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ABSTRACT

Ван пэй ци. China- Russian import and export of high - tech products – Chelyabinsk: SUSU, EU–204, 100 pages, 5tables,8 pictures，29 list of references – 50 names, 50 applications.

In recent years, China has vigorously developed the export of high-tech products and accelerated the internationalization of China's high-tech industries. The so-called high-tech products, that is, technological content, high added value, the use of high-tech means of production of knowledge, technology-intensive innovative products, since China's accession to the WTO.

The share of high-tech exports in global trade has soared from 6% in 2000 to 37% in 2014. China has become one of the world's major exporters of high-tech products. In 2014, China's exports reached 726.3 billion U.S. dollars, ranking the first in the world. High-tech industries are the strategic high ground for all countries in the world. As the world economy globalization and regional economic integration deepen day by day, the promotion effect of international economic cooperation on economic development is increasingly strengthened, and whether it can effectively participate in the international division of labor,expanding economic and technological exchanges with other countries has become one of the most important factors that determine the economic development in a country.

1. IN THN ERA OF BIG DATA, THE ROLE OF CHINA AND RUSSIA

1.1 Big data era coming

Before introduce big data era, cloud computing is also a necessary concept.Cloud computing provides a place for data assets to be stored and accessed, and data is the real value of the assets.

Enterprise business information , goods logistics information in the Internet world,Location information, the number will far exceed the carrying capacity of existing enterprise IT infrastructure and infrastructure.How to revitalize these data assets so that they serve national governance, corporate decision-making and even personal life is the core issue of big data, as well as the inherent soul of cloud computing and the inevitable upgrading direction[1].

Big data as the cloud computing, the Internet and the IT industry is another major disruptive technology revolution.

The earliest proposed big data era is the world-renowned consulting firm McKinsey, big data in physics, biology, environmental ecology and other fields as well as the military, finance, telecommunications and other industries have existed for a long time, but because of the Internet and the information industry The development of people's attention.

A brand new means of enrichment may be placed in front of it worth as much as oil and gold.In fact, when you are still using social platforms such as Weibo as a tool for expressing or discussing controversy, Wall Street 's money-builders are digging the

"data fortunes" of these internets and their ancestors use it to anticipate market trends, and Has made good earnings. Nowadays we talk about Big data,ITt is meaning in the Internet industry refers to the phenomenon that Internet companies generate and accumulate data on user network behavior in their daily operations. "The data is new oil," said former Andreas Weigend, Amazon's chief scientist.Big data is so important that its acquisition, storage, search, sharing, analysis, and even visual presentation have all become important current research topics.

1.2 Global Economic Environment Analysis

In 2016, the world economy is still showing a recovery trend. Inadequate aggregate demand in developed economies and long-term growth rates are not high enough, and the downward trend in the overall growth rate of emerging economies can not be effectively checked. The macroeconomic policies of major economies are inconsistent. Large-scale cross-border capital flows, turmoil in foreign exchange and financial markets, geopolitical changes and natural disasters are all likely to negatively affect the operation of the world economy[2]. The World Bank also predicts that there will only be a small improvement in the world economy in 2016-2018.

In summary, the economic recovery in the past two years has been sluggish. In 2016, the global price situation continued to be sluggish. The drop in commodity prices and the insufficient aggregate demand were the reasons for the continued drop in price levels in major countries in 2015. Commodity prices also fluctuated at a low level in

2016. Overall, there may only be a small upward move to push global price levels up. The Fed's rate hike will not only curb the expansion of domestic demand, but will also reduce the effect of easing monetary policy in the euro area, Japan and other economies. The slowdown of growth in emerging markets and developing economies will continue. The increased risk of economic integration will further curb the expansion of demand in emerging markets and developing economies. Major economies such as the United States, the euro zone and Japan will also be trapped in currency Tightening risk. Certainly, a few economies such as Russia and Brazil are in the stage of stagflation with high prices and negative GDP growth. These countries need to pay a relatively large price adjustment and only after a long period of time can they resume their stable prices and economic growth.

The situation of low global trade growth is hard to be fundamentally reversed. Since the global financial crisis, the world's export growth rate of goods was restored to 20% between 2010 and 2011. From 2012 onwards, the world's export growth rate of goods dropped sharply, maintaining roughly 3% in 2012-2014. The global trade downturn further deteriorated in 2015, with a significant negative growth in global exports of goods. The global downturn was mainly due to the weak global demand[3]. The growth of the world economy mainly relied on manufacturing to rely mainly on the service industry. The global value chain expansion slowed down and the international trade negotiations progressed slowly. These factors will continue to restrain the growth of international trade in 2016. The continued downturn in global trade growth will raise the risk of trade protection and the devaluation of competitive exchange rates. At the same time, we should also see that the trend of growth in trade in services may be

strengthened in the context of the drop in global trade growth. What needs to be emphasized is that the signing of the Trans-Pacific Strategic Economic Partnership (TPP) by 12 countries such as the United States means that important progress has been made in the negotiation of regional trade negotiations and the new rules for international trade. However, since the agreement came into force as early as 2017, its positive effect on the growth of global trade in 2016 is extremely limited.

International direct investment will remain basically stable, and cross-border capital flows will be more active. International direct investment has so far not returned to its pre-2008 peak before the international financial crisis. Global M & A activity started to increase in 2015, and the trend of international direct investment has stabilized. International direct investment will continue to grow steadily in 2016, but it is unlikely to expand substantially. At the same time, cross-border capital flows will be more active and the level of cross-border capital activity will be mainly driven by three major factors: First, quantitative easing in the euro zone and Japan will continue to inject liquidity into the global market; secondly, the time for the Federal Reserve to raise interest rates further , The intensity and speed of uncertainty, so that transnational capital more inclined to short-term allocation; third is to improve the degree of international currency diversification, cross-border capital allocation of currencies more space, issue macroeconomic situation in international monetary economies, policy changes and foreign exchange Changes in the market will increase the size and frequency of cross-border capital reallocation.

If from the 50-year "long cycle", the global economic growth center continued to decline. From the 1960s to the present, the global economic growth has shown a period

of fluctuation and the general trend of declining shows that the long-term endogenous growth momentum of the global economy has become weaker and weaker. Therefore, the current difficulties in global economic growth stem not only from the impact of short-term risks but also from the lack of long-term momentum. The financial crisis has been going on for nine years now. The world is busy coping with short-term risks one after another. Policies and measures are constantly breaking the routine, but neglecting the governance of long-term problems and the reshaping of endogenous dynamics[4]. In 2017, as most countries approach the dual limits of debt and central bank, the underlying problem of economic growth can not be evaded and needs to be solved urgently.

1.3 The Role of China and Russia in the Global Economic Context

During 2005-2014, with the exception of the global financial crisis in 2009, the export of high-tech products in China showed negative growth while the rest of the year maintained high levels, exceeding 10% in most years. Especially in 2010, the global economy is gradually recovering and the export growth rate of high-tech products in China has reached 31%. Overall, since China joined the WTO, the export of hi-tech products has been on a rising pattern. Both the total export volume and the growth rate have maintained a good upward trend.

According to the transcripts of China's 6.7% growth in gross domestic product in 2016, China's national economy has been moderating steadily and steadily, and achieved a good start in the 13th Five-Year Plan. Ning Jizhe, deputy director of the National Development and Reform Commission and director of the National Bureau of

Statistics, said at a press conference yesterday that overall the operation of the national economy remained at a reasonable range in 2016, both the quality and efficiency of economic growth have been raised[5]. As a major real economy country in the world, The status has not waver. For 2016 economic growth, after the market generally expected growth rate of about 6.7%.

According to the 2017 Economic Booklet released by the Chinese Academy of Social Sciences, employment and prices remain basically stable in 2016. China's economy can achieve the economic growth target expected at the beginning of this year and is expected to grow by 6.7% for the full year. Various brokerage analysts also believe that the Chinese economy will be smoothly closed in 2016, and most people expect the fourth quarter GDP growth rate of 6.7%, unchanged from the previous value. The fourth quarter finally released data better than expected. In response, Ning Jizhe said: "At present, China is already the second largest economy in the world with a total economic output of 11 trillion U.S. dollars, a growth rate of one percentage point is a huge sum. Therefore, the economic growth rate of 6.7% In the reasonable operating range, but also in the expected range of 6.5% to 7%, is still moderate growth, and in the world is still relatively high speed. "" At present, China's economic development has entered a new normal in the past year, a new The normal features are even more obvious. "Ning Jizhe further explained that in the past year, the Chinese economy not only achieved high and medium-speed performance, but also completed the transformation of the economic structure and development mode. In 2016, the proportion of the service industry continued to increase, with the contribution rate of consumption accounting for nearly 2/3. Annual energy consumption per unit of GDP dropped by 5.0% over the

previous year. The proportion of clean energy consumption such as hydropower, wind power, nuclear power and natural gas increased by 1.6 percentage points over the previous year. In addition, the online retail sales nationwide increased by 26.2% over the previous year. Among them, the online retail sales of physical goods increased by 25.6%, accounting for 12.6% of the total retail sales of social consumer goods, up 1.8 percentage points from the previous year.

China is the second largest economy in the world and also a substantial real economy. From simplification and decentralization, simplification of examination and approval to lightening the burden and costs, from eradicating stubborn illnesses, improving the environment to protecting property rights, and stabilizing expectations ... Just in 2016, to give solid fuel to the real economy, the country has promulgated various policies and measures. As to whether there is a phenomenon of "de-solidification" in China, Ning Ji-chez said frankly that in some areas some areas may exist[6]. The Central Party Committee and the State Council attach great importance to this issue. In recent years, the government has taken a series of measures to strengthen financial services to the real economy. In particular, through the supply-side structural reform, the efficiency of enterprises has improved. This reflects the fact that the entity The economy is improving.

Looking forward, there will be many uncertainties in the environment China's economy faces in 2017, but it is still expected to maintain a steady growth while not "hard landing." The IMF raised its forecast of China's economic growth in 2017 by 0.3 percentage points to 6.5%; the UN maintained its forecast of 6.5% in China's economic growth in 2017 unchanged; and the World Bank cut the 2017 forecast of global

economic growth by 0.1% Meanwhile, the expectation of maintaining 6.5% of China's economic growth will remain unchanged. In addition, JP Morgan Chase, HSBC, Citibank and other foreign institutions also released a report expected in 2017 China's economy will be further stabilized. Xu Shaoshi, director of the National Development and Reform Commission, said that the internal and external environment facing economic development in 2017 will remain complicated and harsh. Generally speaking, the world economy is slowly recovering[7]. However, uncertainties and instability have markedly increased.Although the domestic economy stabilized slowly and steadily, it still faced some outstanding contradictions and problems. "However, China is confident, qualified and capable of ensuring that the economy is operating within a reasonable range." Xu said that predictions and predictions will be dashed when the outside world said that the collapse of the Chinese economy has fallen and "hard landing" has been unavoidable. Lian Ping, chief economist at Bank of Communications, said that if the external environment improves in 2017, the real estate market is running smoothly and private investment is picking up, China's economy is expected to grow by more than 6.5% in 2017. Lianping also stressed the importance of deepening supply-side structural reforms. He said the measures are conducive to correcting aggregate mismatches in supply and demand and distorting factor allocation while appropriately expanding aggregate demand. This will be conducive to giving full play to the two-way promotion effect of reform and development, creating a harmonious macro-economic environment and promoting microcosmic Economic environment optimization.

Russia was once the world's superpower. Although the economic situation in Russia is not as dramatic as it once was and there have even been two "rubles", Russia

is still doggedly catching up with economic development. Russia ranks second in the list of emerging economies in the world. Since the list of emerging economies was established in 2009 up to now, it is Russia's first overtaking of China. Currently, it is South Korea. Russia's GDP growth rate is low, but the country's liquidity, budget and ability to pay indicators remain strong[8].

In 2014, when all Russians were still immersed in the joy of the return of Crimea, a nightmare quietly came. Oil prices continue to fall, the ruble continued plummeting, inflation was severe, the sudden cold wave swept over to the Russian economy. This is the second post-2008 crisis in Russia. Statistics Russia reported that real incomes of Russian residents fell by almost 10% between 2014 and 2016, while almost a third of Russians lived in poverty (monthly income per capita below 9,956 rubles). However, in 2016, the Ministry of Finance announced that it had successfully organized the economic downturn and the current situation was in a recovery phase. According to the 2018 World Economic Situation and Outlook released by the UN Department of Economic and Social Affairs on December 12, 2017, Russia has stepped out of the recession. In the next two years, Russia's gross domestic product will grow by 1.9%. The report pointed out that in 2017 the global economic growth of 3%, is the maximum growth rate since 2011.In 2017, almost half of the world economic growth was attributed to East Asia and South Asia, while China alone contributed about a third. Expected in the next two years, the global economic growth rate will remain at the level of 3%. The report said: "The end of the recession in Argentina, Brazil, Nigeria and Russia has also accelerated the acceleration of global economic growth between 2016 and 2017. World trade recovery and improved investment conditions have consolidated

the momentum for economic growth." According to expert assessments, This year, Russia's GDP grew by 1.8% and is expected to grow by 1.9% from 2018 to 2019. In addition, experts believe that inflation in Russia will be 4.4% in 2018 and 3.9% in 2019.

2. DEVELOPMENT ANF CURRENT SITUATION OF SINO-RUSSIAN TRADE STRUCTURE

2.1 The history of bilateral trade development between China and Russia

As early as the early 17th century, trade relations existed between China and Russia. Trade during this period was informal. In 1689, the two countries signed the Sino-Russian Treaty of Nepal, and since then China and Russia have established bilateral trade relations based on the treaty. Since then, there have been ups and downs in the development of bilateral trade relations between China and Russia. After the founding of the People's Republic of China in 1949, due to the embargo and economic blockade imposed on China by the United States and other Western countries, during the entire 1950s, China's main trading partners were the Soviet Union and other Eastern European socialist countries and socialist countries. Trade accounts for about 70% of China's total foreign trade. Among them, trade cooperation with the Soviet Union accounted for a considerable part. However, in the 1960s, under the background of the sharp deterioration of Sino-Soviet relations, the total trade volume between China and the Soviet Union fell by 85% year-on-year in 1960, a very large drop. With the acceleration of the process of economic globalization, China's economy has improved since the country's reform and opening up. The first-tier Russian economy has gradually recovered, and bilateral trade between China and Russia has also begun to flourish and entered a new fast lane for development.

In 2002, the total trade volume between China and Russia reached 11.928 billion

U.S. dollars, a year-on-year increase of 11.8%. Since 2002, the bilateral trade volume between China and Russia has maintained rapid growth for seven consecutive years, with an average annual growth rate of nearly 30%. Among them, the year-on-year growth rate in 2007 was the highest, with a growth rate of 44.43%. The total bilateral trade between China and Russia was 48.219 billion U.S. dollars. In 2008, the bilateral trade volume between China and Russia exceeded the US$20 billion mark, reaching US$56.909 billion, which was 4.78 times the total trade volume in 2002[9].

The global financial crisis in 2008 broke out in an all-round way. The world economy is generally in a downturn. This has had a huge impact on bilateral trade between China and Russia. It can be clearly seen from Table 3.2 that the total trade volume between China and Russia in 2009 was only US$ 38.797 billion, which was a decrease of 31.83% compared with 2008, and the decline was considerable. It was the lowest point of bilateral trade volume in the five years before and after. The impact of the financial crisis on bilateral trade between China and Russia did not last long. In 2010, the total import and export volume between China and Russia quickly rose to US$ 55.526 billion, an increase of 43.12%. In 2011, the total trade volume reached a record high of US$79.266 billion, a year-on-year increase of 42.75%, exceeding US$80 billion.In 2012, the Russian President introduced a policy of“turning to the East” as Russia Ross's economic development is a priority, because of the rapid economic development in the Asia Pacific region, of which China is the most economically advanced country. One of the strong countries, so Russia strengthens cooperation with China, including economic and trade cooperation. Until the crisis in Ukraine.Now, the trade cooperation between the two countries has lagged behind.The

Ukrainian crisis led to the European Union's economic sanctions against Russia and Russia responded accordingly by restricting the import of products from European countries. This inter-state contest has promoted the development of Sino-Russian trade from the side.During the 2014 and 2015 China-Russia summits, China and Russia signed a total of 46 strategic agreements to deepen Sino-Russian cooperation in the fields of oil and gas, infrastructure construction and investment, enabling China and Russia to move toward a comprehensive strategic partnership. In the long run, this will also have a huge impact on bilateral trade[10]. At the same time, the renminbi has the right to withdraw money from the world currency, and after the joint efforts of the two countries, they reached an agreement on the direct exchange of the ruble and the renminbi, thereby more effectively promoting mutual trust and cooperation between China and Russia. China's "One Belt and One Road" strategic concept has promoted China-Russia trade and economic cooperation into a new stage of development. This is in line with the urgent trend of the modern global economy. Sino-Russian trade will gain new vitality and opportunities under the framework of economic integration.

Import and export trade, especially export trade, is an important driving force and component of economic development. The economic development of China and Russia includes the growth of foreign trade. Generally, it also includes the growth of Sino-Russian bilateral trade. In 2017, China's economic growth rate is expected to be close to or reach 6.9%, and Russia is 1.6%. According to an authoritative forecast, China and Russia's GDP growth in 2018 is likely to maintain 2017 levels. Therefore, in 2018, the economies of China and Russia continue to grow steadily, and bilateral

trade with the same basic curve as economic development will also increase substantially

2.2 Sino-Russian bilateral trade structure

2.2.1 Sino-Russian bilateral trade scale

After Russia's independence, Sino-Russian economic and trade relations have achieved new development，during the twenty-five years of economic development, bilateral trade experienced a downward trend, but the main trend is still improving.An important indicator of the scale of trade between the two countries is the volume of bilateral trade.

Picture.2.1 Total volume of trade between China and Russia (Unit: mln of dollars)

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2.2.2 Russian product structure exported to China

In 2015, Russia's main exports to China consisted of four categories: mineral

products, wood and products, mechanical and electrical products and chemical products. The export value of mineral products was19.73 billion U.S. dollars.It accounted for 70.2% of Russia’s total exports to China, reduce 31.7% year-on-year; exports of wood and products were US$ 2.21 billion, accounting for 7.9% of Russia’s total exports to China, which was a decrease of 8.2% compared to the same period last year; The export value of the product was 1.53 billion U.S. dollars, and the export value accounted for 5.6%, an increase of 7.8% over the previous year;The export value of chemical products was 1.32 billion U.S. dollars ，accounting for 9.5% of Russia's total exports to China, a 10% drop from the previous year[11]. The export volume of these four categories of products accounted for more than 80% of Russia’s total export volume to China. It is worth mentioning that in recent years, the related products have occupied a major position in Russia’s exports to China. In 2015, Russia had a significant growth in exports to China. There were three types of animal and vegetable fats and oils, transportation equipment and plant products. The growth rates were 470.3%, 284.2% and 191.9% respectively. In addition, leather products, food, beverages, tobacco and optics ，Watches, and medical equipment increased by 56.7%, 51.7%, and 35.1%, respectively. Generally speaking, the structure of Russia's export products to China is relatively single. The leading products are mainly concentrated in the raw material fields such as minerals and energy.

2.2.3 Russia's product structure imported from China

In 2015, Russian imports of major products from China accounted for 49% of

organic products, textiles and raw materials accounted for 8.9%, precious metals and products accounted for 7.4%, and imports amounted to US$ 23.46 billion, US$ 4.91 billion and US$ 3.95 billion respectively. The top three Russian imports from China. In addition, the larger quantities of Russian imports from China are furniture, toys, chemical products, plastics, rubber, footwear, umbrellas and other light industrial products and transportation equipment.

2.3 Sino-Russian Trade Product Structure Changes

Since 1990 until 2000, Russia imported major consumer goods from China, home appliances and Labor intensive goods such such food, clothing, footwear, and textiles, while exported to energy-intensive goods to China, such as refined oil, products, and timber. Wait. In short, Russia's imports of machinery and equipment, high-tech Products and high value-added products from Chinese products have a small share, but the proportion of food, textile raw materials and products and household electrical appliances in such products exceeds 60% of China's total trade volume. Fertilizers, chemical products, fossil fuels, Mineral oil and its products, fiber pulp and timber products, and seafood are the main advantages of Russia's exports to China, accounting for a total of 80% of Russia's total exports to China.

Since the beginning of the year 2000, the proportion of China’s labor-intensive exports to Russia has decreased.The proportion of metal products rose. In recent years, the proportion of electronic and mechanical equipment has been increasing. At present, these products have become It is Russia's largest export product from China. It can be seen that there has been a change in the structure of China’s exports to Russia and

Machinery and electromechanical high-tech products are exported, while Russian exports to China are still energy-intensive products.

Table 2.1 – changes in Sino-Russian product tra

years	Russian exports to China top five product categories	Russia imports the first five categories of products from China
The 90s	Iron & Steel, Fertilizer, Refined Oil, Wood, Pulp	Leather, fur products; textile raw materials and products; caps, umbrellas, etc.; live animals and animal products; plant products
2000-2010	Petroleum, petroleum products and related raw materials; wood，Steel, made into fertilizer	Apparel & Accessories; Footwear; Miscellaneous Products; Equipment for Recording and Reproduction of Telecommunications and Sound; Spinning, Fabrics, Finished Products and Related Products
2015	Mineral Products, Wood & Products, Chemical Products, Machinery & Electrical Products, Live Animals, Animal Products	Mechanical and Electrical Products; Textiles and Raw Materials; Metals and Products;Furniture, toys, miscellaneous products; footwear, umbrellas, etc.

In short, from the beginning of 2000, a firm bilateral trade structure was formed between the two countries. Russia's exports to China are still concentrated in the raw materials sector, while Russia has reduced the import of labor-intensive goods and expanded the import of electromechanical products and high-tech products from China.

2.4 An Analysis of the Problems Existing in the Sino-Russian Bilateral Trade

With the gradual deepening of economic and trade exchanges between China and Russia, the bilateral trade volume between the two countries has continuously increased. However, from the perspective of multi-angle cooperation in the trade field between the two countries, there is currently no such close cooperation as in political cooperation. The high tariff barriers and chaotic order of some products show many deficiencies.China and Russia have not reached a certain height of cooperation in the trade field. At present, there are still many structural loopholes.It has hindered the rapid development of bilateral trade cooperation between the two countries.

2.4.1 Unreasonable bilateral trade structure

The unreasonable trade structure between China and Russia hinders the development of trade cooperation between China and Russia and two neighboring countries.The big problem. The first thing to consider is the type of goods imported and exported by the two countries, because the production structures of the two countries are different.China's main export food, textiles, clothing, shoes, etc. are all labor-intensive products; Russia's exports to China are mostly raw material-intensive products such as steel, minerals, petroleum, and even wood. At present, China is gradually improving With science and technology driving the production level, China will also increase the

export of high-value-added products and develop the current trade.In terms of form, the proportion of high-tech products exported to Russia is still low, and it is not enough to single out China and Russia.The status of trade exchanges has improved. From Russia's perspective despite Russia's superior geographical location and reserves rich in various mineral resources and possesses the world's top-level science and technology to develop various resources, but Russia has the types of products that come to China from the beginning have been resource-intensive products. Although China currently has realizing that there are many deficiencies in the trade institutions of the two countries and at the same time doing their utmost to improve the current trade balance.However, in the short-term, most of China-Russia trade-related commodities are still primary consumer goods.

2.4.2 The bilateral trade system is not standardized

Although China and Russia, two neighboring great powers, have long been engaged in cooperation in the trade field for many years, the two countries still have not formed a complete supervision system in the process of bilateral trade cooperation.Since then, various commodities exported from China have been blocked by all kinds of tariff barriers and unfair government regulations in Russia.Take China's labor-intensive products such as home appliances and clothing as an example. Russia will also impose price restrictions on these products with little added value, because the current trade cooperation between China and Russia is not fully legally guaranteed.Russia's unilateral

such practices have seriously hampered the normal and reasonable trade cooperation between China and Russia and the development of bilateral trade, specifically as follows:

(1)Technical Barriers to Trade

Because Russia must protect local brands and products on its own market while carrying out foreign trade, it has excessively used technical barriers in bilateral trade between China and Russia to prevent some Chinese products from entering the Russian market. Russia requires that products exported from China into the Russian market be of higher quality than Russian products, especially food, clothing, textile products, televisions and other intensive products. Unreasonable quality requirements are very unfair to China's exports of Russian-related products. With the development of related technologies in Russia and the gradual improvement of its market management, Russia is not self-sufficient but has greatly increased its own supply. On the other hand, labor-intensive products in other countries have also continuously improved its quality. Coupled with a variety of consumer demand trends have seriously affected the advantages of Chinese products sold in Russia.

(2)Tariff barriers

Tariff barriers are another very important obstacle to China’s export to Russia. So far Russia’s tariff collection system for imported goods has been stricter, with products with tariffs as high as 25% already accounting for about 10% of all products. Import tariffs as high as 30% of products are mainly tobacco, clothing, plastic products, and automobiles. Naturally, they are not conducive to the development of foreign trade of exporting countries. The other is an unfair market access mechanism. Under the

background of the current economic cooperation between China and Russia, if any company in China is operating a subsidiary or operating branch in Russia, it must re-register the company in Russia, but it has also increased the investment cost of Chinese businesses in Russia. The difficulty of Chinese companies operating in Russia. In addition, some of the restrictions on the import of Russian products into China are not tariff restrictions. However, restrictions on the inspection and quarantine of imported products from Russia, or the transportation of ports and even the flow of workers have caused inconvenience to Chinese products.

(3)The lack of protection of laws and regulations in bilateral trade

Laws and regulations can provide fair and equitable protection in all aspects to protect rights and interests in any aspect, and it is no exception in the area of trade.At present, bilateral trade cooperation between China and Russia still has great deficiencies. The background is the lack of sound legal protection, and there are a lot of problems. This requires the two governments to work together to solve effectively. For example, some Russians In the event of a frustration, companies with poor management and management choose to directly replace their legal entities, resulting in the Chinese companies that are cooperating with them often suffer from non-payment of arrears.Under this background, it is difficult for China and Russia to continue their trade cooperation. Only a series of laws and regulations that are sound and complete as soon as possible can provide strong guarantees for the normal development of bilateral trade relations between the two countries. Only under a reasonable and effective legal background can we be fair and just. Dealing with talents has enabled the trade cooperation between China and Russia to develop substantially.

2.4.3 Incomplete trading service system

At present, the trade cooperation between China and Russia is gradually increasing, and the scale of trade between the two countries is also getting bigger and bigger. However, a good service system has not yet formed in the entire development process. The concrete manifestations are as follows: First, China and Russia International The level of transport is underdeveloped. Although the respective water, land, and air transportation capabilities and technological levels have reached a certain height and a three-dimensional transportation network has been established in their respective countries, as the bilateral trade between the two countries has achieved rapid development, the previous level of transportation is insufficient. To transport the ever-growing imports and exports, China and Russia should quickly complete more railway lines and use science and technology to improve the infrastructure of railway transportation and other modes of transportation.Secondly, the settlement of economic transactions is not good. Chinese banks are very convenient for the people. However, Russian banks have great deficiencies in their operating systems. Bank users have difficulty in freely depositing and withdrawing money. Some banks even use their own money to serve customers in order to make profits in the interest of customers. The change of business led to the suspension of business, bankruptcy, and bankruptcy, which made it difficult for China and Russia to settle their settlements in the course of trade cooperation.Thirdly, there are a lot of talents who lack high-level talents and have

professional scientific and cultural knowledge or management experience. But at the same time, there are very few talents who understand the culture and customs of China and Russia very well.This has hindered the smooth cooperation between China and Russia in the economic field, including trade cooperation. Only by cultivating various types of multipurpose talents with comprehensive development in all aspects can the trade between the two countries develop normally and steadily.

3. THE RISE OF HIGH-TECH PRODUCTS IN CHINA

3.1China's high-tech product trade status

In recent years, China has vigorously developed export trade of high-tech products and accelerated the process of internationalization of China's high-tech industries. The so-called high-tech products, that is, high technological content, high added value, and high-tech means of producing knowledge, technology-intensive innovative products, since China’s accession to the WTO, the proportion of high-tech product exports in the global trade share has steadily increased. From 6% in 2000 to 37% in 2014. China has become one of the world's leading exporters of high-tech products.In 2017, the total value of imports and exports of China's goods trade was 27.79 trillion yuan, a year-on-year increase of 14.2%, reversing the previous two consecutive years of decline. "Nihon Keizai Shimbun" said that in 2017, China's imports of soybeans, aircraft, crude oil and natural gas from the United States increased, but at the same time, under the backdrop of a strong US economy, exports of Chinese electronic products also ushered in growth. The trade surplus expanded. As a microcosm of all-round progress in China's high-tech fields, Huawei has emerged as a global leader in information and communications technology (ICT) solutions. Huawei has achieved remarkable progress in international development. Achievements, in terms of technological innovation, have reached world-class standards, and it is necessary to analyze their technological innovation models and provide reference for other international development companies. Based on the relevant theories of the technological innovation model and Huawei's

development status, the following will analyze the technological innovation model of Huawei's international development.

High-tech industries have increasingly become pillar industries in China, and their major impact on the national economy has become increasingly prominent. Especially when the impact of the international financial crisis is still continuously fermenting and deepening, how can China use high-tech industries as a breakthrough in economic restructuring to transform the disadvantageous position of China's high-tech industries in the international division of labor in the past and maintain the high-speed growth of high-tech industries? At the same time, cultivating new growth points, raising China’s technological innovation level and upgrading its own structure of the high-tech industry are of great significance to the upgrading of China’s economy as a whole and the transformation of its economic development mode.

3.1.1 China's high-tech product trade development overview

Currently in China's "China's high-tech products export directory" used, the high-tech products are divided into 9 categories: life science and technology, biotechnology, optoelectronics, computer and communications technology, electronic technology, aerospace technology, materials technology, Computer integrated manufacturing technology and other technologies.Since 2001, the import and export trade of high-tech products in China has been on a steady rise.By 2013, China's total trade in high-tech products reached US$ 218.252 billion, accounting for 29.3% of China's total import and export of goods, and it also accounted for more than 34% of industrial finished goods. In 2004, the export of high-tech products in China exceeded

imports for the first time and became a net exporter of high-tech products. The scale of exports reached 165.4 billion U.S. dollars. By 2013, the export volume had reached 660.33 billion U.S. dollars, which was 4 times that of 2004. In the export structure of high-tech products in China in 2013, computer and communication technologies accounted for 66.50%, accounting for more than half of the total export of high-tech products, and exports reached 339.090 billion U.S. dollars, an increase of 4.73% year-on-year, ranking first among China's high-tech products.Second place is electronic technology products, with the fastest growth, reaching 34.74%. Others, such as aerospace technology, biotechnology, and materials technology, accounted for no more than 1% of exports, but their growth rates remained at double digits. Among the nine major technical fields, optoelectronic technology is the only negative growth area, which is down 0.41% year-on-year.

3.1.2 China's exports of high-tech products continue to rise

Since China's accession to the WTO, the economy has continued to grow steadily. At the same time, along with the process of reform and opening up, China has also profoundly realized that the development of high-tech industries has an important role in promoting the sustained and stable growth of the national economy. The whole society is very concerned about and supports the development of high-tech industries, and has issued corresponding supporting policies, such as the "863" plan, the Torch Program and other high-tech research. In the wave of reform and opening up, the export volume of high-tech products in China has also been unprecedentedly high, showing a pattern of continuous rise. In 2014, the export volume of high-tech products in China

reached US$726.3 billion, an increase of 10% over the same period of the previous year, and ranked first in the world's exports of high-tech products. Between 2005 and 2014, except for the impact of the global financial crisis in 2009, China's high-tech products showed a negative growth in export volume, and remained high for the rest of the year. The growth rate in most years exceeded 10%. In particular, in 2010, the global economy gradually recovered and the growth rate of China's high-tech product exports reached 31%. In general, since China's accession to the WTO, exports of high-tech products have continued to rise, and both the total export volume and the growth rate have maintained a good upward trend.

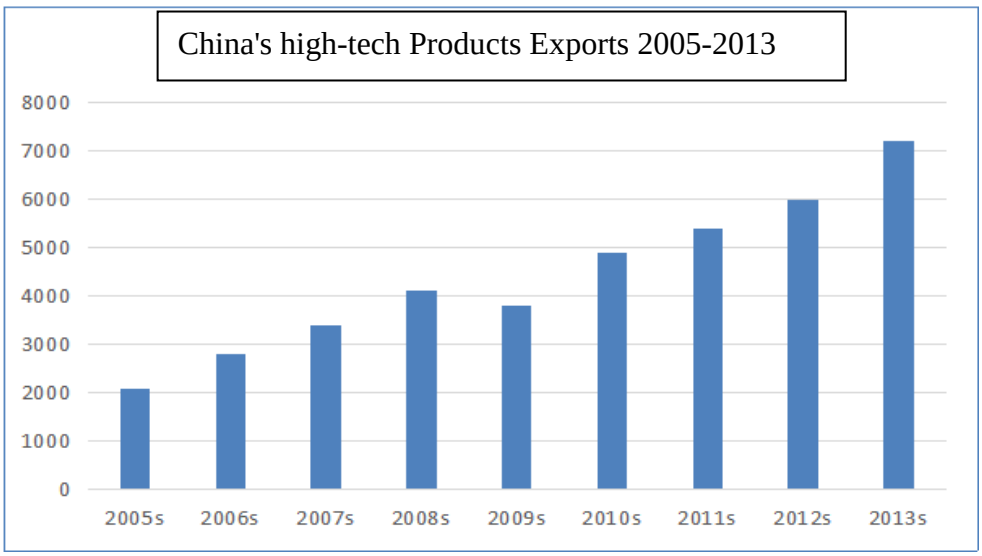
3.1.3Export of high-tech products in China is mainly based on processing trade

According to customs statistics, in 2013, China's high-tech products were mainly processed by processing trade, accounting for 65.33% of the export of high-tech products, with a total value of USD 431.420 billion, of which the raw material processing trade was USD 40.306 billion, accounting for 61% of the total. General trade accounted for 16.8%, an increase of 17.2%.

For a long time, the proportion of China’s exports of high-tech products to processing trade has been consistently higher. According to statistics from the General Administration of Customs, China’s exports of high-tech products were still dominated by processing trade in 2014, totaling US$444.496 billion, accounting for 61.3% of total exports. In fact, since China’s accession to the WTO, it has gradually adjusted the export structure of high-tech products, which has fallen sharply compared to 88.6% in 2000. However, compared with the average level of about 20% in the developed countries, the

proportion of exports of processing trade in China is still very high. For a long time, China’s exports of high-tech products have been dominated by natural resources and labour-intensive industries, and the content of science and technology has been low. In particular, material processing has been extremely successful. For example, in 2014, as much as 60.34% of China's high-tech products were exported to the processing trade, while only 17.3% were exported from general trade. Although industrial policies and trade models based on processing trade have made important contributions to promoting the economic growth of China's high-tech industries. However, the experience of developed countries shows that the structure of export commodities plays a key role in promoting industrial development and economic growth. As a result, in the new era, the development of China's high-tech industries must adjust the export structure of products and upgrade the technological level and added value of export products

Picture.3.1 – China's High-tech Products Exports 2005-2013



3.1.3 Foreign-funded enterprises are the main force for the export of high-tech products in China

Among the high-tech export enterprises in China, foreign-funded enterprises have occupied a dominant position for a long time. The so-called foreign-funded enterprises are Sino-foreign joint ventures, Sino-foreign cooperation, and foreign-invested enterprises. Between 2005 and 2010, the proportion of high-tech products exported by foreign-funded enterprises was maintained at over 80% for a long period of time, and fell to around 75% in 2011-2014. Since the international financial crisis in 2008, the situation of foreign-funded enterprises occupying a dominant position in the export of high-tech products in China has improved slightly. In 2014, the proportion was still as high as 72.9%. It can be seen that foreign-funded enterprises have always been the main force for the export of high-tech products in China, and this trend will remain for a long time to come. In addition, the proportion of high-tech products exported by state-owned enterprises has continued to decline, from 9.5% in 2005 to 5.5% in 2014. The proportion of high-tech products exported by collective private enterprises has shown an upward trend, rising from 6.3% in 2005 to 21.6% in 2014. In the coming period, the pattern of foreign-funded enterprises occupying a dominant position in the export of high-tech products in China will not change, but with the vigorous development of collective and private high-tech enterprises, the share of high-tech products exported by foreign-funded enterprises will gradually be reduced.

3.1.5 China's high-tech product exports are dominated by electronic and communications technology products

It is not difficult to find in the export structure of high-tech products in China that computer, electronic and communication technology products have long dominated the market. Between 2005 and 2014, computer and communication technology products accounted for more than 60% of China's largest high-tech export products, basically hovering at an average level of 66.25%. Electronic technology products are China's second-largest high-tech export products. The proportion is more than 20%, basically fluctuating at an average of 24.88%. For a long time, computer and communication technology and electronic technology products accounted for a large proportion of the total export of high-tech products in China, and exceeded 90% in 2005-2011. Since 2012, the decline has been mainly due to the rapid growth of these two types of products, which has led to a large increase in the total export of high-tech products in China, which has caused the increase in the denominator to outweigh the increase in the number of molecules, thus reducing the two types of products. proportion. However, in 2014, these two types of products still accounted for 87.22% of China's total exports of high-tech products. The export of high-tech products in the fields of life science and technology, aerospace and aviation technology account for a relatively small proportion, and have not changed much in the long term.

Table.3.1- Distribution of China's Hi-tech Product Exports from 2005 to 2014

Types of high-tech products	2005	2008	2011	2014
Computer and Communication Technology	66.8%	64.5%	67.2%	66.5%
Electronic technology	27.1%	27.3%	24.4%	20.72%
Computer Integrated Manufacturing Technology	2.87%	2.95%	3.17%	3.42%
Life Science and Technology	0.89%	0.92%	1.03%	1.66%
Aerospace Technology	0.65%	0.68%	0.71%	0.77%
Other technologies	1.69%	3.65%	3.49%	6.93%

3.2 Obstacles to the Export of High-tech Products

（1）Strength of business R & D investment is not enough, uneven development between enterprises

In the new era, the competitiveness of high-tech industries determines the economic competitiveness of a country, and high-tech industries are technology-intensive industries. Therefore, the level of high-tech industry technology will directly determine the competitiveness of product exports, the country's overall competitiveness. According to international practice, Research and Developmen's strength is used to measure a country's level of research and technology, that is, the percentage of research input that accounts for industrial added value. Statistics show that China's high-tech products are faced with severe technological obstacles in the development of export trade, and the R&D intensity of various high-tech enterprises is generally low. Even the computer and communication technology enterprises and electronic technology enterprises that are the main force for the export of high-tech products in China, the R&D intensity is only 3.2% and 2.5% respectively, which is less than one-tenth of the United States. In fact, among the high-tech enterprises in China, some companies' R&D investment has reached or even surpassed that of developed countries, but most enterprises have not invested enough. For example, in 2014, China's Huawei Technologies Co., Ltd.'s operating revenue was approximately US$47.068 billion, and R&D investment reached US$6.515 billion, accounting for 13.84% of the

total , However, the average global high-tech company is about 12%. However, if we look at the industry as a whole, in 2014, a total of 466 companies in the top 500 Chinese high-tech companies have invested R&D expenses totaling US$73.225 billion, which represents an increase of 5.2% over the previous year. The average R&D investment is only US$157 million. In addition, various types of high-tech companies are characterized by unbalanced technological development. For example, the R&D intensity of aerospace technology companies has reached 16.9%, which is far lower than that of developed countries. The R&D intensity of medical technology companies, medical equipment and instrumentation companies is only 2.4% and 2.5%, which is far from the developed countries.

（2）Labor productivity of China's high-tech industries is far lower than that of developed countries

In the 21st century, the country's economic growth is closely linked with the construction of talents. According to international practice, the use of labor productivity reflects the level of per capita production capacity in the high-tech industry. From the data in the table, low labor productivity has become one of the major obstacles to the development of China's export of high-tech products. In China's high-tech industries, the highest labor productivity of medical technology companies has reached US$ 56.4 thousand per person, which is close to that of Germany and South Korea. However, it is far from the United States, Japan, and France. As the main force for the export of high-tech products in China, computer and communication technology companies and electronic technology companies have a labor productivity of only 31.8 thousand US dollars per person and 28.7 thousand US dollars per person, which is a difference of 4

times and 5 times respectively from the United States. Labor productivity can be used as an indicator to measure the competitiveness of a certain industry. It can be seen that the development of China's export of high-tech products lags far behind that of developed countries. At the same time, factors such as the lag in the construction of managerial talents and the lack of innovative talents have also hindered the development of China's high-tech product export trade.

Table.3.2-Labor productivity of high-tech enterprises in some countries in 2014 (Unit: thousands of dollars per person)

High-tech enterprise classification	China	USA	Japan	Germany	Paris	England	Korea
High-tech enterprise	34.9	117.3	89.8	52.6	78.8	78.7	56.3
Pharmaceutical Technology Enterprise	56.4	212.1	236.2	75.8	131.2	127.4	93.5
Aerospace Technology Corporation	21.9	94.8	95.6	70.3	109.4	68.4	80.5
Computer communications technologycompanie	31.8	127.4	79.4	44.5	41.8	83.6	40.4
Electronic Technology Enterprise	28.7	150.2	82.5	54.2	72.7	77.2	30.4
Electronic Technology Enterprise	21.5	74.9	82.5	43.9	66.1	60.3	44.2

Labor productivity of high-tech enterprises in some countries in 2014 (Unit:

thousands of dollars per person

（3）The export structure of high-tech products in China is relatively concentrated

The high-tech products exported by China are mainly components and accessories for computers and mobile phone products. Further analysis, on the one hand, China's high-tech export products are relatively concentrated in the structure, mainly to process and produce parts and components. In the export trade of high-tech products in China in 2014, only 60.34% of them were imported and processed. Many export companies are just “assembled workshops” for multinational companies and their profits are extremely weak. For example, the national average profit rate of China's electronic information industry in 2014 was only about 3%. This low-value-added labor-intensive development model has brought about serious environmental pollution and resource consumption problems, which is not conducive to the sustained development of China's high-tech product export trade. On the other hand, there are fewer high-end products, and the industry's overall industrial chain is still mostly at the low end. For example, most Chinese IC companies can only produce low-end IC products, and 80% of high-end IC products rely on imports. In 2014, China’s exports of high-end products such as laptops and digital cameras accounted for less than 1%. This series of data shows that the production of high-tech products in China is in the middle and low end of the industrial chain, the export competitiveness is not strong, and the degree of dependence on foreign technology is high[11].

(4) The lack of independent innovation of international brands and standards in the export of high-tech products in China

Since the 1990s, China has put forward the strategy of "building a country

through science and technology innovation," and the high-tech industry has achieved a leap-forward development. More and more high-tech companies recognize that independent innovation capability and brand building are the soul of the company, a symbol of high quality, and an important carrier of high added value. For example, the unmanned aerial vehicle independently developed by Shenzhen Dajiang Co., Ltd. has become the overlord of the consumer-grade drone market, occupying 70% of the global market share and becoming an international standard. In 2014, China has released 20 national standards, forming a standard system for evaluating the value of Chinese brands. However, overall, there are not many international brands and standards for independent innovation in high-tech companies in China. There are two main reasons for the analysis: First, China has a certain gap with the developed countries in terms of brand building, brand development, brand awareness, etc. Second, the brand value evaluation mechanism and evaluation method do not form an international unified standard, and even there are flaws. . In January 2014, China, the United States, Germany and other countries were approved by the International Organization for Standardization (ISO) to establish the ISO/TC289 Brand Evaluation Technical Committee, which will gradually unify the brand evaluation criteria. China should continue to strengthen in this regard.

3.3Relevant countermeasures to optimize China's high-tech product export

(1)To create a complete, competitive and orderly domestic market environment

To upgrade the quality of China's high-tech products, promote industrial upgrading and upgrade core competitiveness, we must create a sound, competitive and orderly

domestic market, and promote the interface with the international market[12]. At present, with regard to China's domestic market environment, there are excessive protection and administrative interventions, which seriously stifle the company's innovative spirit and ability. Under the background of global economic restructuring, China must seize the opportunity to provide a mature and orderly market environment for the development of high-tech industries from two perspectives. First, take the opportunity of global IT and IC manufacturing shifts to China. Re-adjust the layout of high-tech industries. Grasping the opportunity of global industrial transfer, we will introduce industries with high technological content and strong innovation capabilities, so as to promote the optimization of China's high-tech product structure and the continued growth of export competitiveness. Second, establish a reasonable price protection system and promote healthy competition among domestic enterprises. Avoid the destructive effects of high-tech product quality and lack of innovation due to deliberate low-cost competition.

(1) Improve technological innovation system and strengthen capital and technology investment

At present, the export of high-tech products in China is facing the technical bottleneck. From the analysis of national conditions, as a developing country, high-tech companies generally have small-scale and weak technical foundations, and they are unable to invest huge amounts of technology. However, in today's increasingly fierce international competition, China's exports of high-tech products must take the road of new technologies and new products. Therefore, we can start from the following paths: First, to strengthen the government's guiding role in technological innovation, to focus

resources on making breakthroughs in key areas, and second, to introduce support policies from fiscal, taxation, and financial aspects. Science and technology enterprises' technological innovation activities lay the funding conditions and increase investment in R&D; thirdly, transform government functions and promote and promote cooperation between production, learning, and research;Fourth, the government must cultivate a healthy and orderly market system and severely investigate and deal with counterfeit and inferior products infringement; Fifth, establish industry associations, strengthen industry self-discipline, and improve market functions.

(2) Create a good independent brand and establish a good corporate image

According to WTO statistics, there are many global brands, but less than 3% of brand-name products have a 40% market share and 50% sales. It can be seen that the international market competition has entered the brand strategy period[13]. In order to further develop the high-tech industry and promote the upgrading of the product export structure, China must change the current mode of economic growth based on processing and assembly, and gradually shift to high-tech and high added value. At the same time, through the improvement of product quality, performance, etc., create their own brands, establish a good corporate image, gradually seize the market and increase market share. In addition, the independent brand is not only reflected in the "marketing link," but runs through the entire industry chain. As a result, when China's high-tech industries create and nurture their own brands with core technologies, they must co-ordinate the overall situation, promote the optimal allocation of resources, use them as an important part of transforming the mode of economic growth, and strengthen cooperation with research institutes and universities to promote Technological innovation.

(3) Increase the input of human capital, especially knowledge-based human capital

In the 21st century, the competition for talents has become increasingly evident. Especially in the development of high-tech industries, the contribution of human capital has become increasingly prominent. Employees' intelligence and distinct personality characteristics give the company unlimited creativity[14]. From the experience of developed countries, the contribution of human capital is a key factor in the development of high-tech industries. The increase in the stock of human capital is bound to bring high returns to the company. However, lack of talent, especially lack of knowledge-based human resources, has become a high technology in China shortage of product export trade development. Therefore, China must take the strategy of rejuvenating the country through science and education and lay a solid talent team for economic development. On the one hand, nurture technology, marketing, management, foreign trade, and technical talents to promote human capital appreciation. On the other hand, we must strengthen the international exchange of talents and promote the exchange of advanced technologies and management concepts through the "going out and introducing them." Through the above two paths, the two-pronged approach will increase investment in human capital, thus increasing the stock of human capital for the export of high-tech products in China in the short term, and promoting its healthy and orderly development.

(4) Pay attention to and use international marketing methods to promote the export of technology products

For high-tech products, there are two uncertainties. One is technology and the other is market. Therefore, in order for Chinese high-tech product export companies to succeed in international marketing, they must pay attention to these two factors and focus on the following aspects: First, establish the overall product concept.Improve product technology content. To improve the competitiveness of products in the international market, we must establish the overall product concept starts. The company's production is guided by the market and customer needs. It focuses on applicability and cost-effectiveness while enhancing the technological content of products. It accelerates the upgrading of products, ensures the diversification and personalization of products, promotes the standardization of product packaging and decoration, and strengthens export products. After-sales service to improve customer loyalty. Second, a variety of means to unite and jointly strengthen product promotion. With the help of the media, companies are promoted to increase their visibility and promote their internationalization[15]. Such as the use of international television channels, million Internet and other publicity. In addition, the celebrity effect can be used to expand the impact of products on the international market. Third, improve export channels and promote the integration of industry and trade. Gradually improve and perfect the price system in foreign trade, implement the agency system, promote the formation of the relationship between supply and demand for free pricing, and promote the balance between supply and demand.

4.CHINA-RUSSIAN HIGH-TECH INDUSTRY COOPERATION ANALYSIS

This chapter fully analyzes the achievements of high-tech cooperation between China and Russia and summarizes the major parts of the high-tech cooperation mechanism and mechanism in China and Russia, as well as the high-tech cooperation between China and Russia.

4.1China-Russia high-tech industry cooperation history

4.1.1Sino-Soviet high-tech cooperation

The history and experience of scientific and technological cooperation between China and the Soviet Union are a solid foundation for the future development of high-tech cooperation between China and Russia. Sino-Soviet scientific and technological cooperation has experienced a tortuous course, and all stages show different characteristics.

The first stage of the 1950s was a brilliant stage for the cooperation between China and the Soviet Union. The former Soviet Union aided the construction of 156 key projects in China. With the cooperation of these major projects, the two countries also conducted extensive scientific and technological cooperation. The second phase From the 1960s to the 1970s was a period of stagnation in the cooperation in science and technology between China and the Soviet Union. The economic, trade and scientific

cooperation between China and Russia plunged to 1968, and the border trade that has been going on for many years was completely suspended. In the mid-1970s, Although the trade with SU has risen somewhat, it is very unstable. Science and technology cooperation and exchange of talents among universities and research institutes in the forms of civil cooperation have remained trickier. From this historical experience, we can see that exchanges and cooperation in science and technology between China and Russia depend to a large extent on the stability of the long-term strategic and cooperative relations between the two countries in their political relations so as to promote the strides in economic and trade cooperation. Provide good opportunities for science and technology cooperation.The third stage From the 1980s to the early 1990s, Sino-Soviet scientific and technological cooperation entered the stage of restorative growth. The gradual improvement of Sino-Soviet relations has also led to changes in the economic and trade relations between the two countries, opening up new prospects for the Sino-Russian scientific and technological cooperation. In December 1984, China and the Soviet Union signed four agreements on economic, trade and scientific cooperation. At the same time, science and technology cooperation has also entered the stage of official and non-governmental progress from the form of cooperation with the private sector. In 1987, China Science and Technology Commission awarded Heilongjiang province the right to sign and manage the second-level agreement on science and technology cooperation with the former Soviet Union. In September 1988, China and the former Russian Federation's Planning Commission signed the Agreement on Science and Technology Cooperation between Heilongjiang Province in China and Siberia, the Far East of the Russian Federation, the Soviet Union.

4.1.2Sino-Russian high-tech cooperation

Since the 1990s, the scientific and technological cooperation between China and Russia has generally gone through three stages

The first stage is to resume the adjustment phase. In the early 1990s, with the disintegration of the Soviet Union and the normalization of Sino-Russian relations, the scientific and technological cooperation between the two countries began to recover. In 1992, the two countries signed the Agreement on Science and Technology Cooperation between the Chinese and Russian Governments, laying the legal foundation for the scientific and technological cooperation between the two countries in accordance with international conventions. The agreement was immediately included in the science and technology set up by the Sino-Russian economic and trade cooperation committee at the vice premier level Cooperation sub-committee. Russia's policy on science and technology cooperation with China at this stage is to encourage and support the establishment of direct scientific and technological cooperation among counterpart departments, research institutes and regions, and to strengthen cooperation projects in technology trade and high technology.

The second stage is the transitional normative stage. At the suggestion of Russia in 1995, the two countries established their own "China-Russia Science and Technology and High Technology Center" association with the purpose of making use of the preferential policies of China Hi-tech Development Zone and giving play to the advantages of Russia's science and technology and attracting international capital to

promote high and new technology in their respective countries Technology industry development. The establishment of the Sino-Russian strategic partnership of coordination in 1996 opened a new page for the scientific and technological cooperation between the two countries. With the deepening of scientific and technological cooperation and the continuous expansion of the scale, the mode of operation of science and technology cooperation between the two countries under the existing trade, economic, scientific and technological cooperation committee has become unsuitable for the new situation. During the regular meeting between the prime ministers of the two countries in 1997, the two sides formally decided to set up a sub-committee on science and technology cooperation within the framework of the Commission to unify and coordinate matters in the field of scientific and technological cooperation. In the framework of the subcommittee, the two countries also set up the "Working Group on Cooperation between Key Research Institutes of China and Russia" and adopted various policy measures to support the scientific research institutions and enterprises of the two countries in promoting science and technology achievements in science and technology parks and strengthening the management of science and technology parks Exchange and form a bilateral cooperation mechanism in high-tech fields.

The third is the stage of industrialization and technological innovation. In recent years, as Russia has accelerated the process of commercialization, industrialization and exportation of its high-tech products, Russia's scientific and technological cooperation has entered a new phase of industrialization and technological innovation. In 1998, at the initiative of Russia, "China-Russia High-tech Industrialization Demonstration Base" was officially launched in Yantai High-tech Development Zone. In 1999, a joint

Sino-Russian innovation working group was set up within the framework of the Sino-Russian S & T Cooperation Subcommittee. In the same year, during their regular meetings, the prime ministers of the two countries signed the Agreement on the Protection of Intellectual Property and Rights Distribution Within the Framework of the Agreement on Science and Technology Cooperation between the Chinese and Russian Governments, and provided the legal basis for resolving the intellectual property issue between the two countries.

4.2China-Russia high-tech industry cooperation

In recent years, high-tech cooperation between China and Russia has seen a good momentum of expansion in the field. The bilateral cooperation projects involve a wide range of industries, including not only cooperation in nuclear energy technology and military high-tech cooperation, but also cooperation in such fields as ecology, new materials, environmental protection and marine development. These cooperation have expanded from general trade cooperation to technical and economic cooperation.

At present, the cooperation between China and Russia in the military field is gradually heating up. In the past, the military exchanges between China and Russia basically remained at the level of procurement of military products. Russia has now sold Russia's important military technology to China. The cooperation and exchanges between China and Russia in the military are deepening, especially the Sino-Russian military aviation cooperation. The largest area of Sino-Russian high-tech cooperation is the new energy cooperation. Sino-Russian nuclear energy cooperation is not only an important project of high-tech cooperation between China and Russia in new energy

sources, it is also a very important aspect of the cooperative relations between China and Russia. In addition, China and Russia cooperate on centrifuge technology. In 2015, both sides continued to cooperate in the nuclear energy field within the framework of the contract signed between Russia's technology supply exporting company and China Atomic Energy Corporation. Russia uses advanced gas uranium enrichment centrifuge technology to provide support to the fourth phase of China's uranium enrichment plant. It should be noted that the complementary advantages of space aviation between China and Russia will enable both parties to make more contributions in the international market and will also promote the world's space undertaking to a higher level. In addition, the prospect of cooperation in civil aviation between China and Russia is optimistic.As for aerospace, Russia has trained a number of astronauts for China. In 1997, two more astronauts returned with the best achievements. An important part of the cooperation between China and Russia in the space field is cooperation in the field of manned spaceflights. China and Russia have conducted mutually beneficial cooperation and exchange in the field of manned spaceflight. The two countries have conducted active cooperation in astronaut training and manned spacecraft development and have played a helpful role in promoting the development of manned spacecraft in China. Sino-Russian biological agriculture cooperation also has good prospects for development. Russia has many valuable experiences and first-rate research results in the use of biological pesticides, bioactive substances and prevention and treatment of diseases and pests by natural enemies. Russia is already a world leader in the research of synthetic diamond and its superhard composites. In a study tour of the Institute of High Pressure Physics at the Russian Academy of Sciences, the delegation of China's geology focused on the

synthesis of "Kajenat", one of the latest superhard composites developed by the institute, Compared with the natural diamond, the wear resistance is improved and the strength is also obviously improved. This new technology is currently in the leading position in the world. By examining and hiring Russian experts to teach technology and give lectures in China, Chinese professionals have basically mastered this unique technology and have greatly promoted the successful production of superhard materials in China and can be widely used and promoted in industry.China and Russia have also made some achievements in the technical cooperation in new nano materials. East China University of Technology Institute of Chemical Physics, the introduction of Russia Qiao KW microwave plasma nanoparticle preparation device successfully developed the core technology of nanoparticle preparation. Shanghai Municipal Science and Technology Commission and Shanghai Emerging Technologies and Emerging Industries Office jointly initiated the project by the East China University of Science and Technology Institute to undertake cooperation with Russia to develop a rapid condensation control of particle growth and condensation technology, made of a variety of metals, nitrides and oxidation Nanoparticles, and proposed the morphology of nanoparticles control methods.

4.3China-Russia high-tech industry cooperation mechanism

The high-tech cooperation mechanism between China and Russia is a cooperation platform jointly established by the two countries. It is itself an intimate reflection of the close cooperation between the two countries and is determined by the cooperation momentum and the goal of cooperation. Therefore, the efficient operation of high-tech

cooperation mechanisms between China and Russia depends to some extent on the degree of coordination among the various components. Fundamentally, the main body of the cooperation between the two countries was originally the political system, scientific research system and economic system of all countries. These three systems have a profound relationship with the national innovation system. In fact, they are part of the national innovation system. We can say that the high-tech cooperation between the two countries itself is the cooperation between the innovation systems of the two countries. Therefore, the efficient and pragmatic operation of high-tech cooperation mechanisms between China and Russia depends on the pace of establishing an innovation system between the two countries. Building an innovation system is both an inherent need of industrialization of high-tech achievements and an inevitable requirement for the continuous deepening of high-tech cooperation between China and Russia. At the mature stage of the industrialization of high-tech cooperation between China and Russia, we must persistently carry out concept innovation, policy innovation, organizational innovation, mechanism innovation and management innovation, take concept innovation as the guide and incentive mechanism as the medium to drive management, policies and organizations , Models and other related aspects of innovation, so as to construct a complete innovation system of high-tech industry cooperation between China and Russia.The innovation efficiency of the innovation system depends on the interconnection and cooperation among the various innovation actors and on the resulting creative synergies. If only the main body of each of the efficient operation, and the technical flow between the actors and the end of the flow of resources or ineffective, the efficiency of innovation can not talk about. To build an

innovation system, we must give full play to the initiative, initiative and creativity of participating in the main body of high-tech cooperation between China and Russia. Only by building an innovation system can we inject momentum into the high-tech cooperation between China and Russia. In the process of changing the innovation system, the main principles are the integration between education, science, rights institutions, investors, producers and consumers, And customer-oriented.The continuous improvement of the concept of the main body of the innovation system is one of the main conditions for creating a competitive high-tech product market and balancing the interests of the members in the process of innovation.

In the traditional concept, the relationship between the various parts of the system is linear, but under the conditions of the new economic development, the main body should be a ball-type connection. The modalities of this innovative system are based on the creation of high-tech products with new ideas, concepts, techniques and methods as a starting point for building a close link between education, science, production and markets. From the research and development stage, the development of certain characteristics of new products in a timely manner according to market requirements, so that if the stage of industrialization and commercialization will reduce the risk of investors, reduce the cost of products to meet market requirements. In the high-tech cooperation between China and Russia, enterprises can also play the role of "ultimate customer consumer". In order to develop long-term cooperative relations, we must be guided by the needs of our partners and the markets of our partners, and at the same time we must continue to improve our cooperation mechanism.

The more complete the innovation system of the two countries, the more

standardized and efficient the high-tech cooperation among nations will be. The main body of the two countries' national innovation system consists of three parts: one is the "government" of the rights institutions belonging to the political system; the other is the relevant departments and organizations of education and scientific research belonging to the scientific research system; the third is the producers and enterprises belonging to the economic system Home "business."

This is the main high-tech cooperation between China and Russia, because high-tech itself is a product of the innovation system. The cooperation partners can establish cooperation directly or cooperate through cooperation platform jointly created. The cooperation platform generally includes the cooperation mechanism between governments, the joint scientific research cooperation mechanism, the co-construction of production bases such as science and technology parks, consulting structures, incubators and industrialization centers and other cooperation mechanisms.

4.4China-Russia high-tech industry cooperation organization model

Generally, international cooperation in science and technology is divided into non-negotiable transfers and paid transfers. However, this paper argues that international joint research and development can be regarded as a separate form of international cooperation in science and technology. In addition, the new mode of cooperation that has emerged recently is the industrialization cooperation. International transfer of scientific and technological cooperation in the form of free exchange of general scientific and technological exchanges in the form of its specific exchange of scientific and technological intelligence, information, equipment samples, held

scientific symposia, experts exchange technology and imparting technology and so on. The cooperation that scientists themselves undertake without formal agreement is also called informal cooperation. The paid transfer of international scientific and technological cooperation must refer to international technology transfer. It is a technology introduction for countries that receive technology. The object of international technology transfer includes trademark rights, proprietary technology, technical services and so on. The main form of international technology transfer is international technology trade. International technology trade refers to the activities of a country's enterprises, economic organizations or individuals that transfer their technologies to enterprises, economic organizations or individuals in different countries according to certain trading conditions.The main forms of international technology trade are licensed trade, technology and services, cooperative production, engineering contracting and technical trade combined with equipment.

There are many ways in which China and Russia can cooperate in science and technology. In practical cooperation, we send science and technology personnel from each other to experts from each other, from data exchange to purchase of technical equipment, from mutual visits to cooperative research and development, from joint development to cooperative production. From the perspective of the cooperation partners, the types of high-tech industry cooperation between China and Russia include the government-led enterprises to participate in the cooperation, the government advocates the enterprises to participate in the cooperation, the government guides the cooperation among the scientific research units, the enterprises take the lead in the cooperation, the cooperation between the government and the scientific research units in

the enterprise operation and other Type of cooperation. However, at present, the overall mode of scientific and technological cooperation between the two countries mostly stays in general academic exchanges, short-term visits and personnel training technical meetings, exchange of scientists and personnel exchanges. Although this type of cooperation has its own characteristics, great flexibility, it is possible to choose different partners according to different problems and it is easy to make breakthroughs on some frontier issues with less expense in a relatively short period of time. However, this type of cooperation is a traditional way of Sino-Russian scientific and technological cooperation and an informal way of cooperation. It can only exist in the short term and can not bring economic benefits. But from another perspective, if informal cooperation leads to some kind of formal cooperation, then it becomes a starting point for formal cooperation, so the mode of cooperation deserves attention.

The paid transfer of technology between China and Russia is also the traditional way for scientific and technological cooperation between the two countries. The introduction of a variety of ways, including "technology for technology", "market for technology", "technology for the exchange of funds," the advantages of sharing. International joint research and development is to make full use of resources such as funds, talents and technologies owned by research and development institutions in different countries so as to jointly formulate plans and implement joint projects in line with the same market needs so as to create new products and technologies and explore new Science, cross-border actions that lead to new research findings. International joint research methods are state-led R & D activities and business-oriented R & D internationalization activities. Business-led research and development cooperation

includes the strategic alliance between enterprises and enterprises, and the alliance between enterprises and other research and development departments. Technology alliances are the types of technology cooperation agreements reached between enterprises. The agreement includes cooperation in R & D and other technological innovation activities. Recently there has also been a cooperation model among research institutes.

Technological innovation cooperation is one of the most effective ways to upgrade high-tech cooperation between China and Russia. To carry out technological innovation in cooperation, it is very important to choose an effective organizational model. The summary and analysis of Sino-Russian cooperative technological innovation shows that so far some organizational models have been formed in the Sino-Russian cooperative technological innovation cooperation, including the joint research and development model, research company model, education management model, science and technology park incubator Mode and so on.

4.4.1Joint R & D model

The project partnership model is a cooperative and innovative way for both Chinese and Russian enterprises to share research and development achievements in order to complete the research and development of a particular technology project and to invest and collaborate in research and development processes through partnerships.

Due to the cooperation and participation of many cooperative units in the innovation process, the innovative financial risks are scattered. This not only reduces the financial pressure of a single cooperative unit, but also increases the overall

financial risk tolerance of the project. At the same time, due to the centralized cooperation of technical resources, especially the senior technical personnel, the accumulation of knowledge and experience required for innovation is accelerated, thereby greatly reducing the technical risk of innovation. In addition, during the joint R & D process, experts from both sides can practice and accumulate relevant knowledge and experience, ensure the successful completion of cooperation projects and lay the foundation for the development of long-term cooperative relations.

The research model of cooperation between scientific research institutions is also often adopted in the actual cooperation between China and Russia. Central South University and the All-Russian Institute for Light Alloy and the Russian State University of Technology-Moscow Aeronautic Institute of Technology jointly developed military and civilian high-tech product model, most of the previous cooperation is to buy large quantities of finished products. China Wuhan University of Technology and the Russian Academy of Sciences structure of macroscopical dynamics and Materials Science Institute jointly established the Sino-Russian joint SHS Technology Research Center to carry out the gradient material, coating technology, SHS basic theory and other aspects of research, developed a variety of cermet composite material. Weihai expand fiber company and Shandong University and the Russian State Institute of Graphite Materials jointly established by China and Russia new materials research and development center.

The establishment of the International Center for New Materials Engineering Technology Industrialization in China, Russia (Hunan) made the scientific and technological cooperation between Hunan and Russia more open. It also took a crucial

step toward the commercialization, industrialization and internationalization of high-tech industries. The main direction of cooperation is joint research, high-tech development, transfer of scientific research and industrialization and personnel training. The central goal is to vigorously introduce Russia's advanced pilot-type technologies and market-promising scientific research results in two years to realize technological innovation and industrialization in Hunan and form the core technology of China's independent intellectual property rights. In one year, we will improve the "central" market function, introduce risk investment mechanisms, incubate scientific and technological achievements, integrate advantageous resources and promote the integration of production, study and research. The advantage of this model is that joint research institutes can accumulate experience in research and development of a certain technology and high-tech products and implement other cooperation projects more smoothly in this experience and technology. This model itself is a diversified cooperation model of the project. It can also concentrate on cooperative R & D projects in a specific area of high technology and provide good conditions for the high-tech industrialization.

Generally speaking, the advantage of the joint R & D model is that it integrates scientific and technological advantages of both parties and reduces the risk of research by melting the strengths of all parties. However, the disadvantages are the difficulty of coordination and communication, the cooperation sincerity and the alliance construction.

4.4.2research company model

The innovative model of a research firm is an organizational model adopted by a joint venture. It is a joint-stock cooperative innovation organization co-founded by a number of large enterprises or small and medium-sized enterprises or research institutions of both China and Russia to speed up innovation in certain technical fields.

Research company cooperation mode is generally an open company, the company's management system and project execution system are composed of member companies or shareholding units jointly established by the senior managers and senior technical staff member companies or holding units selected The best people and the system of rotation project organization are relatively independent, and the member enterprises or the holding units can choose the projects they are interested in to develop independently. However, regardless of whether the research company presides over or self-innovation projects, all the scientific research achievements are owned by the company , Member companies need to pay the research company the right to use the innovation results. The financial risk of innovation process is shared by member enterprises or shareholding units and has the function of diversifying financial risk. The technical risk in innovation process is greatly reduced due to the optimization of technical resource structure. Market risk is borne solely by the member enterprises in the implementation process, To a certain extent, to ensure the smooth progress of the project.

4.4.3 commission a generation system of cooperation and innovation model

In a market economy, enterprises are the mainstay of research and development activities, but it does not mean that enterprises are the sole undertakers of research and development. A university, an independent research institute for profitability and non-profit has its own advantages and in some cases undertakes the task of developing products and new technologies. Commissioned a generation system of cooperation and innovation model is a kind of production and research cooperation

The new form is based on contract forms of cooperation and innovation model. It is usually the enterprise as the principal Party A, through the tender or directly entrusted to determine the client, usually universities, independent research institutions and government research and development institutions Party B to provide funds and provide high-tech innovation goals, provided by Party B Technical experts and the necessary technical equipment and implement the innovation process to achieve the goal of innovation. In accordance with this cooperation model, two universities in China and Russia have reached an agreement to establish a joint research center in Tomsk, Western Belgium. Both sides plan to cooperate in the fields of high-tech development and application as well as basic scientific research. To this end, China will invest 10 million yuan while Russia will provide the venue and some equipment. The joint research center will, based on the Chinese needs, combine our technical advantages to develop new technologies in the fields of new materials, bioengineering and electronics, and realize industrialization.

4.4.4 Joint Venture Model

Joint research and joint venture production model is a model of cooperation between Changzhou Fangyuan Pharmaceutical Co., Ltd. and Russian company Mykki. The two companies have signed the contract of Sino-Russian Bio-diagnostic Reagent Joint Venture and Sino-Russian Biochip Cooperative Institute. This model belongs to the "middle anger, technology strategic alliance.

In October 2010, Russia NanoTechnology Group and China Zhongrui Leitian Holding Co., Ltd. signed a joint venture of "Keng Ion Technology" in Beijing. The total budget for the project "Looking at High-tech Enterprises in China and Russia" is estimated at 13.58 billion rubles, of which the Russian Nanotechnology Group will invest 2.09 billion rubles and provide a loan of 5.5 billion rubles in the form of capital, technology and intellectual property . Poly Lightning Holdings Limited will invest 20.9 billion rubles, providing 39 billion rubles loan. Joint ventures in accordance with the assessment of project participants, 206 years ago, the total product sales will reach 13.1 billion rubles.

Joint ventures cooperation model is not the most commonly used model, because the practice of a certain degree of difficulty. However, the advantage of using this model is also obvious: it can create new jobs for the countries where joint ventures are located and provide the foundation for some kind of high-tech industry cooperation between the two countries. This will help the country to reduce its investment in world technology The differences in level can use the existing production conditions and scientific and technological achievements of the countries where the project is located. During the

cooperation process, the technical characteristics of products that upgrade their production and ability and co-production will be promoted. The cooperation model framework can also promote the development of related projects.

5.ANALYSISI OF HUAWEI’S IMPORT AND EXPORT STRATEGY FOR HIGH-TECH PRODUCTS

5.1Huawei's international development status

In 2016, Fortune 500 companies were among the top 500 companies in the world. Huawei was located at 129; China's top 500 companies were at 27, and it ranked top in China's private sector rankings. Huawei is a company that is committed to the development of a global market. Huawei's operations cover more than 170 countries and regions in the world. Among the top 50 global operators, 90% of companies use Huawei products and solutions. At the same time, Huawei serves more than one third of the world's population. Huawei is the world's leading provider of information and communication technology solutions. It builds end-to-end solution advantages in telecommunication operators, enterprises, terminals, and cloud computing, and provides competition for operators, corporate customers, and consumers. Forced ICT Solutions, products and services, and are committed to the future of information society, build a better connected world. Huawei's value proposition: "Customer-centric, based on customer demand and technology leadership and continuous innovation, build a win-win ecosystem.

5.1.1 Huawei Overview

In October 1987, Huawei was established in Shenzhen. In the early days of its establishment, the company mainly sold HAX switches in Hong Kong and made profits through the middle spread. After nearly 30 years of development, Huawei has become the leader of Chinese companies in the world and has had a tremendous impact on communications manufacturing in China and the world. From digital languages and simple data transmission, to having the ability to connect to network data services, to the Internet of things that allows machines to connect machines. Now, Huawei has started the 5G infrastructure; in the future, Huawei will achieve higher achievements, provide more opportunities for people to connect and communicate, provide new services to various industries, innovate work methods, and expand the use of the Internet of Things. Scope creates new business opportunities, and works tirelessly to connect with the world's unconnected places and is committed to unlocking the full potential of mobile broadband.

5.1.2Huawei's Three Busniess Areas

According to the division of Huawei's major customer groups, Huawei's business mainly includes three aspects:

(1)Carrier business area

In the first half of 2016, in the area of operators, Ericsson’s main rival, Huawei’s operating revenue, was approximately RMB 81.9 billion, and Huawei’s sales revenue reached RMB 245.5 billion in the first half of the year, far exceeding that of

world-renowned carriers such as Ericsson, which has become the world’s the first. At present, Huawei's 4G equipment has been distributed in more than 140 countries, 5G infrastructure construction is ongoing, and has built more than 280 commercial networks of 400G core routers worldwide.

(2)Business field.

Huawei's business to provide network solutions for enterprises has just begun. Customers are widely distributed and involve a wide range of industries: government affairs, power, finance, education, and medical care. The participating companies include China CITIC Bank, China Construction Bank, German Railways, and Volkswagen. The company has provided more than 350 innovative solutions and has been widely recognized by customers.

Table.5.1- Huawei's corporate business structure

solution	products	Service
Mobile phone，Electric IT，Operation and infrastructure transformation	Wireless network, fixed network Road, Telecommunications soft Pieces, IT, network energy	Consulting, system integration, network deployment, Customer support, training

(3)Consumer Business Area

In the consumer business field, competition is fierce. Huawei's consumer business started in 2003. After more than ten years of development, the business has grown and the number of consumer groups has increased significantly. Huawei's consumer business focuses on personal and home users, including smart phones, computers, wearable devices, and smart homes.

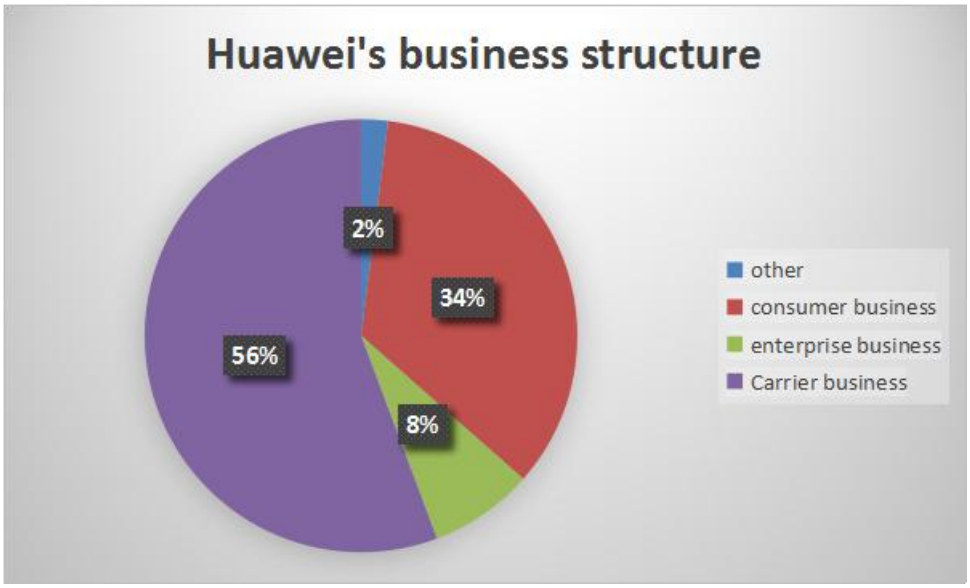
Huawei's consumer business goal is to bring the latest technology to consumers, hoping that every consumer can enjoy the latest technology and use the best products in the world. For example, in 2016, in the global economic downturn, Huawei’s handsets relied on high-end markets in Europe and emerging markets in North Africa, Latin America, and Central Asia, with mobile phone shipments of 140 million, ranking third in the global telephone market.

In 2016, sales revenue of Huawei's three major businesses was as follows:

From the figure below, we can see that in 2016, the carrier's business as Huawei's traditional business, is still the main revenue of Huawei, accounting for 55.7% of total revenue; although business growth is faster, but the business is relatively low, only 7.8%, compared with other businesses, is still in its infancy. After years of efforts, the consumer business has paid more attention to consumer experience and brand building and ushered in rapid growth. It should be pointed out that Huawei believes that the growth of enterprise business is extremely broad, and puts forward the target of more than 10 billion US dollars in business revenue in 2019. Therefore, in 2011,

Huawei Corporation established a separate group for its corporate business, which enabled Huawei to form three business segments for operators, consumers, and businesses, and to accelerate the development of corporate business.

Picture.5.1-Huawei’s business structure

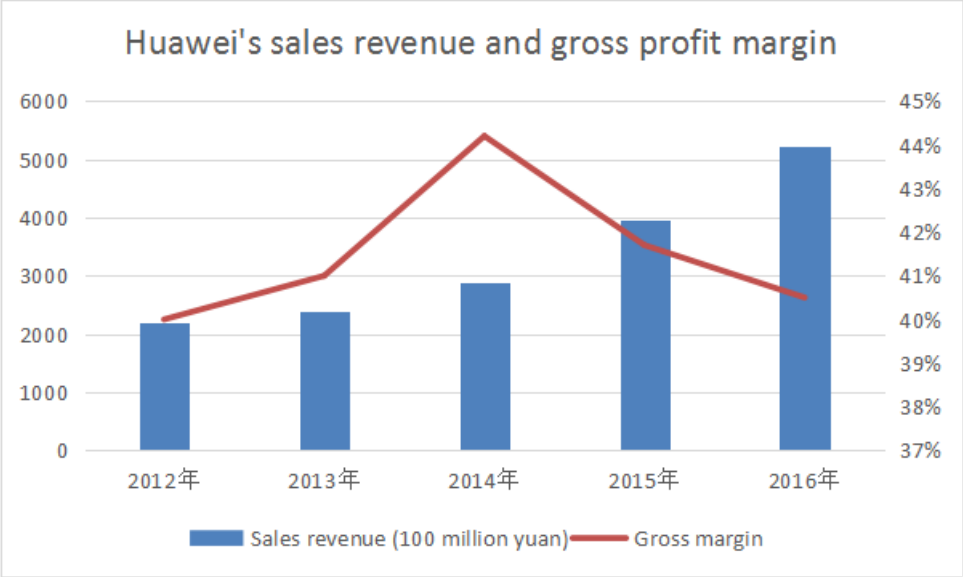


5.1.3Analysis of Huawei's operating conditions

The company's operating conditions can directly affect sales revenue, and sales revenue is the basis for the company to carry out other economic activities. The sales revenue and gross profit margin of Huawei in the past five years are shown in the figure below. From the perspective of its data, sales revenue continues to grow at a compound annual growth rate of 17.6%, indicating that Huawei has continued to grow. Gross profit margin is an indicator to measure the profitability of an enterprise. The higher the gross profit rate, the higher the profitability of the enterprise and the greater the ability to control costs. The gross profit margin is maintained at around 40%, indicating that Huawei has a stronger profitability and the effect of controlling costs is more

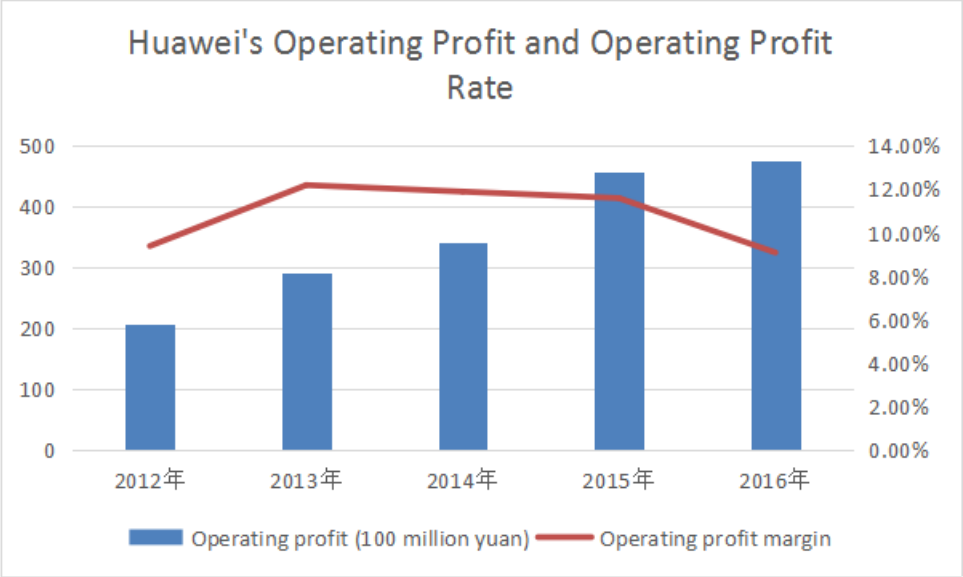
significant.

Picture.5.2-Huawei’s sales revenue and gross profit margin



The operating profit is the total profit that the company obtains from the production and operation activities within a certain period of time, and reflects the results of the basic business activities. Huawei's operating profit for the last five years is as shown in the figure below. Its operating profit continues to grow at a CAGR of 23.9%. The operating profit rate is used to measure the operating efficiency of the company and reflects the ability of business managers to obtain profits through operations. Huawei's operating profit margin is about 10%, which shows Huawei's effective management and profitability. In 2016, Huawei’s consumer business grew rapidly, and investment in brand and channel construction increased. Operating profit margin decreased compared to 2015.

Picture.5.3-Huawei’s operating profit operating profit rate



5.2Huawei's international development

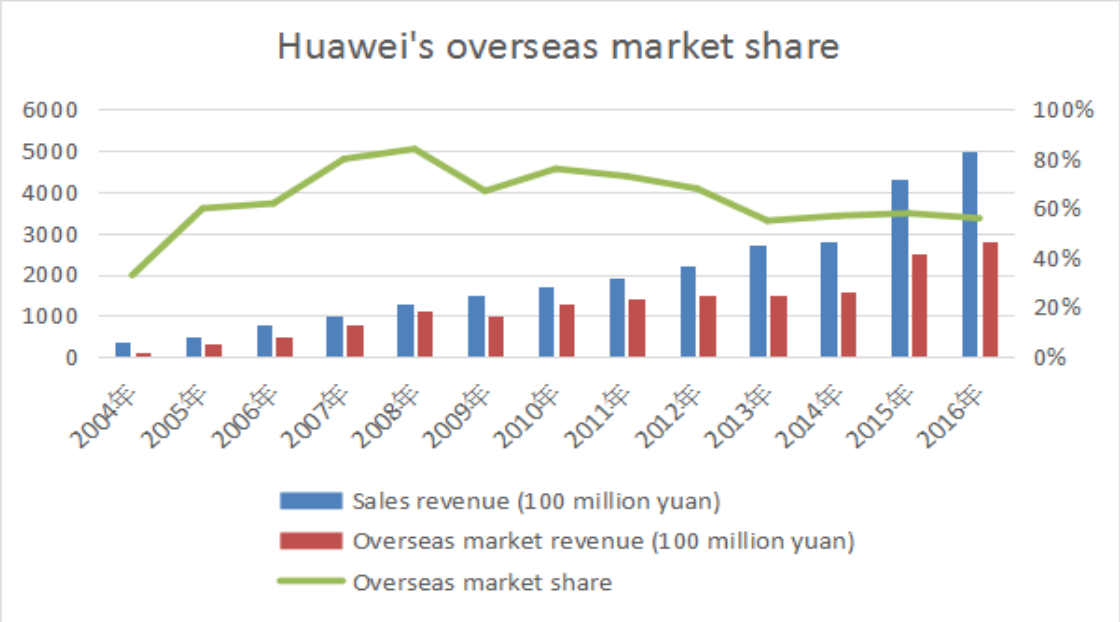
After 30 years of development, Huawei has been at the forefront of other companies in terms of international development. Huawei has grown into a global company. Huawei's international development is mainly reflected in the following aspects:

(1) Sales revenue comes from the global market

In 2003, Huawei’s high-end routers accumulated 500 overseas sales, and more than 100 million C&C08 ports were deployed in various parts of the world. In cooperation with 3COM, overseas market revenues began to change substantially, accounting for the proportion of total sales revenue. Increasing. With the expansion of overseas markets, Huawei’s sales revenue has grown steadily, and its overseas market revenue has also increased year by year, accounting for more than 50% of sales revenue

in the past 10 years, indicating that Huawei’ s internationalization has been steadily increasing. Huawei's overseas market revenue accounts for the figure below

Picture.5.4-Huawei’s overseas market share



In short, Huawei's business market is spread all over the world, not only in Asia Pacific and Africa, which are less developed in the telecommunications industry, but also in the developed Americas, such as the United States. Sales revenue is also widely distributed around the world, and internationalization has achieved remarkable results.

（2）Localization of overseas talent

The competition in the 21st century is the competition of talents. Talents are the foundation for the rapid development of the company. Especially for global companies, the localization of employees is the only way. At present, Huawei has more than 30 branches. To fully open foreign markets, it must adapt to local laws and cultures and must be localized. In 2016, the total number of Huawei's overseas employees exceeded

34,000, and the localization rate was 72%. At the same time, Huawei has 36 training centers around the world to train local technicians and promote the localization of employees. For overseas employees, Huawei's localization process mainly focuses on adopting a guiding strategy based on inclusiveness. For example, at the Huawei R&D center in India, Indians are reluctant to put forward suggestions for corporate improvement.Every month, the company has a public day, and employees can directly submit their opinions to their superiors. Under the guidance of Chinese employees, Indian employees also began to make comments. At the same time, in order to attract high-end R&D engineers and local employees, Huawei’s overseas employees can also hold Huawei’s shares. With the development of localization, most of the technical backbones of the software R&D center in India are foreign employees, and outstanding university graduates from India can also join the software R&D department of Huawei.

（3）Internationalization of management methods

With the deepening of the internationalization of enterprises, enterprises are continuously carrying out technological innovations to adapt to the fiercely competitive international market, and thus can move forward. At the same time, the corporate management approach should also change, that is, it also needs continuous innovation to meet the requirements of enterprise development.

In the management of overseas employees, Huawei uses an incentive mechanism, and all overseas branches use a globally unified management platform. In the early days, Huawei's management efficiency was low, a lot of R&D expenses were wasted, and per capita efficiency was low. In 1999, Huawei and IBM established a cooperative relationship, Huawei's integrated product development process was

established, and the integrated supply chain was optimized to achieve office automation throughout the company. Subsequently, Huawei cooperated with internationally renowned companies such as HAY and PWC to spend a lot of expenses on business process, quality control and customer satisfaction in order to achieve reasonable and efficient management. After a series of reforms, Huawei's network dedicated line can be connected to each overseas branch. Huawei's management approach has continued to change following its international development process. After 30 years of development, Huawei has established guidelines for the conduct of employees' business practices and defined the responsibilities of each employee. Each department and agency has a very clear mandate. Accountability mechanism. At the same time, Huawei also implemented an internal control system based on its own operating model, including control environment, risk assessment, control activities, information and communication, and supervision, to ensure efficient and reasonable management.

5.3Huawei Technology Innovation Status

The reform and opening up has been nearly 40 years. We have witnessed the ups and downs of many enterprises in the world's rapid transformation. The success of a company has never been achieved overnight. The development history of Huawei is also full of challenges and risks. From a small private enterprise, Huawei has grown into the world's largest communications manufacturer. Huawei's founder and president Ren Zhengfei believes that "the ability to master core technologies is the life of Huawei." In fact, the secret to Huawei's success is innovation, and the development of any company, especially for high-tech companies, companies, The ability of technological

innovation is the lifeblood of a company's growth. Without technological innovation, it will not only continue to grow and expand, but it may lead to a gradual decline of the company. Huawei started off with trade but quickly realized the importance of technological innovation. After nearly 30 years of unremitting efforts and hard work, Huawei's technological innovation has achieved remarkable success and attracted worldwide attention.

(1) Many research institutions and R&D personnel

At present, Huawei has 16 research institutes, 36 joint innovation centers, and 45 training centers in the world. Huawei's global R&D staff is 79,000, accounting for 45 of the company's total.

Huawei has set up 16 research institutes in Germany, the United States, India, Japan, Canada, and Russia. The main research directions of each institute are different. However, it is synchronized with the latest global R&D achievements and employs the best talents with high salaries. With no investment in capital, Huawei's products listed on the company's products are synchronized with similar products or exceed similar products.

Huawei's joint innovation center is mainly focused on technology research and development and providing solutions. Technology research and development is more in cooperation with foreign government departments. For example, in January 2016, Huawei cooperated with the Poznan Supercomputer Center (PSNC) in Poland to establish the PSNC-Huawei Joint Innovation Center, which mainly researches HPC, cloud storage and other aspects, and its joint research and development code "Hawk" High Performance Computing Set the group has become the second largest

supercomputer center in Poland. In March 2016, Huawei cooperated with the Malta government. Established a joint innovation center for research and development of "safe cities" through video surveillance, alarm system optimization, and digital in transportation and other aspects, help the Maltese government management to respond to security threats.

(2) Wide range of research and development

Huawei is the world's leading provider of information and communications technology solutions. Huawei's services are basically the area where data flows. At present, three major business modules of Huawei are initially formed. The consumer business serves hundreds of millions of consumers and is committed to the distribution and presentation of information: smart phones, wearable terminals, etc.; operator business service providers worldwide, committed to becoming a customer strategy Partners are mainly represented in the transmission of information: network construction, telecommunication software, M2M connectivity management platform, etc.; enterprise business focuses on the value industry and is committed to becoming the best innovation partner for enterprise informatization, mainly in information storage: cloud services, big data Wait.

(3)Focus on intellectual property protection

In the process of globalization, Huawei has emerged a technological innovation path that can integrate internal and global technological innovation resources, and can use international scientific and technological resources to serve enterprises. With the deepening of internationalization, the company pays more attention to acquiring core competitiveness of enterprises through independent innovation, and at the same time

pays more attention to the protection of intellectual property rights. The company has established the Intellectual Property Department and formulated and implemented the company's technology leadership strategy. In order to maximize the benefits of intellectual property rights, Huawei has paid attention to patent protection and adopted key breakthrough methods to focus its innovation resources on the research and development of core technologies. For example, in the field of mobile phones, the successful development of its own core chips has become a major source of profit.

The most prominent manifestation of the emphasis on intellectual property protection is the patent application and protection strategy. The research and development of the core technology has enabled the company to obtain more patents with remarkable economic benefits and become a model for independent innovation of Chinese enterprises. In 2016, according to the European Patent Office, Huawei applied for 1,953 patents from the European Patent Office and ranked second in patent applications. Thanks to a large amount of R&D funds and manpower investment, as of June 2016, Huawei officially issued 50,377 patents. Huawei’s competitor in the consumer business field, Apple Inc., began to pay Huawei’s patent fees, and Huawei’s patent realignment process opened.

5.4Huawei SWOT Analysis

5.4.1advantage analysis

(1)Promote continuous innovation with R&D

Huawei's development goal is to "be a world-class and leading telecommunications

equipment provider", strengthen investment in research and development, and continue to introduce high-performance products that adapt to the characteristics of the Chinese market. Huawei has placed special emphasis on scientific research. The annual sales jumped 10% as R&D expenses. The number of R&D personnel engaged in product R&D reached more than 10,000, which accounted for 46% of the total number of Huawei employees. At present, R&D has invested more than 5 billion yuan in 3G technology and has become the first camp in the world. It is the first to commercialize in the United Arab Emirates, Hong Kong, Mauritius, and Malaysia, breaking through the European UMTS market, and building a nationwide UMTS network in the Netherlands. The continuous innovation of new products such as NGN, IPDSLAM, and NG-SDH has directly led to its leading technological advantages, and has consolidated Huawei's international brand and international market position.

(2) Strong marketing ability and good service

Among Huawei's more than 22,000 employees, 46% are technical research and development personnel, 33% are marketing and service personnel, 9% are management and other personnel, and 12% are production personnel. Huawei's organizational structure is a typical "dumb-bell" type structure. R&D and marketing are both big, with a small percentage of middle managers and production personnel. This shows that R&D and marketing occupy an extremely important position in Huawei's development.

In terms of marketing and customer service, Huawei strives to be closer to customers and provide more detailed services. Huawei repeatedly stressed that enterprises must always live one way: they must pay attention to customer needs. They must not only consider the changes in customers' future needs, but also pay attention to

the needs of customers. They must not only pay attention to customer needs that have already been realized. Also analyze the potential customer needs. After years of development, Huawei's user training center has become an important training organization in the industry. Huawei has established 15 domestic authorized training divisions in Beijing, Shanghai, Hangzhou, and Kunming, and established overseas training divisions in five regions including South America, the Commonwealth of Independent States, South Africa, the Middle East, North Africa, and Southeast Asia. The training headquarters in Shenzhen has 116 experienced teachers and a 20-person curriculum development team that can accommodate 800 trainees for training at the same time; 34,408 trainees from more than 40 countries and regions have received training at the training headquarters and branch offices. This kind of achievement is rare in the industry. Huawei also continuously launches a series of services including platinum services, gold and silver services for users to choose from, and customizes service packages according to the needs of users to provide customers with personalized service solutions. Therefore, Huawei's business development Has long-term support from telecommunication operators such as China Telecom, China Mobile, China Unicom, China Netcom and China Railcom.

(3) Low overall cost

Huawei can stand out in the highly competitive telecommunications equipment market, and it has important relationships with its ever-evolving communications products with better performance and lower overall cost. Huawei has positioned its competitors in world-class telecommunications equipment manufacturing companies. In response to the high price of multinational products, Huawei has adopted a more

appropriate approach to meet the actual needs of telecommunications operators in various countries, providing affordable and advanced performance and reliable performance. Wumart's products are widely welcomed by users. With the continuous improvement of product lines, Huawei is in the switch, transmission, videoconferencing, GSM, intelligent network, routers, CDMAIX,WCDMA.NGN and other fields have formed a highly competitive cost position, breaking the monopoly of foreign manufacturers and the pattern of high-priced sales, saving hundreds of billions of RMB in funds for the country and telecom operators, and making their own markets. The share has steadily expanded. Huawei proposes that pursuing the maximization of customer interests means pursuing customer success, not just customer satisfaction. To achieve this goal, from the perspective of the customer, it is a necessary condition for the customer to reduce the lifetime cost of the product. To this end, Huawei has worked hard to implement the ISC and IPD in an unrelenting manner to carry out IT system transformation and development build a low cost process.

5.4.2Disadvantage analysis

(1)The cost of human resources is too high

For high-tech enterprises such as Huawei, the requirements for employees in terms of knowledge and quality are generally higher than those of traditional manufacturing industries. This is determined by the nature of their companies. Therefore, the human resources cost of Huawei is far higher than that of other companies.

(2) Poor collaboration between departments

With the rapid development of enterprises and the ever-increasing scale, Huawei’s

organizations are becoming larger and more complex. The responsibilities and authorities between departments and posts are often not clear: Horizontal communication among major departments is stagnant, and resources are difficult to share. begin descending. The management cadres of the company generally feel that their workload is heavy and their affairs are mixed. They often work overtime, but they are still unable to control their feelings. This is certainly related to the growing company, but also reflects the professionalism of Huawei employees. However, on the other hand, it also reflects the relative low efficiency of the company's work, and the incompetence of various departments is not strong.

(3) Corporate governance structure needs improvement

The company's internal governance structure formed during the company's entrepreneurial phase and during the country's rapid development period is, to a certain extent, not suitable for the requirements of the internationalization strategy. First, the opaque equity structure will make Huawei's credit in the international market decline, the lack of access to external capital, which will block Huawei's capital channels in large-scale competition; Second, the lack of compliance with international companies The establishment of the board of directors will make Huawei's technological decisions, market decisions, and management decisions unbalanced. The international market's competitive costs will therefore be far greater than those of competitors.Third, excessively dispersed equity it will become the biggest hidden danger after Huawei's listing. Even if Huawei Corporation takes a spin-off listing, or establishes a new company to be listed with high quality assets to achieve institutional control, the opacity of internal related transactions will still make strategic investors lack of Huawei

Confidence, and speculative institutions in the capital market will therefore rely on various means of controlling Huawei's normal stock price, which will affect Huawei's image in the capital market. Fourth, "Ren Zhengfei Company" created Huawei, but Ren Zhengfei's thought will face irreplaceable and non-replicable nature in the company's management system in the post-term positive era. Although Ren Zhengfei has repeatedly emphasized the principle of fostering successors, the current decision-making system will not change. Huawei, like many Chinese companies, will become a company that cannot produce a true successor.

5.4.3Opportunity analysis

(1)Mobile communications have become the first driving force for the development of the global telecommunications industry

At present, the number of mobile communications users and revenue exceeds that of fixed telephones. Association CEO Robert Conway said that 2005 was a year in which 3G proved its status in communications technology. The popularity of 3G exceeds the speed of 2G and 2.5G at the same stage of development. Global 3G users have exceeded 26 million by May 2005, and the current use of the network has only 16 million users at the same stage of development, and this development was achieved with only 31 countries in the world with 3 networks.

The advantages of rapid deployment of mobile communications networks, convenient and flexible free communication methods, and rich business and business models have made 3G mobile communications a top performer despite the generally slow growth of the telecommunications industry, showing strong growth both in terms

of revenue and number of subscribers. The momentum to become the midstream of the entire telecommunications industry.

(1) Policy support for the communications industry in the “Eleventh Five-Year Plan”

The key contents of the “Eleventh Five-Year Plan” for the communications industry are: vigorously improve the original innovation capacity, integrate innovation capabilities and introduce the ability to absorb and re-innovate, vigorously develop high technology that has a major driving effect on economic and social development, and support the development of major industrial technologies. , Formulate important technical standards and build a technological foundation for independent innovation; focus on cultivating information industry clusters such as digital audio and video, next-generation mobile communications (3G), high-performance computers, and network equipment; and expand the export of goods with independent intellectual property rights and own brands; We will strengthen the construction of information infrastructure such as broadband communications networks, digital television networks, and the next-generation Internet (IPV6), and promote "triple play".

5.4.4 Threat Analysis

(1) Threats brought by intellectual property

Huawei's implementation of the "go global" strategy will inevitably have to face various disputes over patented technologies and intellectual property rights. As China still lacks systematic rules on the use, protection of intellectual property rights and legal support for domestic companies, companies that implement “going out” may be

plagued by technical discrimination, exclusion, and intellectual property rights in third country markets at any time overseas.At the stage of China’s protection after WTO accession, there are ways to avoid such problems, but after the end of the protection period (after 2007), developed countries will use intellectual property protection as an excuse to prevent Chinese high-tech products from entering overseas. aisle. Especially for companies like Huawei, the proportion of patented technologies used in cross-licensing and mutual licensing is very large. The company's definition of intellectual property rights must be synchronized with the country’s intellectual property rights policy. Otherwise, it is difficult for a single company to resist developed countries. Various obstacles set.

The Chinese government’s international strategy is still lagging behind that of developed countries. The United States has a team of RAND experts to help the government formulate national strategies and international strategies of US companies. China has only a macroeconomic strategy and the company's internationalization strategy is very weak. Such as the United States has a corporate global strategy. China only stays in the global trade strategy, but there is no global corporate strategy, capital strategy, cross-border credit strategy. The national strategy lags behind the enterprise. In addition, the United States and Japan have specialized loans (or special funds) for the company’s “going out”, and the Chinese government has not yet provided specific support.

(2)Obstacles to the domestic system

In early 2005, regardless of telecommunication equipment manufacturers or operators, the implementation of the "go global" strategy of globalization is becoming

one of the company's most important goals. "Going out" is both a corporate strategy and a national strategy. However, judging from the current specific situation, Huawei's implementation of the "going out" strategy still faces the following institutional obstacles:

First, the state lacks clear and systematic promotion policies and effective incentives for telecom companies to “go global”, and lacks necessary protection measures and legal support in the international market. Chinese companies’ overseas operations are basically based on low-price strategies and their own ways of fighting.

Secondly, as far as Huawei is concerned, there is a gap in the degree of support between state-owned companies and private companies because of the expansion of overseas capital channels, and the country's overseas financing approval and promotion policies. As a result, Huawei's risks and financing costs may be higher than those of state-owned companies.

Third, to expand the international market, Huawei must seek diversified development while stably developing its main business. At present, although the State Council has issued 36 articles encouraging the development of non-public economy HUAWEI has entered a new field of strategic investment that it expects. The threshold is still high, and the opening of policies cannot eliminate the resistance of traditional interest sectors to non-public economy entry into monopoly industries .

(3)The difficulty of competition due to differences in industry types

From the type of industry, domestic companies that expand into the international market can be divided into the following three categories. The first type is the representative enterprises represented by Galanz. The cost advantage is their main

competitive means. The second category is self-owned brand enterprises represented by Haier, TCL, etc., which need to have manufacturing advantages, but also have stronger comprehensive capabilities and capital strength.The third category is the so-called emerging industrial companies represented by Huawei, and they face the greatest resistance in the process of going global. Faced with the competition from all-out international companies such as Cisco, Nokia, Motorola, Siemens and Ericsson, Huawei's difficulty is very high. Fortunately, after years of hard work, Huawei has achieved certain achievements in the international market. Cisco's intellectual property litigation against Huawei is that Huawei's data products have entered the North American market and pose a threat to the underlying market of Cisco. Happened under the background.

5.5Huawei Internationalization Strategy

5.5.1Huawei's internationalization strategy theoretical framework

Huawei considers both forward-looking and developmental aspects when formulating its internationalization strategy. Forward-looking refers to not waiting for the company to encounter setbacks, and then looking for strategic changes from the lessons, so that the plan will never catch up with changes, the company will always live in a passive, development is that the strategic system will not have a forward-looking basis Being one step and being immutable, we must be able to catch up with the trend of the times and the changes in the environment, and make useful enrichment and

strengthening in due course.

A PEST analysis can be carried out on Huawei's internationalization process for several decades. It analyzes what problems Huawei will encounter during the overseas expansion process, as shown in the table.

Table.5.2-A PEST analysis about huawei company

P，Political law	S，social relationship
Huawei is a private enterprise, non-central enterprise, lacks government resources, and Huawei is not good at handling media relations.Due to the interest relationship between foreign governments and enterprises, it is very difficult for Huawei to deal with the developed countries' governments.China’s founder military background	Huawei is not good at handling media relations. Huawei has not yet systematically established a social network in the target country. Huawei's publicity is relatively low and it is too low-key.
E，Economic	T，Technology
The steady development of the Chinese economy continued to increase the exchange rate of the RMB against the US dollar, making it easier to invest in foreign assets, obtaining resources, and acquiring technology.	Huawei’s technological advantages in the new phase Huawei's core number of patents is still not enough Huawei has not fully established the advantages of the industrial chain

From the above table, it can be seen that Huawei has advantages and disadvantages in each aspect of its international expansion. In the optimization and upgrading of its internationalization strategy, it is necessary to give full play to its strengths and reinforce its shortcomings and weaknesses so that it can maintain its long-term stability.

situation.

In the process of internationalized competition, Huawei can be said to be in a world of war. The internationalization strategy system has also been continuously optimized and perfected in such a process of practice. It can roughly divide the optimization of Huawei’s international strategy system into three phases:

The first stage is to initially improve the stage of the internationalization strategy system. In this stage, Huawei introduced the advanced concepts of IBM and other international giants, optimized its R&D, production, supply chain, and financial processes; it absorbed the theory of “retrokerization” and improved its own core competitiveness; The price strategy found that failure in many overseas countries has given rise to Huawei's determination to enhance product differentiation and improved product advantages. After experiencing market bottlenecks in many regions, Huawei has profoundly realized the benefits of localization. The development of a comprehensive localized business strategy has taken a beneficial step toward transnational corporations and global corporations.

The second stage is the stage of introducing and strengthening intellectual property strategy. Huawei has always attached great importance to the introduction of talents and also paid attention to R&D investment. However, it cannot be said that Huawei has a mature intellectual property rights strategy. Huawei has only completed the thief after suffering the pains. After entering this stage, the fuse is precisely the case of Cisco v. Huawei.

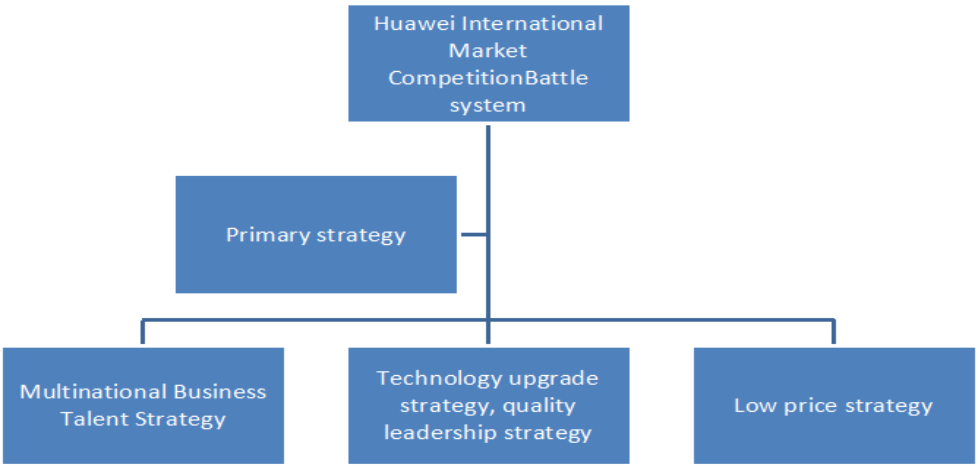
The third stage is to introduce the “capital duality” strategy stage. The dual track is a concept that I proposed. The purpose is to summarize the tangible capital such as

financing and intangible assets such as government public relations. Huawei’s early success depends on the operation of capital and the support of the government. In order to upgrade again in the future, Huawei needs to be more professional and more systematic in capital operations. It is necessary to rely on government forces to shatter the political filters of some countries and pass them. The improvement of its own soft capabilities eliminates the doubts of the target governments, institutions, and citizens and shapes the image, becoming a truly multinational giant.

5.5.2Huawei's International Development Process

(1)The initial establishment of an internationalization strategy and Huawei's opening of the underdeveloped market.First of all, let's take a look at what the most original Huawei internationalization strategy system is. The figure is already a comparatively shaped internationalization strategy system. From this we can see several features of Huawei's early internationalization strategy:

Picture.5.5-Huawei company international primary strategy



First of all, we can see that Huawei attaches great importance to talent. When Huawei recruited new employees at the end of the 1990s, it deliberately recruited English professionals earlier than other domestic companies. Non-English majors often required English to have a level six. Many of the better English talents first participated in the establishment of a laboratory in China. Fields sent to foreign countries. Second, China is willing to take a high proportion of revenue for R&D investment. According to Huawei, you can find evidence that Ren Zhengfei has announced that this proportion is not less than 10%. A large amount of research and development efforts aim at enriching product portfolios and ensuring product quality at the same time. It cannot be like a product sold to a township enterprise in the country, and products that are not packaged outside can also be snapped up. Going out of the country is bound to undergo various certifications. This is the need to increase research and development capabilities and appearance design capabilities. Finally, Huawei mainly adopts low-price strategies in the market competition. Huawei's strategy for market penetration in the country is low price, and the price is half or even one-third of the foreign product.

(2) Comprehensively upgrade the internationalization strategy and Huawei's relationship with expanding the underdeveloped market

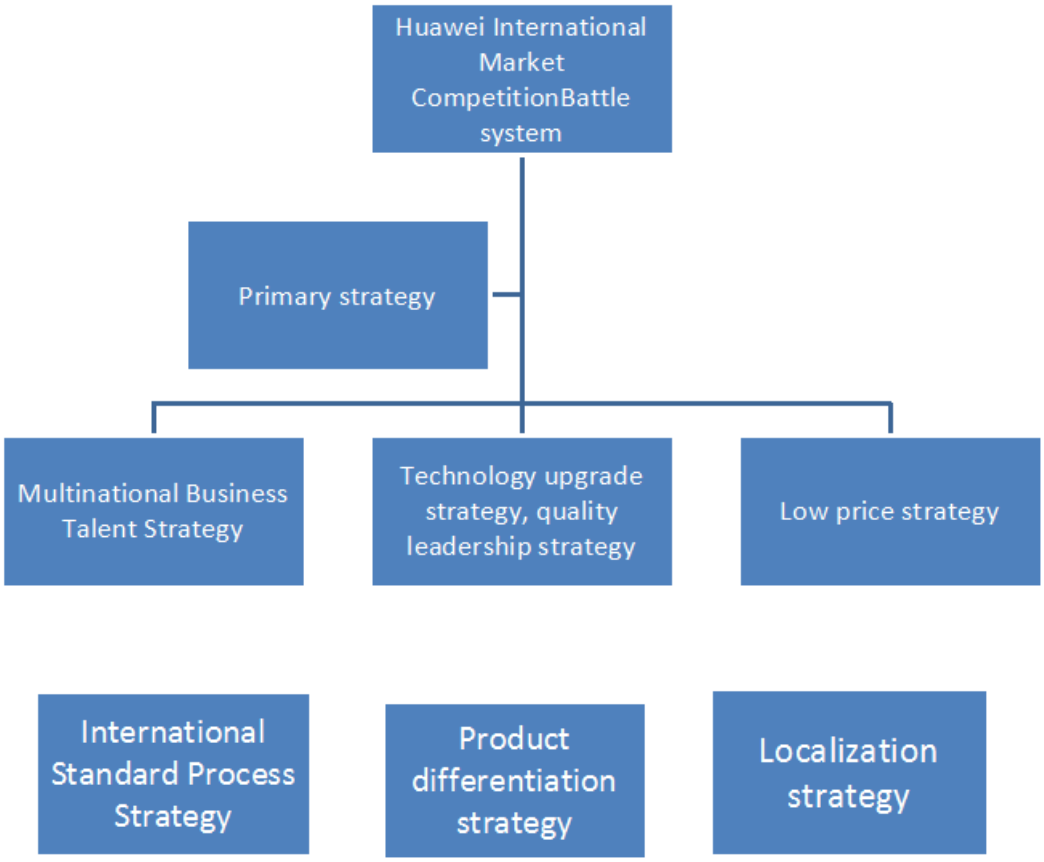
After Huawei stepped out of the country with the most primitive international market competition strategy system, some regional markets expanded smoothly, and product supply increased steadily; some regions waited for several years or even more than ten years but were not successful. Huawei's growth momentum meets the bottleneck, Huawei's management is no longer matched with its internationalization, and Huawei’s large amount of R&D investment returns a small amount of star products. The low-cost strategy that depends on it survives frequently and frequently The efficiency of Chinese employees in local market development is much lower than that of local client managers who have social relations. It is inevitable that the most original international market competition strategy system is upgraded and improved.

The difference in products is a tool for enterprises to take off the single low-price strategy during the process of product penetration. Huawei's tried-and-tested low-cost strategies in China have proved to be ineffective in many foreign countries. This has prompted China's determination to increase product differentiation and enhance the competitive advantage of products. The competition in the mature industry is fierce. The purely low price is the killing of the Red Sea; and if the internal demand of the customer is focused on, the development of a product with a disparate alienation is a blue ocean. Through a strong team of technical talents and research capabilities, Huawei has been a leader in the industry at 3G and a leader in the industry in the 4G era. Huawei's products can not only meet functional requirements, but also fully consider user needs and industry trends, becoming the first choice for developed market operators. The second

layer of product differentiation is service differentiation. Huawei has always attached great importance to the shaping of services in the development of marketing. Their services in the eyes have more profound meanings than simple communication and nodding, but they respond quickly. They understand the true needs of customers, they are predictive, and they want customers to think.

The localization of management is an important guarantee for the integration of enterprises, service upgrading and maximum efficiency. After frequent infiltration of market penetration in many target regions, Huawei has profoundly realized that comprehensive localization is imperative, and it has formulated a comprehensive localized business strategy, which has taken an important step toward transnational corporations and global corporations. Compared with overseas employees, Chinese employees do have the advantage of significantly lower costs, better self-awareness of their independence, and language accessibility with their employees at all levels of the parent company. However, in the actual development of overseas markets, language, culture, and professionalism Such deficiencies emerged. Western Europe is an important grain production area of Huawei's overseas nuclear network. Many representatives are responsible for the backbone of the market either as local employees or local employees. The degree of localization is also divided into stages. The initial localization stage only achieves the localization of culture, while the high-level localization needs to achieve the localization of management.

Picture.5.6-Huawei’s international finnal strategy



(2) Introduce the "Double-track Capital" strategy and Huawei's relationship with emerging resistance

The so-called dual-track capital is used to summarize the entity's capital operation and the flexibility in some international competitions. In order for Huawei to grow in size, it will impact on the supply of telecommunication equipment to the market place and consolidate it. It must make full use of capital resources, and it must also correct some of its own inflexible practices before it is appropriate. Whether it is possible to lay a dual-track capital is the key to whether Huawei can surpass it again.

The first is capital operation. During the company's operations, the cash flow is directly linked with the company's continuous development. The richness of financing means is more closely related to the company's internationalized operating income.

Huawei's financing means are rich and innovative. Employees who have almost accumulated results have the means to finance their own stocks, nurture non-core businesses to grow and then sell them to finance, and the joint venture industry expands to sell financing, export credits, equity financing and bond financing. Talking about financing for Huawei first of all makes people think of employee stock ownership. Employees' stock holdings allowed Huawei to grow stronger, and allowed Huawei to become a successor in the frigid winter days, increasing the freedom of corporate finance in the company's large-scale development. The second is the ability of flexible diplomacy to deal with the government. This includes the ability to deal with the government andThe ability to deal with the target government, Cisco has the ability to ommit with Huawei for many years is inseparable from its government public relations capabilities, and in recent years successfully politicized the trade, so that Huawei and the entire US industrial chain and even the entire country to fight; and the target country Government, institutions, companies, communities, and the people have more skills to deal with. Huawei's public welfare activities and the creation of government public relations capabilities in recent years have gradually shaped Huawei's more positive image.

CONCLUSION

This article uses the international economic and technological cooperation, high-tech industry-related theoretical analysis and evidence of high-tech cooperation between China and Russia analysis of a combination of methods, China-Russia high-tech cooperation conducted a comprehensive and systematic study and analysis, and draw the following conclusions.

High-tech cooperation between the two countries is the government of the two countries Central government, local government, government departments, etc.
International scientific and technological cooperation methods adopted by scientific research and education units and enterprises, natural scientists, technical personnel and technical personnel in order to achieve a certain goal must follow certain principles, observe certain principles of equality and mutual benefit, and work in the field of high-tech industries Something in the area. Due to the unique characteristics of high technology itself that involve many aspects, its chance of success is very small.

After the cooperation between China and Russia, the recovery phase of Sino-Russian scientific and technological cooperation, the transitional normative phase of high-tech cooperation between China and Russia,Into the stage of industrialization and technological innovation stage.

High-tech cooperation between China and Russia has good prospects for cooperation, but due to the current constraints that regulate both the coordinator

The lack of system, the financing method, the lack of compound talents, the lack of intermediary structure and the unsound cooperation service system all directly affect the

development of high-tech cooperation between China and Russia. Therefore, both China and Russia should correctly co-operate with high-tech industries of the two countries, establish the guiding principle for long-term cooperation and win-win cooperation, identify key projects for high-tech cooperation and establish a diversified high-tech cooperation model and long-term government cooperation mechanism. The leading role of enterprises in the two countries in cooperation is to strengthen the service quality and the construction of compound talents.

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