

# Impact of Brexit on U.K-China International Trade

Wenlin Xiong

<sup>1</sup> Brunel University London

\*Corresponding author. Email: xwl0716@gmail.com

## ABSTRACT

Brexit has brought a huge impact on the international political and economic pattern, not only bringing about direct changes in trade rules for the UK and the EU, but also having a profound impact on other countries that have always had close cooperation with the EU and the UK. The readjustment of foreign trade policy rules after Brexit will cause direct trade fluctuations of countries including China, and then indirectly affect the economic and trade cooperation between China and the UK. It is worth paying attention to the changes in the economic and trade rules between China and the UK under the direct impact of Brexit. Based on the analysis of the reasons for Brexit, this paper discusses and studies the changes in the economic and trade relations between China and Britain under the background of Brexit.

**Keywords:** *Brexit, U.K-China, International trade*

## 1. INTRODUCTION

On January 23rd, 2013, former British Prime Minister Cameron first mentioned the Brexit referendum. On June 23rd, 2016, the UK voted to leave the EU by 52% "leave" to 48% "remain"[24]. After more than three years of multiple rounds of votes, discussions, bills, and negotiations, finally, the UK is no longer a member of the European Union starting from 31st January 2020 with a withdrawal agreement. The UK bid farewell to allies that have coexisted for 47 years. The number of members of the European Union has officially changed from 28 to 27. As a veteran capitalist country, the cradle of the growth and development of the western economic system, Britain became the first country in history to withdraw from the European Union. Britain officially withdrew from the EU on January 31, 2020. As for the reasons for Brexit, Britain's pragmatic philosophy and eurosceptic tradition are the cultural reasons for Brexit, while the high annual budget of EU, European debt crisis and European refugee crisis are the practical reasons for Brexit.

Since Chinese President Xi Jinping visited the UK in October 2015, that was the beginning of the golden age of Sino-British trade. After Brexit, Sino-British bilateral trade may usher in great development. The scale of China-UK trade import and export is expected to expand, and there are high expectations for future service industry cooperation. Both China and the UK are of great strategic significance in their respective foreign economic and trade activities. We have carried out close cooperation in

more and more fields. We are each other's important trading partners in the context of economic globalization. Therefore, it is of certain theoretical and practical significance to analyze and study the economic and trade exchanges between China and the UK and the impact of national economic and trade policies under the background of Brexit. First in the theoretical level, the British out of Europe not only can be divided into an international political events, has had the enormous changes in the European integration process and the direction, but it is also an international economic event, involving English, Chinese-English, central Europe and many countries in economic, trade, investment, monetary cooperation, wide range and complex. It is of certain theoretical significance to study the impact of Brexit on the economy and trade between China and the UK in the context of the epidemic and further analyze and discuss the possible future policy trends of the two countries. In practical sense, China is an important partner of the UK in terms of economic and trade cooperation, and it is of great strategic significance in its market policy adjustment after Brexit. In recent years, China's international status has been increasing day by day, with a vast market and huge potential. China is an important economic and trade cooperation country in the world, and the UK has actively joined the "Belt and Road" initiative initiated by China, which is an important opportunity for the UK to restore its economy and trade and re-plan its overseas market after Brexit. Britain and China, on the other hand, ranking the second largest trading partner in the EU economy, as a political policy system is relatively

complete, relatively complete market system rules of capitalist countries, the UK the important position in global politics, economy, trade, finance, self-evident, so take off after the British produce changes in the political and economic environment, will bring great impact to China. Therefore, It is of great practical significance for China to follow the Brexit process in a timely manner and actively analyze and predict the possible policy changes of the UK in the future in the context of Brexit, so as to avoid trade risks, reduce uncertainties and timely make targeted decisions.

## **2. LITERATURE REVIEW**

At present, mainstream research focuses on the impact of Brexit on the United Kingdom [8], the impact on the European Union[13], and the impact on the United States [32]. Few research paid much attention to the impact on China in this regard. And the current mainstream research on the impact of Brexit on Sino-British trade relations has different perspectives. The existing literature mostly studies the impact of Brexit on China's One Belt One Road policy, or just from the perspective of financial investment, and lack of diversified perspectives including about service trade etc[12]. There are also many documents that pay more attention to the relationship between China and the EU after Brexit [35]. This article fully supplements the development of Sino-British trade relations after Brexit and analyzes the pros and cons from both the British and Chinese perspectives. Our paper concludes that: the reasons for Brexit are composed of cultural and practical aspects. The cultural aspect emphasizes the pragmatism and the doubt of Continental Europe. The practical reasons are analyzed from the perspective of economics and immigration. The positive impact of Brexit on U.K-China trade relationship include short-term forecasts, British perspective — opportunities, and Chinese perspective — reform and service trade. The disadvantages of Brexit on U.K-China trade relationship include financial impact, the quality of export and oil. The context of this article is divided into three main parts: the reasons for Brexit, the advantages and disadvantages of Brexit on the U.K-China trade relationship.

### ***2.1. Sino-UK economic and trade relations before Brexit***

Jin used qualitative analysis and quantitative analysis to make relevant analysis on the history and current situation of Sino-British trade development[11]. He found that there is a certain imbalance in the trade structure of the two countries, and the bilateral trade structure needed to be further optimized. Yu emphasized the use of data for empirical analysis, studied the complementarity and comparative advantage of goods trade between China and Britain, selected specific quantitative index standards, collected reliable data from

corresponding sources, put them into the model for calculation and analysis, and finally came to the conclusion that the two countries had strong complementarity[36]. It is embodied in the comparative advantage of Capital and technology-intensive products of Britain and the comparative advantage of steel and textile industry of China. Chen pointed out that in order to promote the steady progress of RMB internationalization, it is necessary to make full use of London's role as a financial center[4]. In addition, it is necessary to improve the added value of Chinese products and promote the economic progress of China and Britain by taking advantage of the good political and economic environment of Britain.

### ***2.2. The impact of Brexit on China-UK trade and economy***

After the UK passed the referendum on Brexit in 2016, great changes were brought to the relationship between the UK and the EU as well as the relationship between China and the UK. Since then, most studies on sino-UK economic and trade relations have been carried out around the background of Brexit. The current literature mainly analyzes the current situation of China-UK trade, or researches from economic and financial perspectives such as enterprise investment and RMB internationalization.

From the perspective of the current trade situation, Marianne believes that based on the real economic and social situation, the UK is very likely to implement the trade protectionism policy after Brexit, but the UK has always claimed to be a free trade economy, the actual impact of Brexit needs to be determined according to the degree of trade protectionism[17]. Cristian believed that after Brexit, on the one hand, the flexibility of the domestic market would be directly affected[7]. The UK, with more autonomy in economic policies, would make more use of its flexible and pragmatic characteristics in foreign trade relations and reduce restrictions, which would be conducive to the recovery of domestic economic growth. But on the other hand, the UK without the EU system can no longer fully apply the preferential trade rules of the EU region, which will inevitably lead to higher barriers in foreign trade and financial investment services, which is not conducive to the stable development of economy and finance in the short term. The methods used by Thomas in his research include qualitative interpretation and analysis and tracing the process of Brexit[28]. The article focuses on the analysis of the contents, mainly dividing the international impact after Brexit into the cooperation between the UK and EU and the cooperation between the UK and major developing countries represented by China. He believes that in the long run, The negative impact of the negotiations should be eliminated as much as possible and policies to protect development should be

implemented in the process of leaving the EU. Li et al. analyzed the trade scale of China and the UK, the structure of bilateral trade goods and the index of trade integration[15]. On this basis, they studied the impact of Brexit on Sino-UK trade from the import and export scale, trade surplus and trade policy. The research results show that after Brexit, the UK no longer enjoys the preferential trade terms as a member of the EU, which may lead to the increase of sino-UK import and export volume, the expansion of trade scale, the reduction of sino-UK trade surplus and the emergence of a new pattern of Sino-UK trade policy. Wang believes that in the context of the golden era of China-UK relations, the impact of Brexit on China-UK relations is mainly reflected in the economic and trade relations, political security and cultural exchanges between The two countries, and timely countermeasures should be formulated[30]. Starting from the current situation of China-UK trade, Zhao Yujun analyzed the impact of Brexit on the trade relationship between China and the UK from two aspects: short-term negative impact and long-term positive impact. Yin started from the development trend of Sino-British trade after Brexit, analyzed the national trade environment, and discussed the impacts and countermeasures from the positive and negative impacts[34].

From the perspective of enterprise investment and RMB internationalization, Li not only analyzed china-UK bilateral trade, but also analyzed the ability to attract overseas investment and the status of trade agreements, based on which he predicted the possible impact of Brexit on Sino-UK economic and trade relations[14]. Jiang et al. studied the internationalization of RMB and its impact on Chinese enterprises, and specifically analyzed the impact of Brexit on the exchange rate and interest rate of RMB in the international market, as well as the impact on overseas financing and foreign trade of Chinese enterprises[10]. In addition, it briefly analyzes the impact on China's position in the global economy and China's possible future policy towards Europe. Fu analysis of the UK to take off the influence on the internationalisation of the renminbi, thinks Britain out of Europe will have a negative effect on the internationalisation of the renminbi, the London market volatility increases in a short period of time will affect the economic business, in Europe the yuan in the promotion of the cost increase, but at the same time, it will create new opportunities[9]. The changes in the global economic landscape require careful consideration in all directions. From the perspective of enterprises, Zhang analyzed the impact of Brexit on Chinese enterprises' investment in Britain in the short and long term by analyzing the specific data of Chinese enterprises' investment and merger in Britain from 2009 to 2019[37]. The research results show that the UK still faces the risk of hard Brexit in the transition period, and investment will face severe challenges in the short term. However, in the medium and long term, the UK will be

more free and open after breaking away from the institutional constraints of the EU, and Chinese enterprises' investment in the UK will have a bright prospect. Ren believes that Brexit event has brought a direct negative impact on THE RMB exchange rate, but such negative impact is not likely to paralyze China's economy in the future and will not last forever[20]. In the long run, it will be good for the internationalization of RMB. Ruan selected the specific tourism industry to analyze the impact of Brexit on china-UK service trade, and believed that the increasing uncertainty of RMB internationalization, the increasing complexity of Chinese enterprises' products export to Britain, and exchange rate fluctuations may lead to difficulties in overseas financing for Chinese enterprises and affect the direction of EU policies[22].

### ***2.3. Other implications of Brexit***

Xu & Wang also combed the British to take off the reasons, and explored from several aspects to take off the event's influence on the world, studies suggest to take off the first big test to British society, at the same time, the eu integration will suffer huge impact, the Sino-British trade is faced with opportunities and challenges, the future direction of the china-eu relations will also be affected[33]. Wang analyzed the transitional period and off the prospect of British foreign policy, and considered the possibility of extending the transition off still exists, the UK and the eu negotiations smoothly or not, will ultimately affect the without agreement whether the European situation will appear, and take off the current transition period of the most important task is to reshape the relationship[31]. Cong from the UK to take off the background, analyzes its impact on the global and China's economy, mainly including Britain itself, the European Union, global economic growth, china-uk relations, thought the ou will affect its own economy, intensify social conflicts, to the European Union get in the way of economic development, the impact of the global economy growth, As well as Sino-British, Sino-European partnerships and reform initiatives within China[6].

### ***2.4 Literature summary***

To Britain to take off the western scholars in the study of the effects of related, and the effects on the UK trade relations to China studies is relatively small, most of the research are the brief introduction of the combed the anglo-chinese trade development present situation, further points out the problems existing in the trade, on the basis of a recommendation of targeted countermeasures; And more content will be the research focus on the UK, Europe's interests, explore the main analysis the profound reasons behind the euro, to Britain take off the social and economic impact, and take off the relations with the eu over Britain such as the impact of

changes, and the analysis of the Sino-British trade has certain one-sidedness.

### 3. POSITIVE IMPACT OF BREXIT

The visit of Chinese President Xi Jinping to the UK in October 2015 marked the arrival of the "golden age" of Sino-British trade relationship. Trade cooperation in both import and export have been increasing year by year. The UK has gradually become the third largest trading partner country for imports from China and the second largest trading partner country for exports to China. This continuous strengthening and deepening of relations during the "golden age" should provide a good opportunity for further mutually beneficial cooperation between China and the UK in the economic and trade fields after Brexit.

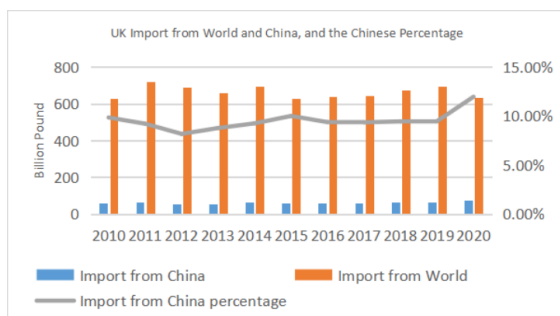


Figure 1. UK Import from World and China, and the Chinese Percentage, 2010-2020

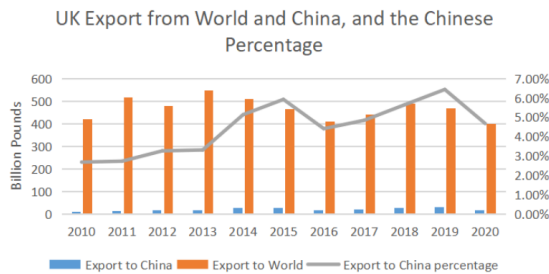


Figure 2. UK Export from World and China, and the Chinese Percentage, 2010-2020

According to statistics, the bilateral trade volume between China and the UK has been fluctuating from 2013 to 2019. After reaching a historical highest point of \$91.03 billion in 2015, under the influence of global economic and trade turmoil and the process of Brexit, the bilateral trade volume between China and the UK started to decline in 2016. It was not until 2018 that the trade in goods between China and Britain rose to \$82.10 billion. From January to March 2019, the trade volume between China and Britain was 20.39 billion U.S. dollars, an increase of more than 8.8%, and the number tended to expand.

#### 3.1 Short-term Prediction

Brexit provides opportunities for the development of

Sino-British trade. Bilateral trade between China and Britain may usher in major developments with investments. Both countries should take this opportunity to reach a consensus on in-depth negotiations over the terms of trade between both sides.

The scale of Sino-British trade is expected to expand. With Brexit, the UK no longer enjoys some of the preferential terms of trade as a member of the European Union, leading to potential decline in UK-EU trade volume. This post greater opportunities for the development of Sino-British trade. China is expected to increase imports of British products, reduce trade surplus, and maintain a balanced development of Sino-British trade under the background of a global pandemic and political interferences of the CN-EU BIT signing.

The Sino-British trade surplus is expected to decrease due to the potential decline in the exchange rate of Pound after Brexit. Since China's exports to the UK are mainly labor-intensive products and are easily affected by the exchange rate. It will lose its price advantage. As a result, the scale of British exports to China will expand, thereby reducing the Sino-British trade surplus and promoting a more balanced development of Sino-British trade.

#### 3.2 UK perspective -- Opportunities

After the Brexit referendum, the exchange rate of pound to China's currency RMB fell sharply. Moody's Investors Service downgraded the UK's sovereign credit rating from stable to negative. Affected by Moody's ratings, the international financial market took the lead in responding. In the months after the referendum, the Pound to RMB exchange rate has been volatile. From 9.80 on the day of the referendum, it fell all the way to the lowest point of 8.24 on October 31, 2016, setting a record low in the past decade [16]. Although the exchange has increased significantly since then, it has not yet returned to the level before the Brexit referendum.

After the referendum, Moody's revised down its UK GDP growth forecasts to 1.5% and 1.2% for 2016 and 2017 from 1.8% and 2.1% previously [17]. It is foreseeable that for a long period of time in the future, the Pound will be in a state of substantial depreciation. It then allows China to obtain the necessary production and living materials from the UK at a lower cost. On the other hand, it helps to alleviate the negative impact of the UK's reduction in the EU market after Brexit on its own economy.

The Chinese investment in the UK has provided strong support for the UK's economic development after Brexit. After the announcement of Brexit referendum, China General Nuclear Power announced its 6 billion Pounds investment commitment in the Hinkley Point nuclear power project in the UK will not be shaken[29]. In addition, in November 2016, a Chinese developer announced that it would continue to promote the

development of a new business district worth £1.7 billion in the Royal Albert Dock area in East London.

**3.3 China perspective – Reform**

Chinese companies should improve their product R&D capabilities and product quality, open up emerging markets to participate in the formulation of new trade rules in the international market. China must promptly advance structural reforms in the sense that the development of the world economy requires China's strength after the COVID-19 pandemic.

For a long time, Britain's exports to China were mainly capital and technology-intensive products, while China's exports to Britain were mainly labor-intensive products. China introduced the “Made in China 2025” plan to domestic companies in the UK in detail and stated that it will invest sufficient funds to support British companies in linking with the plan in the future, focusing on advanced and innovative manufacturing industries such as the automobile and aerospace. This provides the best opportunity for Chinese companies to learn and absorb from the UK's advanced manufacturing technology in order to upgrade Chinese manufacturing products.

**3.4 Service Trade**

In financial services, where the UK has the most global competitive advantage, China and the UK will especially strengthen cooperation. The main services exported by the UK are financial services, communications, computer and information services, insurance and pension services. As a global financial center, its financial services accounted for 23% of the UK's total service trade exports at 50.77 billion Pounds in 2015 [18], ranking first. After Brexit, the economic and trade cooperation between China and the UK has been continuously deepened and it's expected to keep expanding.

In recent years, with the continuous upgrading of Internet technology, financial technology companies have played an increasingly prominent role in promoting financial service trade. At the "China-UK Financial Technology Cooperation Forum" held in London in November 2016, Ernst & Young released a report entitled “China-UK Financial Technology: On the Cutting Edge”. The report pointed out that the United Kingdom, as a world-recognized financial technology center, has made substantial gains in the financial technology industry, with revenues of up to 6.6 billion Pounds in 2015. The report also pointed out that the UK has strong expertise in the three major areas of blockchain, regulatory technology, and foreign exchange trading and management. In the preface of the report, the Undersecretary of Economic Affairs of the British

Ministry of Finance, Simon Kirby, pointed out that the Chinese market has huge potential, and the UK has actively explored the Chinese market. This report, released after the Brexit referendum, conveyed to the world the vision of the UK and China to strengthen cooperation in the field of financial services and trade. This alleviated to a certain extent the reduction of the UK's market share in Europe after Brexit. In addition, Chinese financial technology companies have also begun to explore the application of new financial technology technologies such as blockchain, which has played a positive role in promoting financial service trade between China and the UK.

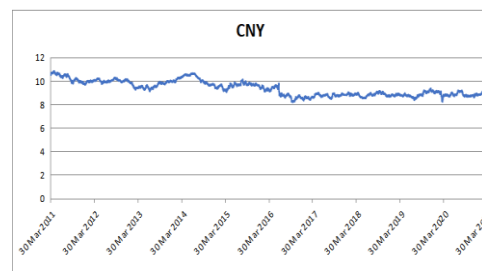
**4. NEGATIVE IMPACT OF BREXIT**

The UK was the EU's largest trading partner before Brexit with large investments in the economy. After Brexit, UK's market share in the EU may be reduced. From the perspective of Sino-British trade relations, China has relatively strong economic strength and market space. This is the one of the best choices for the United Kingdom to ease the pressure on economy after Brexit. It also indicates that the UK can pay more attention to Sino-British trade relations after Brexit. The current China-UK Free Trade Agreement has not yet been negotiated and many provisions are under planning. However, it is also necessary to realize that Britain's “Brexit” does have some adverse effects on Sino-British trade.

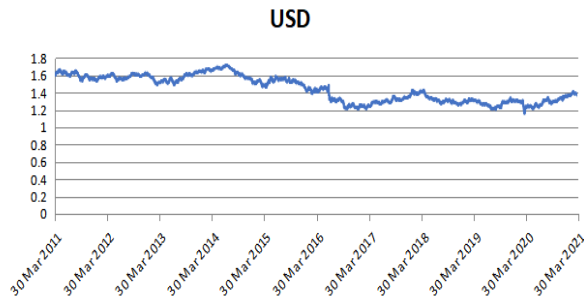
**4.1 Financial Impact**

First, the exchange rate of Pound is bound to show a downward trend in the later period of Brexit. Although this is conducive to exports, foreign study and tourism, etc. from the perspective of short-term benefits, the foreign exchange market is very likely to cause the appreciation of the U.S. dollar, which directly affects the devaluation of the RMB against the U.S. dollar. At the same time, Brexit may cause panic in the financial market. The impact on China is that mainland capital is likely to flow out, which will put pressure on the depreciation of the RMB.

**4.2 GBP-RMB/GBP-USD Exchange Rate**



**Figure 3.** GBP-RMB Exchange Rate, 2011-2020



**Figure 4.** GBP-USD Exchange Rate, 2011-2020

Secondly, Brexit will have a certain impact on China's "go global" strategy. This is because Britain's position in the financial market has been affected. At the same time, it will also affect the internationalization of the RMB. This is due to the fact that London has vigorously promoted the construction of the RMB offshore market in recent years and has become the second largest RMB offshore settlement center. After Brexit, the strategic cost of RMB promotion from the UK to Europe will directly increase. In addition, UK's economic market will be severely impacted in the short term, and the EU will also face a severe financial shock. If the EU chooses to adopt a trade protection policy at this time, it is likely to affect the export of Chinese goods and the bilateral trade between China and Europe. Moreover, Brexit has broken the effectiveness of the United Kingdom as a link to strengthen the cooperation between China and the European Union.

### 4.3 Export Quality

After Brexit, Chinese companies have to respond to the high-standard quality inspection requirements of the EU and the UK at the same time, and the pressure on product exports will increase. It is mainly aimed at the safety and environmental protection of clothing, toys, communication products and home appliances, and provides early warnings to China. These products are the main products China exports to the European Union and the United Kingdom. While dealing with the higher technical barriers of the European Union, Chinese goods exporting enterprises must also deal with the higher technical standards of the United Kingdom, which undoubtedly makes the export of Chinese related products more difficult.

After Brexit, the United Kingdom will produce export standards that are different from those of the European Union or even more stringent, and passively and forcibly require the upgrading of my country's industrial chain.

### 4.4 Petroleum

The uncertainty caused by Brexit has increased the operating costs of oil companies and increased the risk of trade in Scotland, which is not conducive to the UK's

export of oil to China. Petroleum is the second largest export product of Britain's trade in goods to China. The UK's oil industry is mainly located in the North Sea region of Scotland, and its oil reserves rank first in Europe. In 2015, the development of new oil fields in the UK was decreasing, which will lead to a decline in future oil production. The reduction in overall oil production has directly reduced the export volume of British Petroleum. The US investment bank Morgan Stanley once stated that Brexit would destroy oil investment in the UK and the North Sea region and adversely affect the supply of crude oil (WSJ, 2016). Reuters also wrote an article that the departure of the United Kingdom from the EU will make UK's energy infrastructure costlier, and the construction of new projects will be delayed [21]. Brexit has caused Britain to further reduce investment in the oil industry, further reduce the volume of British oil exports, and make China import less oil from the UK.

Regarding the operating costs of the oil industry, although Brexit has caused the sharp depreciation of the Pound to reduce BP's operating costs in the short term, in the long run, it will make British oil producers invest more in response to the uncertainty of Brexit Additional cost. Browne, the former CEO of BP, said on the day of the Brexit referendum that people with common sense would choose to stay in the European Union because there are too many socio-economic uncertainties caused by Brexit, and the oil industry will be brought about by Brexit. Uncertainty increases financing costs [5]. The increase in British oil production costs will undoubtedly reduce corporate profits and will also weaken BP's price competitiveness in the international market, which will hinder the export of British oil and adversely affect Sino-British oil trade.

## 5. INFLUENCE ON BILATERAL TRADE SCALE STRUCTURE

### 5.1 Trade scale

This paper selects the relevant data of import and export trade between China and the UK from 2011 to 2019, as shown in the figure below. It can be seen that under the influence of the changes in Sino-British trade relations and the Brexit process, the total amount of Sino-British trade, The amount of Chinese exports to The UK, the amount of Chinese imports to the UK and the balance of trade between the two countries all show periodic fluctuations.

After the global financial crisis in the early 21st century, the economies of all countries began to recover gradually. China's economy performed strongly in the crisis. From 2011 to 2014, the total trade volume between China and the UK continued to grow rapidly, and in 2014, the total trade volume between the two countries exceeded usd 80 billion. In 2016, the trade volume fell to us \$74.4 billion due to the UK's vote to leave the

European Union. It did not recover to US \$79 billion until 2017 when the brexit negotiation process was basically stable. Since then, the trade volume between China and the UK has recovered to a relatively rapid growth. According to the Data of the National Bureau of Statistics, by August 2020, the trade volume between China and the UK had reached 117.97 billion US dollars, breaking the 100 billion mark, which was supported by the steady growth of China's economy and the confidence in trade inspired by the formal brexit of the UK in January 2020.

In terms of China's exports and imports to the UK, they also showed similar gradual changes of increase and decrease. From a vertical perspective, the establishment of china-UK global comprehensive strategic partnership in 2015 ushered in a golden era of China-UK relations. China's export to the UK also increased to 60 billion DOLLARS from a sustained growth, and then fluctuated after a brief decline in 2016. China's import to the UK reached the highest value in this stage in 2014, and then fluctuated around 2016 and gradually recovered. Horizontally, China's exports to the UK have always been greater than its imports, and the trade balance has generally increased.

The fluctuation trend of China's import and export growth rate to the UK can be obtained after data collation and calculation in Table 1. In general, the trend of the three lines is roughly the same, showing obvious fluctuations. Among them, the trend of the growth rate of total trade and the growth rate of export are more consistent, and the growth rate decreased significantly from 2011 to 2012. From 2012 to 2014, the growth rate gradually increased and reached a high value. The growth rate of export reached 12.17% in 2014, the highest in recent years, reflecting the high growth rate of export and total trade in this period. However, influenced by Brexit, both of them dropped to below -5% in 2016, showing significant negative growth. After that, the growth rate fluctuated and picked up. Both rebounded to a more stable growth rate of around 10% in 2019. The fluctuation range of the import growth rate line is larger than that of the other two, and the growth rate shows a trend of gradual decline after 2017, contrary to the upward trend of the first two.

**Table 1** Import and Export status of China and the UK from 2011 to 2019 (Unit: US \$billion)

year	Total trade between	Chinese exports to the	The value of Chinese	Trade balance
2011	586.78	441.22	145.57	295.65
2012	631.02	462.97	168.05	294.92
2013	700.21	509.42	190.79	31 & 63
2014	808.68	571.41	237.27	334.14
2015	785.01	595.67	189.34	406.33
2016	744.02	557.21	186.81	370.39
2017	790.42	567.14	223.29	343.85
2018	804.14	565.43	238.71	326.72
2019	863.56	624.25	239.31	384.94

Source: website of National Bureau of Statistics, PRC, <http://www.stats.gov.cn/>

## 5.2 Trade structure

Table 2 selects the data before and after 2016. According to the information released by The Ministry of Commerce of China, the relevant data of the top 15 categories of British exports to China are sorted out and analyzed briefly. It can be seen that from 2015 to 2019, the main commodity categories exported by The UK to China are basically the same in general, with slight changes in the top four categories. Transport equipment and mechanical and electrical products ranked in the top 4 in the selected three years. Compared with 2015, precious metal products and mineral products were less in 2017, while precious metal products and mineral products were in the top 4 in 2019, but chemical products were less. From the perspective of proportion, the top 4 commodities in 2015, 2017 and 2019 all accounted for more than 70%, accounting for about 80% in 2015, while the proportion decreased significantly after 2016, accounting for about 71%. In the selected time dimension, In the past three years, the proportion of transport equipment exported from Britain to China was 21.9%, 28.5% and 13.7% respectively, that of mechanical and electrical products was 12.6%, 15.1% and 11.1% respectively, and that of chemical products was 7.5%, 10.1% and 9.1% respectively. The proportion of these three kinds of commodities all fluctuated significantly. Both peaked in 2017 when the Process of Brexit negotiations was stable. However, the proportion of precious metal products and mineral products changes more widely. The proportion of precious metal products in three years is 37.9%, 4.0% and 29.1% respectively, and the proportion of mineral products is 3.8% and 17.5%. 17.9% respectively. It has replaced the top 4 of precious metal products.

Among the remaining 11 commodities, leather products in 2015 did not appear in 2017 and 2019, ceramics and glass increased from 0.2% in 2015 to 0.3% in 2019, but did not appear in 2017 either. The proportion of live animals and animal products decreased first and then increased in the three years. The proportion of other commodities generally showed a trend of first increase and then decline, consistent with the top 4 main commodities.

**Table 2** Composition of main commodities exported from Britain to China dollar (unit: million US dollars)

2019			2017			2015		
Commodity categories	exports	Accounted for %	Commodity categories	exports	Accounted for %	Commodity categories	exports	Accounted for %
Precious metal products	8779	29.1	Transportation equipment	6123	28.5	Precious metal products	10506	37.9
minerals	5402	17.9	minerals	3768	17.5	Transportation equipment	6060	21.9
Transportation equipment	4135	13.7	Mechanical and electronic products	3262	15.1	Mechanical and electronic products	3492	12.6
Mechanical and electronic products	3342	11.1	Chemical products	2175	10.1	Chemical products	2064	7.5
Chemical products	2751	9.1	Base metals and products	1354	6.3	Base metal products	1238	4.5
Optics, Horology, Medical treatment	1181	3.9	Optics, Horology, Medical treatment	1021	4.7	minerals	1064	3.8
Base metals and products	1056	3.5	Precious metal products	850	4.0	Optics, Clocks and watches	894	3.2
Live animal animal products	538	1.8	Cellulose pulp, Paper	590	2.7	Cellulose pulp	699	2.5
Food, Beverage, Tobacco	439	1.5	Plastics, Rubber	439	2.0	Plastics, Rubber	477	1.7
Plastics, Rubber	402	1.3	Live animal animal products	365	1.7	Live animals	247	0.9
Works of art	286	1.0	Food, Beverage, Tobacco	336	1.6	Textile material	215	0.8
Cellulose pulp, Paper	279	0.9	Furniture, Toys, Miscellaneous	216	1.0	Foodstuffs, Tobacco	184	0.7
Textiles and Raw Materials	174	0.6	Works of art	190	0.9	Leather products	164	0.6
Furniture, toys, miscellaneous	125	0.4	Textiles and Raw Materials	176	0.8	Miscellaneous products	85	0.3
Ceramics - glass	81	0.3	Animal and vegetable grease	124	0.6	Ceramics, glass	47	0.2

Source: Ministry of Commerce of the People's Republic of China website, <http://www.mofconLgcw.cn/>

The data in Table 3 show the main composition of goods imported from China in the UK in 2015, 2017 and 2019. As can be seen from the table, the composition structure of main imported commodities is generally the same with almost no change. In terms of proportion, the difference between 2015 and the last two years is more obvious, while 2017 and 2019 are more different. Among them, the top 4 commodities have not changed not only by category, but also by individual category. Mechanical and electrical products, miscellaneous products, textiles and raw materials, and base metals and products are ranked in the order of ranking, and their total proportion also basically remains at about 70%. The proportion was 72.8 percent in 2015, 69.7 percent in 2017 and 73.3 percent in 2019, with little fluctuation. In three years, The proportion of mechanical and electrical products imported from China is 37.8%, 34.9% and 44.3%, of miscellaneous products 14.4%, 15.1% and 13.2%, of textiles and raw materials 14.1%, 12.5% and 9.8%, of base metals and products 6.5%, 7.2% and 6.0%, respectively. It can be seen that compared with 2015, the proportion of mechanical and electrical products increased significantly, but the proportion of the other three commodities decreased to varying degrees, but did not affect the overall ranking.

Among the remaining 11 categories, live animals and animal products were added to the list in 2019 compared to 2015 and 2017. However, other commodity categories are consistent, with slight changes in individual rankings. From the perspective of proportion changes, the

proportion of commodities in most categories has increased in 2019 compared with 2015, while the proportion of a small part has decreased.

**Table 3** Composition of main commodities imported by Britain from China dollar (unit: millions of US dollars)

2019			2017			2015		
Commodity categories	imports	Accounted for %	Commodity categories	imports	Accounted for %	Commodity categories	imports	Accounted for %
Mechanical and electronic products	29029	44.3	Mechanical and electronic products	18101	34.9	Mechanical and electronic products	23901	37.8
Furniture, Toys, Miscellaneous	8635	13.2	Furniture, Toys, Miscellaneous	7809	15.1	Miscellaneous products	9102	14.4
Textiles and Raw Materials	6420	9.8	Textiles and Raw Materials	6482	12.5	Textiles and Raw Materials	8928	14.1
Base metals and products	3927	6.0	Base metals and products	3706	7.2	Base metals and products	4101	6.5
Plastics, Rubber	2900	4.4	Plastic Rubber	2607	5.0	Shoes and boots, Umbrella and other light work	2861	4.5
Chemical products	2578	3.9	Chemical products	2177	4.2	Plastics, Rubber	2720	4.3
Shoes and boots, Umbrella and other light work	2077	3.2	Shoes and boots, Umbrella and other light work	2065	4.0	Chemical products	2204	3.5
Optics, Horology, Medical treatment	1780	2.7	Optics, Horological medicine	1526	2.9	Leather goods, Cases and bags	1464	2.3
Transportation equipment	1573	2.4	Transportation equipment	1225	2.4	Optics, Horological medicine	1463	2.3
Ceramics - glass	1224	1.9	Cellulose pulp, Paper	1104	2.1	Transportation equipment	1269	2.0
Cellulose pulp, Paper	1194	1.8	Ceramics - glass	1102	2.1	Cellulose pulp, Paper	1261	2.0
Leather goods, bags	1158	1.8	Leather goods, Cases and bags	1101	2.1	Ceramics - glass	1184	1.9
Wood and products	875	1.3	Wood and products	838	1.6	Wood and products	1016	1.6
Live animal animal products	450	0.7	Precious metal products	528	1.0	Precious metal products	376	0.6
Food, Beverage, Tobacco	424	0.7	Food, Beverage tobacco	349	0.7	Food, Beverage tobacco	343	0.5

Source: Ministry of Commerce of the People's Republic of China website, <http://www.mofcom.gov.cn/>

In summary, the main commodities exported by Britain to China include precious metal products, mineral products, transport equipment, mechanical and electrical products and chemical products, while the main commodities imported by Britain from China include mechanical and electrical products, miscellaneous products such as furniture and toys, textiles and raw materials, base metals and products. This reflects the differences in import and export between China and the UK and the variety of goods trade. It showed that Britain's exports to China mainly for capital-intensive products of high added value, and the proportion of heavy industry is larger, and the UK imports from China are mainly low value-added labor-intensive products, light industrial industry proportion is larger, the two countries industry respective comparative advantage obviously, there is great potential for trade, China's exports to the UK still need to continue to optimize the commodity structure improvement.

From the perspective of time, in 2015, 2017 and 2019, the UK's exports and imports to China showed a trend of first decrease and then increase, and the categories of goods imported by the UK changed greatly around 2016. It is not difficult to find that the Brexit referendum in 2016 had a certain impact on the amount and structure of Sino-UK trade. After the Referendum to leave the EU, the ranking of commodity categories of trade changed



significantly, and gradually recovered stability after the Brexit negotiations got on track in 2017.

**5.3 Degree of trade integration**

The Trade Integration Index (TI) is a relatively comprehensive index, which is generally used to measure the degree of interdependence between two countries in trade. The calculation method is as follows: the proportion of a country's exports to a trading partner in the country's total exports and the proportion of the trade partner's total imports in the world's total imports. The higher the final calculation, the closer the trade ties between the two countries. The formula is as follows:

$$TCD_{ab} = \frac{X_{ab} / X_a}{M_b / M_w}$$

Corresponding to the research content of this paper, TCD in the formula represents the degree of trade combination between country a and country b, that is, between China and the UK; Xab represents the exports of country a (China) to country b (UK), Xa represents country a (China) total exports, Mb represents the total imports of country b (UK), Mw represents the total value of world imports. If the TCDab > 1 indicates that a and B have high trade interdependence, otherwise, it indicates that a and b have low trade interdependence.

**Table 4** China's trade integration with the United Kingdom (unit: US \$billion)

year	China's exports to the UK (X <sub>ab</sub> )	Total volume of China's exports (X <sub>a</sub> )	Total UK imports (%) (M <sub>b</sub> )	Total World Imports (%) (M <sub>w</sub> )	Degree of trade integration (TCD <sub>ab</sub> )
2011	441.22	18983.80	7176.06	185031.00	0.60
2012	462.97	20487.10	6891.37	187080.00	0.61
2013	509.42	22090.00	6572.23	190149.00	0.67
2014	571.41	23422.90	6943.44	191197.00	0.67
2015	595.67	22734.70	6302.51	167686.00	0.70
2016	557.21	20976.30	6363.68	162873.00	0.68
2017	567.14	22633.50	6409.08	180240.00	0.70
2018	565.43	24866.80	6716.94	198269.49	0.67
2019	624.25	24994.80	6957.98	192632.14	0.69

Source: Gen Zheng National Bureau of Statistics of China and WTO official website su Tami collation

According to the data analysis, the degree of trade integration between China and the UK is less than 1, which indicates that the degree of trade integration between China and the UK is not high and the trade links are not close. However, based on the data of previous years, the trade integration index between China and the UK has been growing steadily, and it began to fluctuate frequently after the Brexit referendum in 2016. According to previous research data, the Sino-British trade integration index was 0.44 in 2000, 0.51 in 2005, and exceeded 0.6 in 2009. Table 4 shows that it exceeded 0.7 in 2015. From 2000 to 2015, the Sino-British trade integration index continued to grow at a relatively stable rate. It increases by 0.1 every five to seven years. Since

2016, the index of trade integration degree has fluctuated and declined, always hovering below 0.7, failing to break through 0.8 in accordance with the previous cyclical trend.

The reason why the sino-UK trade integration index is less than 1 is that the numerator is less than the denominator for a long time. That is to say, the proportion of China's exports to Britain in China's total exports is always small when the proportion of Britain's total imports to the world's total imports is almost unchanged. The main advantages of the UK economy are mainly in foreign investment, financial services and high and new technology. There is little room for the development of trade in goods, which accounts for a small proportion of the world's total imports and remains unchanged, accounting for about 0.04 in the period from 2011 to 2019. By contrast, China is in a stage of steady economic development with rapid growth in total export. However, hindered by some trade protection measures and complex trade barriers of The UK, China's export to the UK is not high and its proportion in total export is also very small, maintaining a level of 0.02 to 0.03 from 2011 to 2019.

According to the analysis of the import and export data and the trade integration index, it can be found that the sino-UK trade integration index dropped suddenly due to the impact of the Referendum to leave the EU in 2016, and then the growth rate slowed down significantly, and the numerical fluctuation rebounded. In the long run, combined with the data from 2000 to 2011, the growth of sino-UK trade integration degree and the strengthening of trade links were indeed significantly hindered by Brexit, but the general trend is still growing. It is expected that after the brexit agreement is gradually implemented in 2021, the index will gradually pick up and continue to grow closer to 1.

Comprehensive the above analysis of the trade scale, structure, and each other, Britain to take off the events from a referendum to negotiations to protocol implementation of a series of influence on the Sino-British economic and trade cooperation, from the commodity trade scale, the Sino-British trade volume in 2016 off the early has been significantly weakened, but after the rapid rebound, and although growth is slowing down, but the future is expected to still keep growth; On the one hand, it is based on the trend of the overall fluctuation of trade volume and growth rate. On the other hand, it is based on the fact that the concrete implementation of the Brexit agreement is still very complicated. Therefore, the hedging role and value of the Chinese market are of great practical significance to the UK. The trade gap between China and the UK is unlikely to narrow in the short term as the growth rate of China's exports to the UK is on the rise and that of China's imports is on the decline. From the trade structure, at around 2016 British imports from China main

commodity categories ranking changed obviously, but the top 4 main product category on the import and export of basic didn't happen too big change, is still the main labor-intensive, low value-added products imported from China mainly exports to China capital and technology intensive and high value-added products; This shows that Brexit has had little impact on the structure of trade in goods between China and the UK, and there are still big differences between the two countries. In terms of the degree of trade integration, the index of the degree of trade integration between China and the UK shows an overall upward trend, but the growth rate of the index slows down after the impact of Brexit, and the level of trade ties between the two countries is still not close.

## 6. CONCLUSION

The British desire common interests rather than permanent friends. This is the best interpretation of British pragmatism philosophy. Additionally, there has always been a cultural tradition of "Euro-scepticism" in the UK. This makes Pragmatic philosophy and the European doubtful tradition are the cultural reasons for Brexit. The negative economic impact of the EU regime on the UK and disagreement over immigration has undoubtedly accelerated British sentiment to leave the European Union.

Overall, the article revolves around the advantages and disadvantages of post-Brexit trade between China and Britain. The positive impact of Brexit on Sino-British trade is analyzed from four perspectives: short-term forecast, British perspective, China perspective, and service trade. In the short term, it is predicted that Europe will benefit China-UK trade import and export, and the China-UK trade surplus is expected to decrease. From the perspective of the United Kingdom, the depreciation of the pound sterling after Brexit on the one hand enables China to obtain the necessary production and living materials from the United Kingdom at a lower cost, and on the other hand, it helps to alleviate the negative effects of the UK's shrinking in the EU market after Brexit on its economy. After Brexit, it will attract many top Chinese companies to invest in the UK, and it will also benefit the UK economy and employment position. From the perspective of China, Britain, which has left the EU, will formulate a new trade policy with China. This provides many new opportunities for the development of Sino-British trade and also provides the best opportunity for Chinese companies to learn from the UK's advanced manufacturing technology. In addition, in terms of financial services in which the UK has the most global competitive advantage, China can learn from the UK's more advanced financial services knowledge after Brexit.

There are indeed some adverse effects on Sino-British trade. Mainly analyze from three aspects: Financial Impact, Export Quality and Petroleum. From the perspective of the international business

environment, the pace of RMB internationalization will slow down. In addition, the trade policy between China and the EU is likely to be reformulated and other measures need to be taken to maintain Sino-EU trade. At the same time, Chinese companies have to deal with two different high-standard quality inspection requirements of the European Union and the United Kingdom. This is equivalent to forcing the upgrade of China's industrial chain, which undoubtedly increases the cost of improving export quality in all aspects. Brexit has reduced the overall oil production in the UK and directly reduced the export volume of British oil. This affects the amount of oil China imports from the UK.

Brexit not only has a negative impact on china-UK economic and trade cooperation, but also brings new opportunities. Although the international political relations are complicated and changeable, both China and the UK should adhere to the objective and rational principle and develop their political and economic relations based on the common interests of both sides. Economic and trade cooperation is the highlight of China-UK relations and the cornerstone of bilateral relations. First of all, China should unswervingly develop its own economy, actively promote economic and trade negotiations with the UK, upgrade China's economic and trade structure on a stable and fair basis, and make china-UK trade more integrated. In addition, our country should timely adjust domestic monetary policy, reduce the sterling exchange rate movements on the impact of the RMB exchange rate, at the same time actively participate in international financial organizations, safeguard China's financial cooperation relations with major countries such as Britain, promote further renminbi internationalization development, strengthen the foreign investment and to attract foreign investment. Sino-British economic and trade cooperation relationship need to continue to maintain good and stable development, this is the requirement of China's peaceful development, but also needed in Britain achieve global vision and hope after take off the matters to implement step by step, in both countries to follow the principle of objective and pragmatic attitude, seeking to maximize the common interests of bilateral economic and trade cooperation areas.

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