published by Global Data, Huawei ranked first in the overall competitiveness of both 5G RANs and LTE RANs and was crowned the "sole leader" for a second consecutive time.

3. Analysis of Problems

3.1. Effectiveness on Aspects Growth in Science and Technology Strength

Huawei has numerous patented technologies, thus, it has made a qualitative leap in chips, operating systems, and other aspects of technology. Huawei, in the face of U.S. suppression, has developed a strategy to increase investment in research and development, strengthen its independent innovation capability, and independently develop chips and operating systems to reduce its technological dependence on U.S. firms. It also strengthened its cooperation with domestic companies to find alternative supply chains and reduce its dependence on U.S. suppliers. Whether in cutting-edge fields such as 5G, cloud computing, and artificial intelligence, as well as in consumer electronics such as smartphones, autonomous driving, the Internet of Things, and smart homes, Huawei has demonstrated strong technical strength and innovation.

Huawei's success in independent research and development, science, and technology innovation stems from its adherence to the strategic policy of investing in R&D and bolstering independent innovation, a strategy that researchers and scholars have previously validated. Zhu and Wang conducted a study on the current state of R&D investment in Chinese enterprises, as well as international comparisons between R&D investments made by Chinese and foreign enterprises [6]. Strengthening enterprise R&D investment is critical to enhancing enterprises' technological innovation capability [6]. Zhang et al.'s empirical studies on independent technological innovation, knowledge transformation, and enterprise growth have shown that businesses need to take the path of independent innovation to make the most of their technological, market, or financial advantages and grow quickly [7].

Although the U.S. suppression of Huawei is very serious, because Huawei adheres to independent research and development and continuous investment in R&D, its level of science and technology has made a qualitative leap.

3.2. Effectiveness on Diversification and Localization of Business Layout

The United States' suppression of Huawei has resulted in a significant loss of market share for the company. Especially in the overseas mobile telecommunication equipment market, Huawei has focused on selling mobile communications equipment in the domestic market by adjusting its corporate strategy. It has adjusted the existing business structure, tilted its core resources toward more competitive businesses, and laid out other business areas to realize diversification and localization of its business layout.

In the face of U.S. sanctions, Huawei has changed its corporate strategy and adjusted its business focus to the domestic market. Huawei rapidly increased its investment in the domestic market, and with a series of strategic adjustments and consumer sentiment, Huawei's domestic market share for mobile phones has climbed rapidly. It reorganized its existing businesses, tilted its core resources towards businesses with more competitive advantages, and diversified its operations by laying out other business areas. As a result of continuous optimization, Huawei has now formed an industrial

portfolio comprising ICT infrastructure, terminals, Huawei Cloud, digital energy, and smart car solutions.

Researchers and scholars have validated the significance of diversification strategy and localization, demonstrating Huawei's success in diversifying its business layout and localizing its products and services. Zhang Litong, in his study of the current situation of an enterprise diversification strategy, verified that diversification strategies can improve enterprise operation efficiency and diversify operation risk [8]. Chinese businesses need to use a diversification strategy, make the most of their enterprise management resources, and expand their business development opportunities in order to become more fundamentally competitive and unbeatable in today's tough market competition [8]. Wan Lin also confirmed that the local consumer-oriented business philosophy is the key to the company's overall localization strategy [9]. To make products that will sell, one only needs to understand what local customers really want and be able to communicate with them in a more localized way to win their favor [9].

Although the U.S. suppression of Huawei means Huawei cannot access Google GMS services, Huawei's rapid decline in sales of mobile phones in the overseas market resulted in Huawei's loss of the overseas mobile device market. However, Huawei correctly adjusted its corporate strategy, focusing on the domestic market and achieving diversification by restructuring its existing business and laying out other business areas. This enabled Huawei to develop rapidly in the domestic market.

3.3. Effectiveness on Enhancement of International Cooperation

The United States has suppressed Huawei, leading to a significant decrease in its market share abroad. Huawei continues to actively seek opportunities for international cooperation and exchanges, particularly in the overseas mobile communications equipment market, and has shifted its focus in the overseas market to the development of its communications business, collaborating with operators on the construction of network service equipment, and providing technical and equipment support to network operators. It attends the Mobile World Congress (MWC) to share and exchange communication technology with global customers and partners.

Huawei continues to actively seek international cooperation and exchange opportunities, despite U.S. sanctions. As the world's leading ICT infrastructure and smart terminal provider, Huawei is the world's number one telecommunications equipment manufacturer. At the MWC, Huawei shares and explores several cutting-edge technologies in the industry with its customers and partners around the world, enabling the landing of technologies and promoting global technology sharing and development. Relying on its overseas presence, Huawei dominates markets outside North America, cooperating with operators to build network infrastructure and providing technical support to network operators in most markets.

Researchers have suggested that Huawei's success in international collaboration and exchange is due to the company's significant focus on these areas. Nuria and other researchers have investigated how R&D internationalization affects multinational organizations' creative performance. International collaboration serves a moderating function in the energy industry by allowing participants in various R&D units to exchange and coordinate novel inputs and outputs, lowering R&D costs and making it easier to incorporate new results [10]. Collaboration's potential to improve organizations' ability to discover, share, distribute, and coordinate international knowledge flows might explain this outcome [10]. According to Fu Jianqiu's research on the pros and cons of the new trend of international scientific and technological cooperation for China's scientific and technological development, as well as its countermeasures, companies from different countries do research and development as well as technological innovation activities all over the world in order to make money off of scientific and technological innovations made in other countries [11]. It is critical for businesses to recruit and employ scientific and technological resources from all over the globe to support their worldwide strategy, production, and business operations, adapt to the demands of global customers and consumers, and increase their share of the international market [11].

Although Huawei's U.S. crackdown has resulted in a sharp decline in its overseas market share, Huawei has shifted its focus to overseas markets, developing communications services, cooperating with operators to build network infrastructure, and providing technical and equipment support to operators. By seeking international cooperation, exchanging cutting-edge technologies in the industry, and promoting global technology sharing and development, Huawei has been able to continue to develop overseas markets.

4. Suggestions

4.1. Continuous Improvement of Technological Strength

Huawei is still subject to U.S. sanctions, which are becoming more severe to suppress Huawei's development. The technology limits Huawei's chips, preventing them from producing flagship chips on their own. Additionally, U.S. restrictions on some key components prevent Huawei's cell phones from using Google's services. As a result, Huawei's mobile communication equipment remains unable to develop in overseas markets. Under such conditions and environments, Huawei wants to further utilize its technical strength in the whole international trade market. This thesis suggests that Huawei should continue to innovate and develop, increase its investment in scientific research, and cooperate with other domestic science and technology enterprises to develop and progress together, promote China's technological strength, and break the scientific and technological barriers that European and American enterprises have against China.

Historically, there was also a company that faced a similar dilemma as Huawei, and that was Toshiba. Toshiba, a Japanese technology enterprise, and Huawei, a semiconductor technology leader, also suffered from United States suppression. The United States sent Toshiba to the Soviet Union in the 1980s to export machine tools to process nuclear submarine parts. As a result of sanctions against Toshiba, Toshiba suffered U.S. semiconductor sanctions, resulting in Toshiba losing the advantages of semiconductors, followed by other industries not forming synergistic effects in a series of wrong decisions towards delisting. Therefore, in order to avoid repeating Toshiba's mistakes, Huawei must recognize the risks and threats that Toshiba faces in this area, examine the issues that Toshiba encountered following the sanctions and blockade, and draw valuable lessons from these experiences. It should insist on technological innovation and persistent investment in R&D to break the monopoly of U.S. companies in technology.

4.2. Continuous Development of Diversified and Localized Business

Huawei's inability to yield chips on its own, as well as its inability to use Google services against the backdrop of U.S. sanctions on Huawei, have made it difficult for the company to continue to grow in overseas markets. As its business structure diversifies, Huawei shifts its focus to the domestic market. This thesis suggests that Huawei should continue to adhere to the diversification of business layout in the next step and continue to layout and develop other industries based on its main business to lead the industry to progress together. Continuously develop new businesses in line with Huawei's strategy, leverage the company's advantages to develop new businesses, collaborate with other enterprises, and consistently launch products and services that align with consumer needs and preferences. Enterprises should adjust their localization in terms of products, content, operations, and talent dissemination channels to align with the characteristics of different markets and meet market preferences.

In recent years, many Chinese companies have gone global, and localization and business diversification are doing very well. Xiaomi is an example. Xiaomi has built a diversified product system through self-production and cooperation. It is used in high-end smartphones, Internet TVs, and smart homes, among other things. It has also been very successful in localization, such as its localization strategy in India, where, in the face of impending stricter import restrictions, Xiaomi has chosen to work with local partners to ensure a continuous supply of products through local manufacturing. The company has successfully localized its software, launched localized products, adapted its marketing strategies, and trained its personnel, among other initiatives. Huawei has shifted

its focus back to the domestic market, clarifying the needs of the domestic market and building a diversified product system with products that meet the requirements of the domestic market. Therefore, Huawei can learn from Xiaomi's experience in diversification and localization and continue to develop diversified businesses and localized products and services.

4.3. Strengthening International Cooperation

Huawei phones are unable to access Google services due to U.S. sanctions, which has hindered the company's ability to sell and advance its mobile communications equipment in international markets. Thus, under these circumstances and settings, Huawei aims to maximize its technological prowess in the global trade industry. This research proposes that Huawei should persist in strengthening international collaboration and exchange, actively engage in international exchange conferences and technological exhibits, and establish foreign network service equipment to augment Huawei's prominence. Huawei should engage in effective communication, exchange knowledge, and jointly investigate state-of-the-art technologies in the sector. Reorient business efforts towards international markets, enhance Huawei's telecommunications business, consistently increase Huawei's telecom market share abroad, establish partnerships with additional carriers to construct network service equipment, propagate Huawei's technology globally, persist in innovation, introduce new technologies to consumers, and drive advancements in the communications industry.

Strengthening international cooperation and exchanges is essential for every multinational company, and many Chinese enterprises have made outstanding achievements in international cooperation and exchanges. BYD is a positive example. BYD is a Chinese electric car company, and BYD electric cars go to the world market, appearing in overseas auto shows to attract overseas consumers. BYD's global sales volume exceeded 3 million units in 2023, ranking it as the top seller of new energy vehicles. China's new energy vehicle exports totaled 307,000 units, with BYD contributing nearly one-third. According to the China Association of Automobile Manufacturers (CAAM), BYD's export volume in 2023 was 252,000 units, a year-on-year increase of 330% [12]. It implements a globalization strategy by exporting while operating overseas. It engages in cooperation and exchange within the international market, consistently conducting scientific and technological research and development, as well as making significant investments in these areas. Enhance the quality and competitiveness of the products, and take the lead in introducing China's electric vehicles to the global market. Therefore, Huawei should study and learn from the strategies utilized by BYD in international cooperation and international exchanges to further expand Huawei's visibility in the international arena and strengthen Huawei's cooperation with overseas enterprises.

5. Conclusion

This article delves into the beneficial effects of international trade barriers on businesses, examining the Sino-U.S. trade war of 2019 and the U.S. sanctions imposed on Chinese technology companies in response to Huawei's U.S. sanctions. Through the analysis of Huawei's growth in technological strength and Huawei's diversification and localization in business layout, as well as Huawei's strengthening of international cooperation and exchange and transformation of business focus in overseas markets, three aspects are analyzed. The conclusion is that, despite the existence of trade barriers, enterprises may not necessarily face bankruptcy or delisting due to them, and trade barriers can still have positive effects on them.

This article uses non-tariff trade barriers, trade protection, and economic sanctions to demonstrate once more that economic instability necessitates protection policies. These policies make more use of non-tariff barriers, allowing countries to protect their businesses by limiting their growth through economic sanctions. Technological innovation, localizing business diversification, and international cooperation among enterprises play a crucial role in enhancing their technological strength and market competitiveness. This article fills the gap in academic research on the positive impact of trade barriers on enterprises and organizes relevant literature to verify that trade barriers have a positive

effect on enterprises. Using Huawei as an example, this paper analyzes the ways in which trade barriers benefit enterprises and provide recommendations. The benefits of technological innovation, business diversification, and localization, as well as strengthening international cooperation and exchanges for enterprises, can be useful for other Chinese technology enterprises and multinational corporations to learn how to continue to develop and change their corporate strategies in the face of trade barriers and suppression.

This article's analysis of Huawei's response to the U.S. sanctions is not comprehensive enough, as it ignores other countermeasures and focuses solely on the enterprise's scientific and technological innovation, business diversification and localization, and strengthening of international cooperation and exchange. The analysis of the content of the U.S. sanctions against Huawei is limited, and it does not provide a complete picture of the increasing nature of these sanctions. In future studies, study should add the complete measures taken by Huawei after facing U.S. suppression and continue to study and supplement the U.S.-specific sanctions against Huawei.

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