

CHARLES UNIVERSITY

FACULTY OF SOCIAL SCIENCES

**Institute of International Economic and Politics
Studies**



Master thesis

**The Foreign Direct Investment of China in
Central Europe under the One Belt One
Road Policy**

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Academic Year: **2018/2019**

Bibliographic note

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1. The author hereby declares that he compiled this thesis independently, using only the listed resources and literature.
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Prague, July 19, 2019.

Acknowledgments

I strongly thank my supervisor Vladimir Benacek, who gave me painstaking guidance and help, selflessly modified and improved the paper for me. I also want to thank professor Vilem Semerak, who provided me with a lot of data, literature and combed the logical framework for me in detail. At the same time, I sincerely thank my friend Song Yao for helping me in the data analysis and econometric model. Without his guidance and explanation, I can't complete the writing of the econometric part smoothly. Finally, I am also very grateful to the monographs of the scholars I quoted in this article. Without the inspiration of their research results, I will not be able to complete the writing of this paper.

Abstract

This paper attempts to explore China's direct investment in Central Europe under the OBOR initiative. China's economic cooperation in Central Europe is short and the total amount is small. First, this paper analyzes the current situation of Chinese investment including scales, industrial structure, investment entities. Second, through data integration, this paper analyzes the competitive advantage of China's investment in Central Europe. Finally, this paper explores the motives of Chinese investment through the panel data model. The results show that the market size, technology level, resources and other factors of the Central European countries can attract Chinese investment. At the same time, the local environment, economic stability and other factors do not affect China's investment in infrastructure construction. China has laid the foundation for its economic and trade cooperation with Central Europe and is also a strategic choice between China and the United States.

Keywords

CE-China investment, competitive advantage, OBOR, economic cooperation, motivation of investment

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Master's thesis Proposal

Author:	Han Zhang
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Defense Planned:	September 2019

Proposed Topic:

The Foreign Direct Investment of China in Central Europe under the One Belt One Road Policy

Motivation:

I chose this topic mainly because under the One Belt One Road policy, China has increasingly focused on economic and trade cooperation with Central Europe (Czech, Hungary, Slovakia, Poland). Although Central Europe area is an important part in the whole Europe, and of the EU in particular, in the past two decades the developments of China's economic and trade cooperation with Central European countries were slow and the proportion of mutual trade was relatively low if compared with other regions of comparative size in Europe and also with FDI flows from Japan or South Korea. However, under the One Belt One Road policy of China, investment in Central Europe in the period 2015-18 has seen significant growth and witnessed an opening of new windows of opportunity. The continuous development of economic trade relations between China and Central Europe is of great strategic importance for Chinese cooperation with the whole European Union. Economic activities between countries have an inextricably linked relationship with politics. In particular, under the current U.S. trade protectionism policy of "American First", expanding trading partnership with China can reduce economic risks and protect political stability in Europe.

I will collect relevant statistical data to compare and analyze China's direct investment in Central European countries before and after the "One Belt One Road" Policy. I will analyze the specific impact of OBOR policy on the investment's industrial structure, investment scale, and investment entities. At the same time, I will further analyze the motivations and comparative advantages of China's direct investment in Central European countries under the One Belt One Road Policy. I will also compare the parallel FDI flows from Central Europe to China. Considering these quantitative perspectives, I will be able to explain my main research direction more comprehensively. I will also assess the importance of 16+1 agreement for the development of economic ties of China with the Central Europe.

Hypotheses:

1. Hypothesis #1: China's investment in Central Europe continues to expand under the "One Belt and One Road" policy since the potential for FDI has been underused until recently.
2. Hypothesis#2: The direct investment under the OBOR policy has strengthened trade cooperation between China and the countries in Central Europe. I will test the hypothesis that FDI and trade flows (exports and imports) are interconnected.
3. Hypothesis#3: The direct investment under OBOR policy will help raise the level of science and technology in China and Central Europe; The combination of OBOR and FDI will also be instrumental in enhancing the penetration of advanced management techniques, expanding international markets, and reducing the trade barriers.
4. Hypothesis#4: China's investment in Central Europe is related to the game between China and the United States. China needs to expand its international market, cooperate with CE countries, establish economic partnerships, and strengthen friendly exchanges.

Methodology

First, I will collect relevant data to analyze the status of China's investment in Central Europe (industrial structure, investment scale, investment entity, country composition, etc.) and competitive advantage (economic strength, scientific research input). Second, I will use the panel data model to study the factors that influence China's direct investment. I will use a different data source, such as UN comtrade, WITS, Eurostat, to form a comprehensive data set, and I will use the STATA software to select the significance between variables and FDI. Finally, in the motivation analysis, I will combine the stereotype analysis with the quantitative analysis to explain the motivation of China's Belt and Road investment from multiple perspectives.

Outline:

1. Introduction
2. Literature Review
3. The Current Situation of China-CE Direct Investment
4. The Competitive Advantages of China's Direct Investment in Central Europe
5. Analysis of the Motivation of China's Direct Investment in Central Europe
6. Conclusions
7. References

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Author

Supervisor

1 Introduction

From 2013, Xi Jinping's "One Belt, One Road" initiative has aroused widespread concern in the international community, also it has received active supports and responses from countries along the line. The OBOR Initiative is an inheritance and development of the ancient Silk Road, also it has richer connotations. The implementation of the initiative has achieved remarkable results in more than five years. It has successfully established financial security institutions, promoted the signing of several cooperation agreements, as well as promoted the achievement of some cooperation projects. The implementation of this initiative is conducive to leading the development of China's economy, but also promotes the prosperity and development of countries along the line, even promotes global peace and stability.

Under the OBOR policy, China is increasingly concerning about economic and trade cooperation with Central Europe. Since the implementation of the initiative, China-EU political mutual trust has gradually increased, cooperation areas have been continuously expanded, and humanities exchanges have become closer. The initiative brought new opportunities to China-EU relations. they should catch up the opportunity to promote the in-depth development of bilateral relations.

Although Central Europe area is an important part in the whole Europe, and of the EU in particular, in the past two decades the developments of Chinese economic, cultural, trade, and political cooperation with these countries were slow and the proportion of mutual trade was relatively low if compared with other regions of comparative size in Europe and also with FDI flows from Japan or South Korea. OBOR is an initiative involving the common interests of China and the EU. Its proposal has had a new in-depth impact on China-EU relations.

Under the OBOR policy of China, the investment in CE in the period 2015-18 has significant growth and witnessed an opening of new windows of opportunity. The continuous development of economic trade relations between China and Central Europe has great strategic importance for China to cooperate with the whole European Union. Economic activities between countries have inextricably links with politics. In particular, under the current U.S. trade protectionism policy of "American First", expanding trading partnership with China can reduce economic risks and protect political stability in Europe.

By collecting relevant statistical data, this paper attempts to analyze the overall situation of China's direct investment in Central European countries under the OBOR policy. First, I try to analyze the overall situation of China's direct investment through intuitive data, especially the scale of investment, industrial structure, and investment entities in Central European countries. Second, I will analyze China's competitive

advantage in direct investment in this region. Thirdly, I will analyze the main motives and influencing factors of the investment in these countries, including the economies of Central Europe, natural resources, science and technology, trade levels, and industrial structure. Finally, I will analyze these influencing factors of FDI through the panel data model and give my opinions.

2 Literature Review

2.1 Relevant Theory of FDI

International direct investment theory originated from international trade theory. After the WWII, FDI theories developed rapidly. From 1960s to 1980s, many influential FDI theories emerged.

Hymer argues in the monopolistic advantage theory that a company can make foreign direct investment because of its monopolistic advantage (*Hymer, 1960*). This advantage exists only in imperfectly competitive markets, so foreign direct investment exists only in these markets. Buckley and Casson's internalization theory (*Casson & Buckley, 2009*) is an extension of the theory of monopoly advantage. In an imperfectly competitive market, transactions between companies will incur high costs. The premise of FDI is to be able to save transaction costs by internalizing the intermediate product market. Kindleberger argues that multinational companies can do FDI because they have specific monopoly advantages, which are reflected in innovative technology, trademarks, financial capital, management experience or exclusive distribution channels (*Kindleberger, 1969*). Caves supplemented the diversification of products as the main influencing factor (*Caves, 1971*). Aharoni and Hirsch emphasized the importance of knowledge and research capabilities (*Aharoni & Hirsch, 1997*).

Vernon (*Vernon, 1966*) proposed the product life cycle theory. This theory holds that the form in which companies enter the international market is related to the life cycle of the product. The products developed by the company will go through four stages in the market: introduction, growth, maturity and decline. When the product enters the end of maturity stage, the company will gradually lose the domestic market share of the mature product. Establishing production centers in a host country with market potential can reduce costs and extend product profitability.

Dunning's OLI model is the most comprehensive FDI theory in the world. It proposes that there are three conditions for a company to make FDI: Ownership advantages (O), Internalization advantages (I), Location advantages (L), these three are indispensable (*Dunning, 1977*).

Kojima's marginal industrial expansion theory used Japan as a research object (*Kojima, 1977*). The study found that FDI should start from disadvantaged industries

in the investor country, and the host country is in a leading position in these industries. This way can make up for the advantages of the enterprise that the investor country does not appear because of the backwardness of technology and management.

Melitz proposed a heterogeneous corporate trade theory (*Melitz, 2003*). He regards enterprises as micro-research units and puts forward that the productivity of enterprises is the key to whether enterprises choose to export or foreign direct investment.

These theories are all based on FDI in developed countries. However, in the 1990s, the economies of other countries including China developed rapidly. In order to adapt to the international background of economic globalization, these countries have opened their doors to encourage their advantageous enterprises to invest in other countries. The traditional theories of FDI cannot explain these phenomena well. Therefore, many scholars study the direct investment theory of developing countries from multiple perspectives of competitive advantage, motivation and so on.

2.2 Literature Review of FDI in Developing Countries

2.2.1 Analysis of Competitive Advantages of FDI in Developing Countries

The theories of FDI in developing countries are based on traditional international investment theories. The main idea is that multinational corporations in developing countries have certain competitive advantages. The competitive advantages have important positions because they compete with local companies, but also with other large multinational companies from developed countries. These advantages provide the impetus for companies in developing countries to invest abroad.

Wells proposed the theory of small-scale technology (*Wells, 1983*), which states that multinational corporations in developing countries are small in scale and relatively flat in management structure, so they have lower management costs and higher decision-making autonomy. The level of economic development varies greatly from country to country, and the market presents multiple levels of characteristics. Therefore, multinational companies in developing countries that are smaller and less technologically advanced can still participate in overseas operations. Secondly, the transnational corporations in developing countries will improve and innovate foreign advanced technologies to meet the needs of the development of themselves, thus enhancing their international competitiveness. Lall's theory of state on localized technological capacities (*Lall, et al., 1983*) has similar conclusions. The theory proposes that the investment advantage of developing country enterprises is that they have unique innovation capabilities. Developing countries can absorb advanced technologies from developed countries and adapt them to their own realities through transformation and innovation. On the other hand, they are able to innovate the original

technology and produce products that are satisfactory to the host country market based on the characteristics of the host country. The combination of these two technologies can enhance the competitive advantage of developing countries and lay the foundation for their foreign investment.

Cantwell and Tolentino proposed in the theory of technological innovation and industrial upgrading that multinational corporations in developing countries have unique learning and organizational capabilities (*Cantwell & Tolentino, 1990*). In the absence of traditional ownership advantages, developing countries accumulate learning capabilities and market knowledges by absorbing foreign advanced technologies and innovating. When the technology and management capabilities accumulated by these companies are gradually digested and innovated, the total amount and growth rate of FDI in developing countries will increase.

In the dynamic comparative advantage theory, Ozawa said that the economic transition from a developing country to a higher level can push its FDI into a new phase. This transformation requires a combination of appropriate FDI models, unique competitive advantages in the country and its domestic industrialization strategy (*Ozawa, 1979*).

The above researches on the competitive advantage of FDI in developing countries mainly includes: localization level, accumulation and learning ability, management and procurement costs, market similarity and so on. The report of the United Nations on the competitive advantage and type matrix of developing countries is given in the appendix.

2.2.2 Research on FDI Motivation in Developing Countries

Teece's research shows that the main reason for FDI of multinational corporations in developing countries is to obtain compensatory resources and increase the output of specific assets (*Teece, 1986*). Ozawa's theory (*Ozawa, 1979*) argues that in order to achieve better development, multinational companies in developing countries should combine FDI and economic development with their industrialization strategies. Wells found through research that one of the main purposes of FDI in developing areas is to obtain cheaper labor and raw materials. They are more inclined to invest in neighboring countries because they can close to the target market and reduce transportation costs (*Wells, 1983*). Technological innovation and industrial upgrading theory (*Cantwell & Tolentino, 1990*) believe that direct investment in developing countries is to learn advanced technology to complete their transition from labor-intensive enterprises to technology-intensive ones. The investment should first be oriented to neighboring countries and gradually extended to technologically developed countries. This theory attributes the motives of FDI in developing countries to the development of the national economy and complete the transformation of the enterprise. Deng draws conclusions by studying Chinese FDI in developed countries (*Deng, 2007*). The motivation of

Chinese multinational corporations (MNCs) to invest in developed countries is mainly to seek strategic resources and capabilities.

Dunning pointed out that the motivations for OFDI can be divided into four types: efficiency acquisition motives, natural resource acquisition motives, strategic asset acquisition motives, and market acquisition motives (*Dunning, 1998*). With the development of this theory, scholars are increasingly adopting dynamic methods to deal with the motives of FDI in multinational corporations. Companies need to consider not only traditional elements, such as transportation costs and demand levels, but also transaction costs, dynamic externalities (*Enright, 1992*), knowledge accumulation, mutual learning (*Malmberg, et al., 1996*), innovation and technical standards (*Antonelli, 1998*) and other factors. According to the theory relate with transaction costs (*Storper & Scott, 1995*), the cultural similarity between the host country and the investor country is the reason for the investment. The theory related to government (*Loree & Guisinger, 1995*) incentives suggests that incentives for host governments to finance, intellectual property and tax incentives increase the investment needs of multinational companies and promote investment in foreign companies that aim to form strategic alliances.

In a study of the motivations of FDI specifically targeting Chinese companies, Poncet pointed out that the friendly relationship between the two countries can create a good investment environment for enterprises. The host country that signed a bilateral investment agreement with the Chinese government can attract more FDI by Chinese companies (*Poncet, 2010*). Cheung and Qian, through a study of Chinese direct investment flows to 31 countries during 1991-2005, found that host countries with larger market, lower wages and richer natural resources are more likely to attract Chinese investment (*Cheung & Qian, 2009*). Kolstad and Wiig, through research on Chinese data between 2003-2006, found that China tends to invest in host countries with poor institutional environments and better natural resources (*Kolstad & Wiig, 2012*).

By summarizing the reasons and motives of FDI in developing countries, we can see that the current FDI of enterprises has expanded from possession of the market, avoiding trade barriers, saving costs and using environmental factors to save transaction costs, gain intangible Assets and natural resources, access to international networks, and improve competitive advantage.

2.3 Current Situation

In recent years, China's OBOR Initiative and investment in countries along the route have caused discussions among many scholars. Some people believe that such investment will drive the economic development of various countries along the line and promote another new pattern of the world economy and politics. Part of them also gave different opinions. They believe that such investment will not really promote the development of countries along the route, especially in Europe. But such trade pessimism lacks credibility once it is not duly underpinned by a sound economic argument. I will summarize the views of different scholars on this issue through the following three aspects.

2.3.1 Analysis of the Motivation of China's Direct Investment in Central Europe under the OBOR

(1) Strengthen Trade

OBOR policy can promote investment of China even in countries with present sluggish trade performance. Such investment can boost the economic development of countries along the road and increase their trade cooperation both with China (*Djankov & Miner, 2016, p. 7*), as well as with the countries participating in BRI. First of all, these countries along the line of BRI import products and services to China, which can enhance the competitiveness of existing enterprises in the Chinese market (*Ferdinand, 2016, pp. 941-957*). Second, China's development has greater demand for resources. China can achieve diversification of resource imports by accepting the exportation of OBOR countries (*Shi, et al., 2018, pp. 335-354*). Finally, investing in countries along the route and promoting local infrastructure can increase their demand for Chinese products and services (*Vinokurov & Tsukarev, 2018, pp. 93-113*).

Figure 1 shows the trade (import and export) situation of China with the 10 countries of Central Europe¹. It can be seen from the figure that trade cooperation between China and Central Europe is on the rise in economic aggregate. However, it also can be seen from figure 2, the proportion of China's trade in Central Europe is very small, only 2.75% in 2009. After nine years developing, the proportion in 2017 increased to 3.8%. The economic cooperation history between China and CE is short, trade is small, under the OBOR policy, it may have great development potential. Strengthening investment and cooperation between the two countries will provide more markets for the two regions.

¹ Austria, Bulgaria, Croatia, Czechia, Hungary, Poland, Romania, Slovakia, Slovenia, Serbia are included

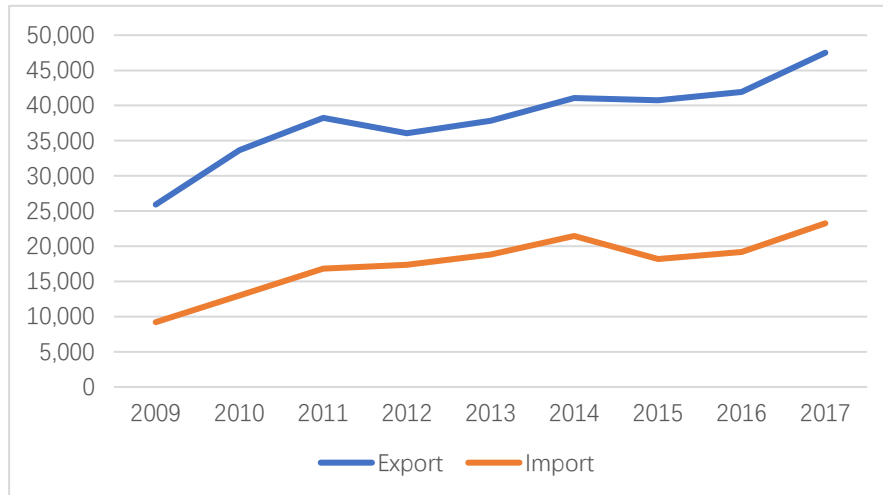


Figure 1 :Trade between China and Central European Countries (Million USD)

(data source: UN Comtrade. <https://comtrade.un.org/data/>)

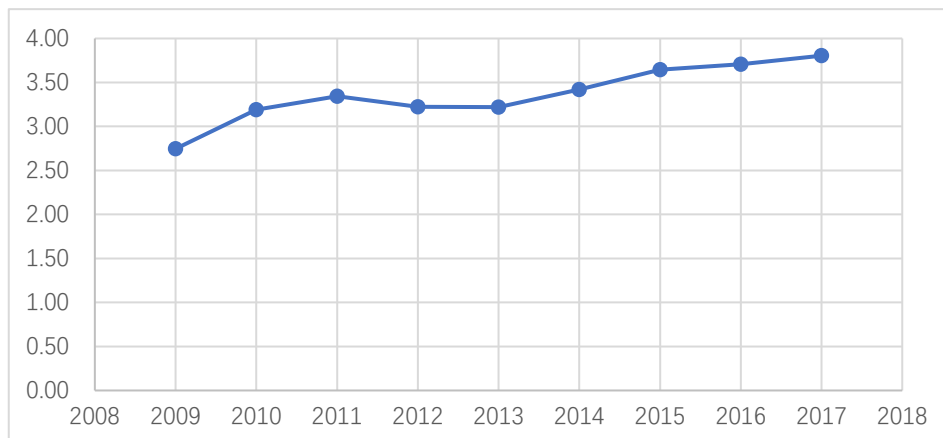


Figure 2: The proportion of China-Central European countries trade in the total trade of Central European countries (%)

(data source: UN Comtrade. <https://comtrade.un.org/data/>)

(2) Energy Security

The economic growth in China depends on energy imports (Wang, 2015, pp. 13-22). Investing in facilities such as oil and gas pipelines along the countries under the OBOR and cooperating in the new energy sector will solve the issues of strategic energy and resource security in China. This policy also can reduce heavy dependence on polluting coal and improve environmental quality in China (Barisitz & Alice, 2017, pp. 13-28). China is the world's largest producer of crude steel. In 2016, China's crude steel production was 49.6% of the world's total output (Wirtschaftsvereinigung Stahl. n.d., 2019). The development of heavy industries such as steel production relies mainly on

coal energy.

Figure 2 shows the level of coal imports and exports in China and the United States (*Data Sources: The global authority on energy*). It can be seen that China's demand for coal in the international market is very large. Indeed, China's heavy industry development relies mainly on coal energy, which leads to an increase in carbon dioxide emissions in cities and serious air pollution.

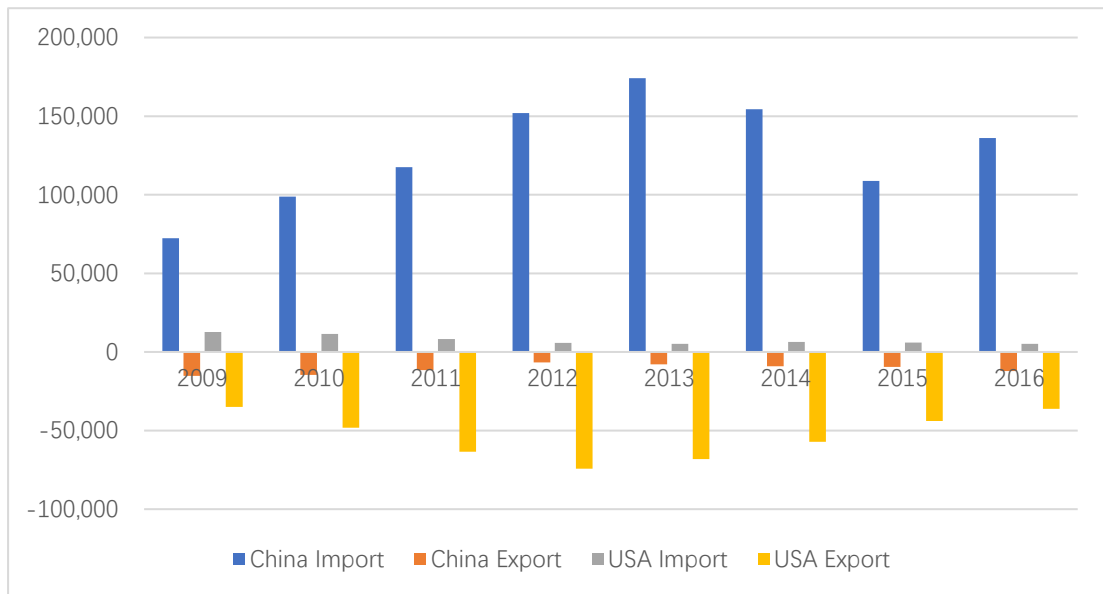


Figure 3: China-US Coal Import and Export Comparison (Ktoe)

(data source: International Energy Agency. <https://www.iea.org/statistics/?country>)

Notes: The tons oil equivalent (toe) is a unit of energy defined as the amount of energy released by burning one ton of crude oil. Ktoe: thousand tons oil equivalent.

The Chinese government also recognizes the importance of managing the environment, improving sewage liquidation, and developing clean energy (*Chen, et al., 2013, p. 1959*). The chart below shows that China is actively improving the current energy structure and improving the current problems. The main methods mainly include self-development or import of new energy sources, as well as improving the level of technology and reducing emissions. By investing in infrastructure construction in other countries via BRI, China can have more access to new energy sources and more partners in technical cooperation (*Havlik, 2015*).

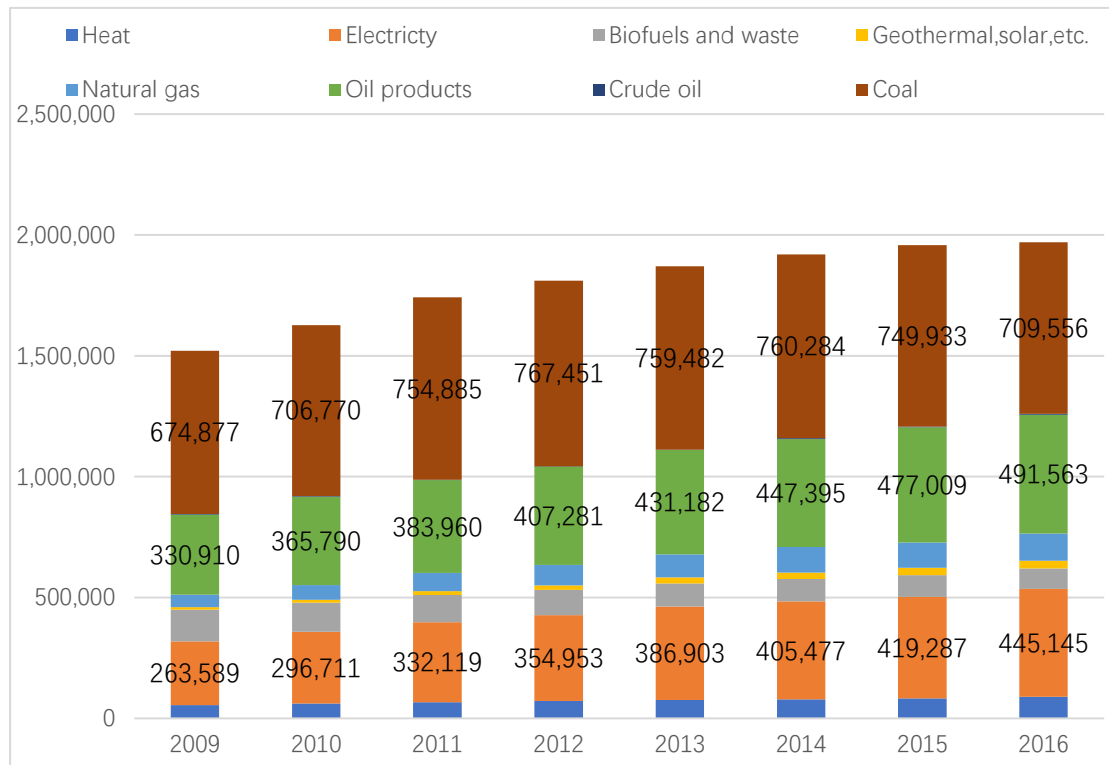


Figure 4: Total Final Consumption in China, 2009-2016

(data source: the global authority on energy. <http://www.iea.org/countries/China/>)

(3) Relieve Overcapacity

Wuttke came to conclusion that China's domestic supply is facing overcapacity in several industries, which is inconsistent with domestic consumers' demand for quality products and reliable advanced equipment (Wuttke, 2017). Therefore, the government plays a role in exporting excess capacity to foreign countries, which can alleviate China's domestic development contradictions. Since 2009, the problem of overcapacity was especially present in the industries of steel, cement, glass and aluminum. Thus, domestic supply and demand constraints restrict economic development (Rahman & Shurong, 2017, pp. 1-7). After studying from a Chinese perspective, Hong Yu discovered that China will transfer some of its excess production capacity to other countries along the route which has demand for such products. It will promote the sustainable development of economy in China by participating in bilateral infrastructure, trade and investment cooperation (Hong, 2017, pp. 353-368). Francis Fukuyama (Fukuyama, 2016) also supports that the OBOR policy focuses on overseas infrastructure investment intensive particularly in steel, cement, glass and aluminum, which can enhance economic development in China, and it will help to reorganize industries affected by overcapacity.

(4) Geopolitical Strategy

While promoting its own economic development, China has also driven the common development of all countries participating in BRI. Prosperity in these countries will bounce back on the Chinese economy by demanding higher imports from China. Direct investment under the OBOR Initiative can expand China's influence in Eurasia and shake the US trade policy in the Asia-Pacific region. At the beginning of the 21st century, world power transfer is taking place: the power of the United States is relatively declining, and China is rapidly emerging. As China's national strength improves and its international status rises, China is striving to reshape the international order in a way that benefits its interests rather than the interests of the United States. This will change the world's geopolitics along the BRI routes in Asia rather than agreeing to be bound by the American Peace Association's systems and rules (*Layne, 2018, pp. 89-111*). China believes that the United States is trying to contain China's future development in order to protect its hegemonic status (*Allsopp, 2018*). At the same time, US hegemonism and "American Priority" policies are not in line with the world order of liberalism (*Gideon, 2016*). Trade protectionism is a theory of international trade. On the one hand, it restricts imports to protect domestic goods, on the other hand, it provides various preferential environment for local goods to enhance their international competitiveness. In order to restrict imports, trade protectionism mainly adopts measures such as imposing high import tariffs and setting import quotas. In order to protect industries of US, the government proposed to impose new tariffs on imports of steel (25%) and aluminum (10%) in most countries of the world in 2018 (*Horsley, 2018*). These measures have sacrificed the interests of their trading partners and caused changes in the international market.

China's OBOR initiative aims to build trade infrastructure and expand China's global influence. As US trade protectionism becomes more and more serious, countries will greatly strengthen trade cooperation with China because they are worried about the disruption of the supply chain. This provides a good opportunity for China's OBOR investment construction.

Yilmaz Kaplan researched on the geopolitical motives of China's OBOR Initiative found that the initiative aims to establish an institutionalized international structure parallel to the existing Western-led structure. At the same time, the initiative provides a "win-win" concept that demonstrates China's ambitions without any hegemony; therefore, the initiative has attracted the attention of many countries. China also follows purely functionalism and bilateral/regional approaches to dealing with heterogeneity between target countries (*Kaplan, 2017, pp. 7-23*). This also provides countries with new programs beyond the US-centered world order.

Promote RMB internationalization

Rahman and Zhao Shurong (*Rahman & Shurong, 2017, pp. 1-7*) discover that the OBOR Initiative covers a huge number of countries, which means the rise of the Renminbi as an international currency is inevitable, especially in the countries of the OBOR. By encouraging cross-border monetary loans and investments to support the development of the OBOR, the major banks of China will increase experience in operating the RMB as an international currency.

The functions of the RMB in the international market mainly include: Unit of Account; Medium of Exchange or Settlement; Store of Value. It can provide a platform for the rapid development of RMB internationalization and strengthen the economic dependence on China by strengthening bilateral and multilateral trade cooperation with countries along the OBOR. Oliva (*Oliva, 2016*) pointed out that One Belt One Road policy, by largely relying on yuan-denominated loans may help accelerate the internationalization of the Renminbi. In addition, most of the countries along the line are in the process of development and social and economic transformation. Therefore, the export of RMB is conducive to coping with the current situation of insufficient foreign exchange reserves and enhancing the liquidity of these countries.

For the currency reserve function, Starting 1 October 2016, the RMB has been included in the Special Drawing Rights (SDR) basket of currencies of the International Monetary Fund (IMF). This is an important milestone for the Chinese RMB, and RMB can be used as an international store of value. With the improvement of China's comprehensive national strength and the promotion of OBOR construction, the acceptance and circulation of the RMB in this region will continue to increase, stimulating more and more countries along the line to use the RMB as a foreign exchange reserve. The OBOR construction plays an important role in enhancing the international status of the RMB, stabilizing the value of the RMB, and promoting the steady conversion of RMB capital account convertibility.

2.3.2 The Positive Impacts of Direct Investment under the OBOR Initiative on Europe

Economy and Trade Impacts

First of all, the positive impacts of the OBOR policy on European countries are mainly concentrated in the economy and trade.

The economic gap between the countries in the euro zone is large, which means the development between these areas is very unbalanced. In 2016, the GDP of Germany accounted for 20% of the total GDP of the euro zone. Germany, France and Italy's GDP accounted for 50% of the euro zone (Data Sources: Eurostat). After the establishment

of the euro zone, core countries such as Germany and Italy can make full use of the technical and financial advantages of the system and enjoy the benefits of regional integration and single currency areas. However, countries outside the core of the zone, such as Greece and Ireland, have few gains. In the euro zone, the unified monetary policy is more inclined to the economic goals of countries such as Germany and Italy, and regional economic development is uneven.

Barisitz and Radzyner (*Barisitz & Radzyner, 2017*) analyzed the SEE countries that have not joined the EU and concluded that because these countries have less opportunities to get investment of EU and lack development opportunities, participating in the OBOR Initiative will stimulate economic expansion in these countries, and may even help them overcome their traditional peripheral position in Europe. In the long term, these developments may also affect the political and economic status of EU on a global scale.

After the 2008 sovereign debt crisis, some European countries adopted austerity measures, which means the level of investment within the EU fell sharply. It has delayed the recovery process of Europe. In the long term, it even will have a negative impact on European competitiveness and integration. The economic difficulties of SE and EE countries are particularly pronounced.

Zhao Minghao (*Zhao, 2016*) analyzed that the OBOR initiative can provide new opportunities for economic growth in Europe. China's infrastructure investment and economic trade with SE and CEE can provide new economic development assistance for these countries. It can also promote balanced development within Europe, narrow the economic gap between European countries, and promote the process of European integration.

Second, OBOR has strengthened cooperation between China and Europe in transportation. China and the EU are located at the two ends of the Eurasian continent, and the two sides are far away. Therefore, the transportation between China and Europe is not convenient, the transport cost is high, and the transport time is long. The difference in geographical location has caused some limitations to the relationship between the two parties.

Godement (*Godement & Stanzel, 2015, pp. 34-38*) analyzed that a one-way initiative can effectively deepen trade and investment cooperation between China and European countries. Under the OBOR Initiative, countries along the route will establish new Eurasia bridges and international economic corridors, which will greatly reduce the trade costs between China and Europe.

Under the guidance of the OBOR, China-EU international railway freight transport has developed rapidly. Railway freight transport is increasing in terms of

opening shifts, frequency of transportation and types of goods. The operation of international railways has greatly saved transportation time and has also effectively reduced transportation costs (*Islam, 2013*). The development of China-EU rail transport has effectively overcome the original problems in trade and broadened the trade channel between China and the EU.

Zhang and Schramm's research on railway transportation costs and transportation time in China and Europe shows that Eurasian rail freight is about 80% cheaper than air cargo, only half of the transit time of traditional shipping (*Zhang & Schramm, 2018*). Hence, Eurasian rail freight seems to be an option beneficial in terms of transport cost, transit time, reliability and service availability, which enables shippers to build up agile and sustainable supply chains between China and Europe. Philipps uses the gravity model to draw conclusions by comparing the relationship between export costs and trade potential, small European economies can benefit from an active participation and cooperation with China (*Philipps, 2017*).

Finally, OBOR can promote energy cooperation between China and Europe. Whether the economic development of a country or the development and progress of human society, it is inseparable from the development and utilization of energy. The energy sector is also an indispensable aspect of the implementation of the OBOR initiative.

Central Asia has an important geopolitical position. It has rich energy reserves and has received much attention from many energy-consuming countries. Driven by the OBOR initiative, Central Asia has become a global energy development center. China is not only a major energy producer but a major energy consumer. China has large population, which means although the total amount of energy in China is huge, the per capita of energy is low. EU is one of the largest regions of energy import in the world, with a large consumption of oil and gas resources. However, the supply capacity within the EU is insufficient and the energy dependence is strong. Russia has abundant oil and gas resources and has maintained energy cooperation with the EU for a long time. In recent years, the EU has been pursuing diversification of energy imports (*Casier, 2011*). After the outbreak of the Ukrainian crisis, the EU hopes to get rid of the heavy dependence on Russian energy. The promotion of the OBOR provides an important opportunity for energy cooperation between China and the EU. China can cooperate with the EU by using technology to develop new energy (*Jin & Mo, 2017*). On the other hand, through the OBOR, China and the EU will drive the economic development of Central Asia and achieve diversification of energy imports (*Chhetri, 2018*).

Security Impacts

The strategic partnership between China and Europe is not only at the economic level, but also at security level (*Verlare & van der Putten, 2015*). Europe is not only

a part of the Eurasian security network, but also the builder and contributor of the network. Investment under the OBOR Initiative can help European countries establish a Eurasia security network which can promote long-term stability and common prosperity in Eurasia. In recent years, Europe has faced a series of crises, including the Ukrainian crisis, the Syrian crisis and the refugee crisis. These crises indicate that there is insufficient development in the surrounding areas of Europe, political instability and the security situation are deteriorating. Solving these problems on Europe itself is difficult. In addition, OBOR initiative covers almost all of Eurasia, extends to East Africa, the Mediterranean and other regions. The stability and development of these areas can decrease the pressures of European countries.

OBOR can promote cooperation between China and Europe in the field of peace and security. Economic development and security are independent, security is the foundation of economic development, and economic development also has a positive effect on national security. No matter the development of a country or an international organization, it must rely on a peaceful and safe international environment. At present, there are some peace and security issues in the international community. Such as religious extremism, ethnic separatist forces² and international terrorist forces in Central Asia. These issues not only threaten the security of Central Asia but also the surrounding areas of Central Asia, even the security of the international community.

The EU has important strategic interests in Central Asia, especially the security issues. However, the national security cooperation between the EU and Central Asia are lack, and there is less effective coordination of relevant systems, the role of the EU in helping Central Asia change the security situation is limited.

OBOR covers a large area and a wide range. Central Asia is an important area to promote the construction of the OBOR. The security challenges of Central Asia are not conducive to the implementation of this initiative in China. Therefore, China and the EU share common interests in maintaining stability and development in Central Asia. OBOR provides an opportunity for communication and cooperation between the two. Some East Asian countries involved in OBOR still have instability factors. China and EU can strengthen communication and coordination on these security issues, carry out pragmatic exchanges and cooperation, seek effective solutions, and jointly safeguard world peace and stability.

2.3.3 Problems and Critical Ideas

First, OBOR exacerbates conflicts of interest between the EU and European countries. The biggest feature of Europe is its two-layer system. The European

² For example: disputes between Uzbekistan, Tajikistan and Turkmenistan; security issues in Afghanistan; ethnic divisions in the Balkans, etc.

decision-making system is a complex system of interactions, and the EU's decision-making constrains the behavior of member states in some aspect. On the other hand, the actions of member states also have effects on EU decision-making. The overall interests of the EU and the national interests of the member states are not completely balanced. At the EU level, the EU is more focused on attracting Chinese investment to stimulate its economic recovery; for CEE countries, they are more focused on China's cooperation in infrastructure and capacity; for Britain, France, Germany and other countries, they also emphasize on the complex and diverse needs of China's cooperation with third-party markets. The complex decision-making system in EU, and different interests between countries are major bottlenecks for China-EU cooperation under the OBOR (*Pepe, 2017*). Research by Casalini shows that although OBOR initiative of China has enormous economic opportunities, it has brought significant political challenges to the EU (*Casarini, 2016, pp. 95-108*). Competition for Chinese investment may further split EU member states.

While BRI investments may temporarily help to sustain excess of China's major industries, absorb surplus capital, and increase corporate profitability, they are unlikely to be a permanent solution to China's growing economic challenges, as many projects are not economically viable (*Brinza, 2017*).

In recent years, the RMB exchange rate has appreciated sharply, especially in the real terms and the demand for Chinese products in the international market has shrunk partially due to that factor, which has made the problem of overcapacity in China increasingly prominent. One of the purposes of Chinese investment is to solve the problem of overcapacity in domestic market. Hart made critical comments on this. He believes that OBOR's investment in Central Europe cannot solve the problem of overcapacity in China (*Hart, 2018*). He gives the following two reasons:

- a) Many investment projects are not feasible and cannot create economic benefits.
- b) More and more countries are reluctant to participate.

The explanation for the first reason can be exemplified by railway construction. China has vigorously promoted the construction of railways between Chinese cities and important European cities. These railways have increased the density of the Eurasian railway network, but most of these railways are economically meaningless and unlikely to be profitable. Although international rail transport can greatly shorten the transportation time compared with traditional sea transport, the cost of rail transport is also high. Cheap products exported from China to Europe, such as toys, are difficult to obtain profits through rail transportation. At present, the Chinese government subsidies for international rail transport are between 10% and 40%, but this exacerbates the financial burden of the Chinese government and makes it difficult to implement high subsidies for a long time (*The Economist, 2017*).

In the short term, some railways may not have economic benefits, but they can strengthen the relationship between China and the countries of Central Europe, attract more countries and increase China's influence.

On the other hand, more and more countries are reluctant to participate in the OBOR initiative because most of the projects are loans from China, which increases the debt burden of the local government and may lead to financial instability. Also, these projects have increased their foreign exchange, but they may not get economic benefits.

Hart's view is one-sided. China's investment in Central Europe is not just to transfer excess capacity. I think the purpose of foreign investment is to re-expand a production area by combining local resources, population and market. Many countries along the OBOR have poor economic conditions. Many countries do not have a complete industrial system at all. Many of them are in the state of selling resources and certain products. China can import excess capacity into these countries. On the one hand, it can solve the problem of overcapacity in China, and at the same time, it can help these countries along the line to build a relatively complete industrial system and achieve a win-win result. Investment projects cannot only look at short-term economic benefits. Investment in infrastructure construction is a high-cost economic activity, and the results it brings need to be tested over time. Although these projects have not yet achieved considerable benefits, they can strengthen economic exchanges between European countries and China. Through economic exchanges, countries can promote the optimization and improvement of the industrial structure, which is conducive to the long-term development of the country.

The report of the European Union Chamber of Commerce in China shows that with the accelerated development of China's reform and opening up and the advancement of the *Third Plenum Decision*. China has made great progress in many fields. At present, China has become one of the major trades and investment countries in the world. China promotes foreign trade and investment, expands the international market, and develops its own economy. But on the other hand, there are still many obstacles for foreign companies to enter the Chinese market. Although Chinese government has given a commitment to adjust the system, the effectiveness of the measures and the enforcement of the policies are generally low. In *European Business in China Position Paper 2018/2019*³, the problems encountered by many European companies in China are mentioned:

1 Access to licenses, which should be speeded up and liberalized, free of discrimination between domestic and foreign applicants.

³<https://www.europeanchamber.com.cn/en/publications-position-paper#download-table-319>

2 *Complex and lengthy administrative procedures. The government should improve the efficiency of the administrative approval process and simplify the examination and approval procedures.*

3 *Consultation and communication. The formulation of rules and regulations should allow related foreign investors to fully participate in the discussion and obtain the best solution.*

4 *Cybersecurity. When developing appropriate cybersecurity measures, groups such as businesses and consumers should be fully involved in it which can strike a balance between security and development.*

5 *IPR and R&D (Intellectual property; research and development). While encouraging technology research and development, the government should establish a strong intellectual property system to properly protect innovation.*

6 *Overlapping regulations and interdepartmental coordination. The government should establish a clear and unified supervision system to avoid overlapping functions and forming a gray area.*

7 *Market access barriers. The government should reduce differential treatment of foreign-invested enterprises and other barriers so that foreign-invested enterprises can successfully conduct business in China and have market shares.*

8 *SOE-related issues (State-owned enterprise reform). The government should establish a sound social security system to alleviate the social responsibility of state-owned enterprises. At the same time, the government needs to promote the reform of state-owned enterprises and solve the problem of social resource allocation.*

9 *Standards setting. The Chinese government should align domestic and international standards so that national standards can conform to international practices.*

10 *Transparency issues. The Chinese government should ensure that foreign investment groups have clear policy formulation and implementation mechanisms.*

11 *Unclear regulations and unpredictable enforcement. The government should establish sound rules and regulations to solve the problems such as ambiguous policies and lack of transparency.*

12 *Unequal and unfair treatment. The Chinese government should stop the protection policy for local enterprises and treat foreign companies in a fairly way.*

13 *Unfair procurement systems. The Chinese government should speed up the negotiation process of the World Trade Organization's "Government Procurement Agreement" and promote the establishment of a fair and transparent procurement system.*

14 *SMEs (small-medium enterprises). Since most of the multinational companies interested in entering the Chinese market are already doing business in China, attracting new foreign direct*

investment needs to focus on SMEs. In other words, China needs to provide a good investment environment for small and medium-sized foreign-funded enterprises to solve the various challenges they face.

These problems have been dragging down China's development speed. At the same time, it will also cause imbalances in investment and trade between China and other countries, which will easily lead to a tense situation in economic and political areas. International economic and trade cooperation is based on equality and mutual benefit. Therefore, the Chinese government needs to adopt effective reform measures to overcome these problems in the next few years. Also, the government need to improve policy implementation, eliminate trade barriers, and solve the challenges faced by European companies in China, create a good investment and trading environment.

3. Analysis of the Development History and Current Situation of China's FDI in Central Europe

3.1 The Development History

Throughout the historical analysis, the development of economic and trade investment relations between China and Central Europe has gone through the following four stages:

3.1.1 The first stage: 1990-1995

The drastic political situation has led to major changes in the foundation of China-CE relations. Especially after the collapse of the Soviet Union, the Soviet factor between CE and China disappeared, and the direct relationship between the ruling parties stopped. Political relations between China and CE countries are tense, while CE is actively integrating into the Western capitalist market (*Czeslaw, 2016, pp. 3-14*). Due to changes in the social nature of CE countries, China and these countries have lost common ideological and social institutional foundations in their bilateral relations. At the same time, both sides have focused their investment and economic trade on big countries such as Western Europe and the United States. FDI and economic trade relations between China and CE countries are at a relatively low level.

China and CE have different attitudes and positions on political issues, such as the Taiwan issue and the Tibet issue, which are also obstacles to the development of bilateral economic and trade relations. In order to strengthen communication and understanding, China and CE countries have made many efforts in the development of bilateral relations:

a) In August 1990, Chinese Vice Foreign Minister Tian Zengpei went to Bulgaria, Hungary, Albania, Romania, and Yugoslavia to conduct a Deputy Foreign Minister's Business (*Ministry of Foreign Affairs, 2014*). Through a series of bilateral contacts and meetings, they reached a consensus: China and CE countries have no fundamental interest conflicts and continue to develop comprehensive state relations have some benefits to both sides.

b) In February 1991, Foreign Minister Qian Qichen visited Poland, Hungary, Bulgaria, Czechoslovakia and Romania (*Hu, 2009*). In the visit, they respected the differences in social systems, ideologies and values, and also made demands on non-interference in China's internal affairs and promoted the development of bilateral relations.

c) In 1994, China and CE countries have shelved sensitive issues (Taiwan issue, Tibet Dalai issue, etc.) and understood each other at a lower level (*Czeslaw, 1997, pp. 933-937*). This stage laid a solid foundation for the future resumption of FDI as well as economic trade relations between the two sides.

3.1.2 The Second Stage: 1995-2003

In July 1995, President Jiang Zemin visited Hungary. During his visit, he expounded five basic ideas for developing bilateral economic and trade cooperation with CE countries (*Jiang, 2010*).

These propositions indicate that China and CE countries have weakened ideological analysis and strengthened economic dialogue (*Xing, 1995*). Under the guidance of the Budapest Principles, China and CE countries have entered a new stage of historical development.

At this stage, the Chinese government respected and supported the development path chosen by Central Europe and understands the adjustment and innovation of its foreign policy. After unremitting efforts of both sides, the bilateral political and economic relations between China and CE have begun to pick up. The trade relations between the two sides have returned to normal and growth trend.

3.1.3 The Third Stage: 2004-2012

As Central European countries join the EU one after another, the relations between China and the EU have a dual nature: the relations between China and CEE countries have been incorporated into the EU's China policy framework. While maintaining bilateral relations, CE countries also participate in EU multilateral relations with China. In order to promote the transition of China-Central Europe relations to a higher level, China and CE countries have exchanged views with each other through high-level

government exchanges. The "Bucharest Principles" proposed by President Hu Jintao during his visit to Romania in 2004 broadened cooperation and communication area between China and CEE countries.

3.1.4 Fourth Stage: 2013 to Present

After the OBOR policy, China and CEE countries are developing in all areas. All of the 16 countries in Central and Eastern Europe have been included in the construction map of OBOR and play an important role (Ministry of Foreign Affairs, the People's Republic of China, 2017). Central European countries which are in the heart of Europe, have the irreplaceable position in the construction of the OBOR. With the implementation of the OBOR initiative, the establishment of overseas cooperation zones along the way will bring a broader market and development opportunities to the host countries. On March 9, 2016, Chinese and Czech leaders signed a joint statement to establish the strategic partnership relationship to jointly promote capacity cooperation in the manufacturing sector and to develop the innovative technology cooperation in the technology industry. In 2017, Hungary has become China's third largest trading partner in CEE. China's investment cooperation in Hungary is mainly distributed in the chemical, financial, communications equipment, new energy, logistics and other industries. The main enterprises are Wanhua, Huawei, ZTE, Bank of China, Anhui Fengyuan, Rizhao Jinhe and so on. Therefore, at this stage, China's economic and trade exchanges with Central European countries have shown a spurt of development.

3.2 Current Situation

3.2.1 Investment Scale

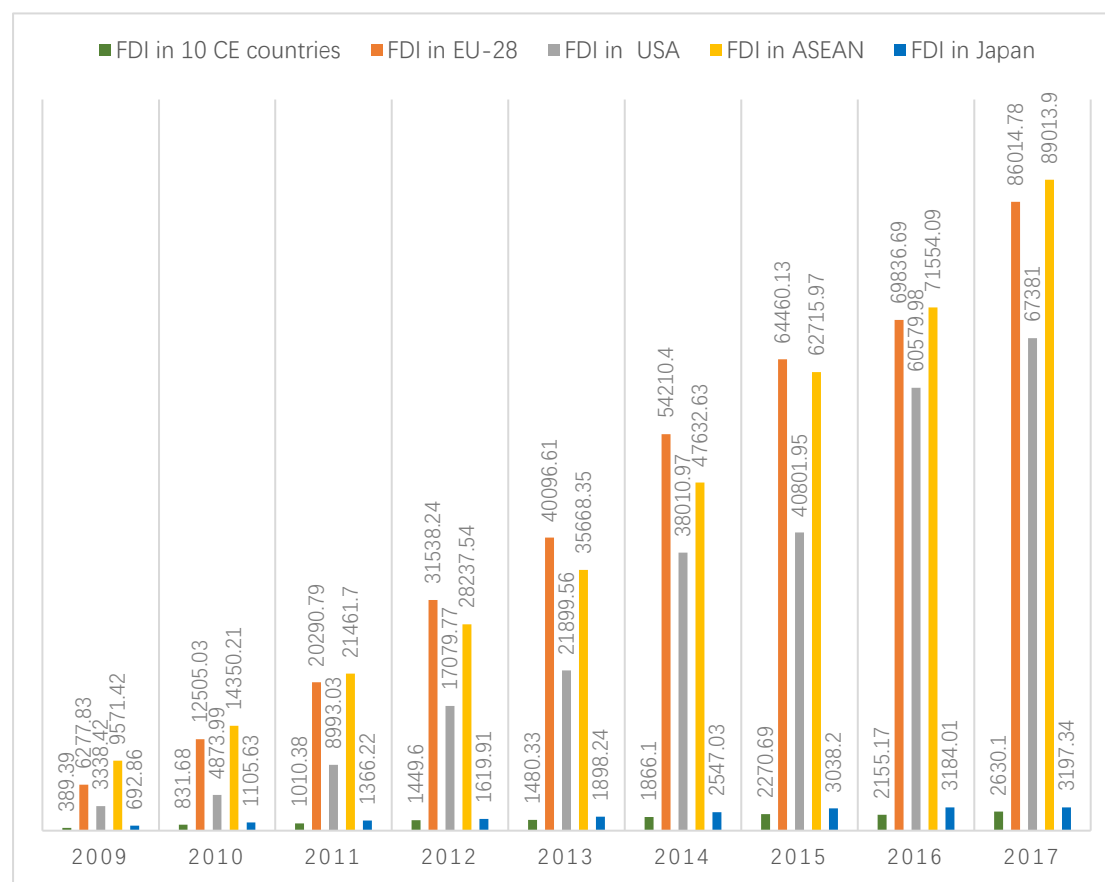


Figure 5 : Total FDI Stock of China in 5 Areas (Million USD)

Data Source: Ministry of Commerce of the People's Republic of China

Notes: FDI in EU-28 include Britain.

As can be seen from the figure, China's investment in the United States and ASEAN is much higher than that in Central Europe. China's foreign investment in Asia is mainly concentrated in ASEAN, Hong Kong and other regions. The United States has also greatly attracted Chinese investment. China's total FDI in the EU-28 countries is very high, but in the past two years it is slightly smaller than the FDI in United States. China's direct investment in Central Europe is close to that in Japan, although the overall upward trend, but the total amount is quite small.

China's direct investment in Central Europe is generally on the rise. At the end of 2009, China's stock of direct investment in Central Europe was 389.39 million USD. By the end of 2017, it was 2630.10 Million USD, and the scale of investment expanded slowly. In 2010, the Eurozone debt crisis has seriously hurt the economic growth of EU.

Many European countries have adopted attracting FDI as a way of promoting economic growth. During this period, the investment environment of Central European countries was very beneficial to foreign investors.

It can be clearly seen in the Figure 5 that at the end of 2016, the investment in Central Europe showed a downward trend, down by about 115million USD over the same period of the previous year. The main reason of this phenomenon is the decline in EU's economics. The most obvious part is that China's investment in Hungary has fallen by 257 million USD, and the decline in Hungary's GDP in 2015-2016 is the main reason for the decrease in investment.

At present, the overall foreign investment supervision system in Europe is continuously strengthened. In 2018, Central countries such as Hungary and Latvia are strengthened the investment review system, while the Czech Republic and Slovakia will also strengthen the investment review mechanism. the EU is also developing a comprehensive investment review system. This shows that China's direct investment in Central Europe will become more rational in the future.

China and CEE countries have highly complementary economies and bilateral cooperation has broad prospects. On the one hand, CEE countries have strong demand for economic development and infrastructure upgrading. On the other hand, China has competitive advantages in many areas especially in manufacturing and infrastructure construction. Bilateral cooperation can meet needs of China and CEE countries.

In April 2012, the meeting of leaders of China-CEE countries was held in Warsaw, Poland. Which marked the official launch of the "16+1 cooperation" between China and CEE. After several years of development, the "16+1 cooperation" has moved from the initial "window period" to the "mature period", especially the OBOR initiative has provided new opportunities for "16+1 cooperation". In 2017, all 16 countries in CEE were included in the framework of the OBOR, highlighting the importance of CEE in the OBOR initiative. "16+1 Cooperation" will become an important "interface" for the OBOR initiative to integrate into the European economic circle. Therefore, China's investment in Central European countries has great potential for development.

3.2.2 Industrial Distribution

At present, China's investment in Central European countries continues to expand, the major investment areas concentrated in manufacturing, retail, mining, services, finance, and transportation. Due to the uneven economic development level and industrial structure of Central Europe, the investment choices of China in Central Europe are also different.

Austria, the Czech Republic, Poland, and Hungary, as higher-income countries in

Central European countries, are the key targets for China's direct investment. The Czech Republic has higher-quality research and development facilities and highly skilled workforces. Also, the government strongly supports the development of high-tech industries. Therefore, the Czech Republic has a good development foundation in aerospace, automobile manufacturing, electrical engineering, information and communication technology. It has also attracted many large companies from all over the world to invest in the Czech Republic. China's investment cooperation with the Czech Republic is mainly distributed in manufacturing, R&D centers and technology industries. In addition to traditional manufacturing industries such as automobiles, machinery, home appliances, and chemicals, Chinese companies have expanded their investment fields to emerging aviation, information technology, new energy, high-speed rail, e-commerce, and tourism. The investment structure was further optimized, and the technical content and added value were further improved. Hungary is one of China's major countries investing in Central Europe. At the very beginning, China's investment in Hungary was mainly concentrated in the field of clothing trade, and most of the investment entities were small enterprises. Under the initiative of the One Belt One Road Initiative, China's investment pattern in Hungary has continued to expand, and investment in large state-owned enterprises has continued to increase. China's main investment areas include: finance, consulting services, communications, electronics manufacturing, logistics, real estate, construction and many other industries. These investments are mostly in technology-intensive areas and have a small proportion in traditional manufacturing. China's investment in Austria has grown rapidly. In 2017, China invested about 851.49 million USD in Austria, with an increase of 60.5% than the same period last year (530.51 million USD). Austria has undertaken the most developed industrial chain in Europe, such as automotive, electronics and environmental products. In addition, Austria's location advantage is significant, and many foreign companies value Austria's pivotal role that connecting Eastern and Southeast Europe. Austria has many professionals, a stable society and legal system. The above favorable conditions and advantages have attracted many Chinese companies. In addition to traditional fields, China's direct investment in Austria also includes tourism, winter sports, and light rail. China will host the 24th Winter Olympics in 2022, which will inevitably lead to the development of the winter sports industry, which also drives Chinese companies to invest in Austria's traditional advantage industry. Austria has advantages in developing road transport, including railways, light rail trains and trams, which has greatly attracted Chinese companies that have the advantages of technology and capacity in the equipment manufacturing industry. As for Poland, the main areas of investment for Chinese companies are trade and services, manufacturing, real estate, and contracting projects.

Central European countries such as Serbia, Romania, and Croatia are lower-income countries in Central Europe. China's investment in these countries is different from that in countries with higher economic level.

Serbia has a weak economic development in Central European countries, especially in 2012 and 2015, due to extreme climate disasters, the economy experienced negative growth. Agriculture is a traditionally advantageous industry in Serbia. China's technology cooperation with Serbia is mainly in the field of agricultural science and technology. At the same time, China's investment in Serbia is mainly divided into two categories. One is the Chinese commodity sales center invested by Chinese businessmen; the other is the large-scale investment projects, such as the acquisition of steel. The Slovenian economy is highly extroverted, and its economy is small in scale and is greatly affected by the world economy, especially the European economy. In addition, Slovenia's natural resources are relatively scarce, but its manufacturing base is strong. China's direct investment in Slovenia is mainly concentrated in the fields of electronic equipment, auto parts, primary metal processing and metal products processing, food, machinery and equipment manufacturing. China's investment in Romania is mainly concentrated in the fields of power telecommunications, infrastructure and manufacturing. Larger investment cooperation companies include: (1) China Tobacco International Europe Co., Ltd.; (2) Huawei Technologies Co., Ltd.; (3) ZTE Corporation Romania; (4) Fengjia Group Romania Company; (5) Donghui Sports Supplies company; (6) Yuncheng plate making (Romania) company.

Croatia's economic development level is weak, its GDP has been declining since 2011, begun to recover after 2016. China's direct investment in it is mainly concentrated in communications, wood processing, construction, electrical equipment real estate, and hotel catering. China's direct investment in Bulgaria is mainly concentrated in the automotive, communications, renewable energy and agricultural cooperation. China has invested in cooperation with Slovakia in the fields of telecommunications, research and development, machinery, agriculture and new energy.

It can be seen from the analysis that China's investment in the weaker Central European countries is concentrated in the traditional manufacturing, agriculture and infrastructure construction; in the higher-level Central European countries, except for manufacturing, infrastructure, telecommunications and other fields, China is paying more attention to new energy sources and technology-intensive areas.

3.2.3 National Composition

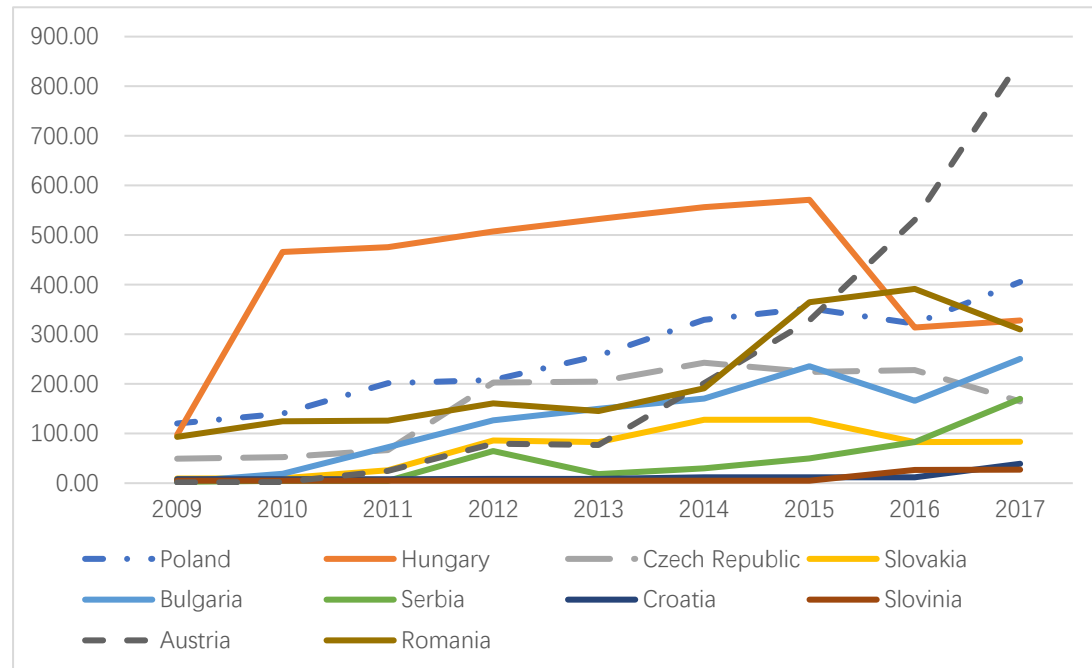


Figure 6: China's Outward FDI Stock in CEE Countries (Million USD)

Data Source: Ministry of Commerce of the People's Republic of China.

<http://images.mofcom.gov.cn/hzs/201810/20181029160118046.pdf>

From the Figure 6, we can see that China's investment in Central Europe varies with time, and the scale of investment in different countries is very different. In 2009, the direct investments of China in 10 countries were close. In 2009-2011, the direct investments in Hungary, Poland and Romania ranked the top three, the direct investment in Hungary was far ahead. In 2010 and 2011, direct investment in Hungary accounted for 56% and 47% of the total direct investment of China in these 10 countries. However, in 2012, the rankings have changed, the top three are Hungary, Poland, and the Czech Republic, with 507.41 million USD, 208.11 million USD, and 202.45 million USD, accounting for 35%, 14.4% and 14% of China's total direct investment in 10 countries respectively. China's direct investment in the Czech Republic exceeded that in Romania. In 2015, with the exception of Hungary, Poland and Romania, China's investment in Austria has grown rapidly, rising rapidly from the last one in 2009 to the fourth one, and the investment gaps with Romania and Poland are not large. China's investment in the Czech Republic fell to sixth. By 2017, China's direct investment in Austria ranked first with the absolute advantage of 851.49 Million USD, accounting for 32.4% of China's total investment in 10 countries. As for Hungary, after China's investment reached its peak in 2015, it began to show a downward trend and fell to third one in 2017.

It can be seen that in the past nine years, China's direct investment in the 10 countries has changed considerably. Among the ten countries, China's investment stock in Hungary has remained at the top of the list until 2015. Although it has shown a downward trend in the past two years, the proportion is still large. China's direct investment in Austria has seen the most significant increase. China's direct investment in other countries showed a steady increase in small fluctuations. Austria, Poland, Hungary, and Romania are the main countries for China's direct investments in the region currently.

3.2.4 Investment Entities

China's direct investment has developed rapidly. Although the Chinese investment entities are increasingly diversified, the dominant players are still large state-owned enterprises and limited liability companies. As can be seen from Figure 7, the investment of state-owned enterprises has always accounted for half of the total investment. Although limited liability companies are also an important part of investment, their investment scale has been decreasing year by year. At the same time, other investment entities, such as private companies, self-employed, etc., are developing rapidly.

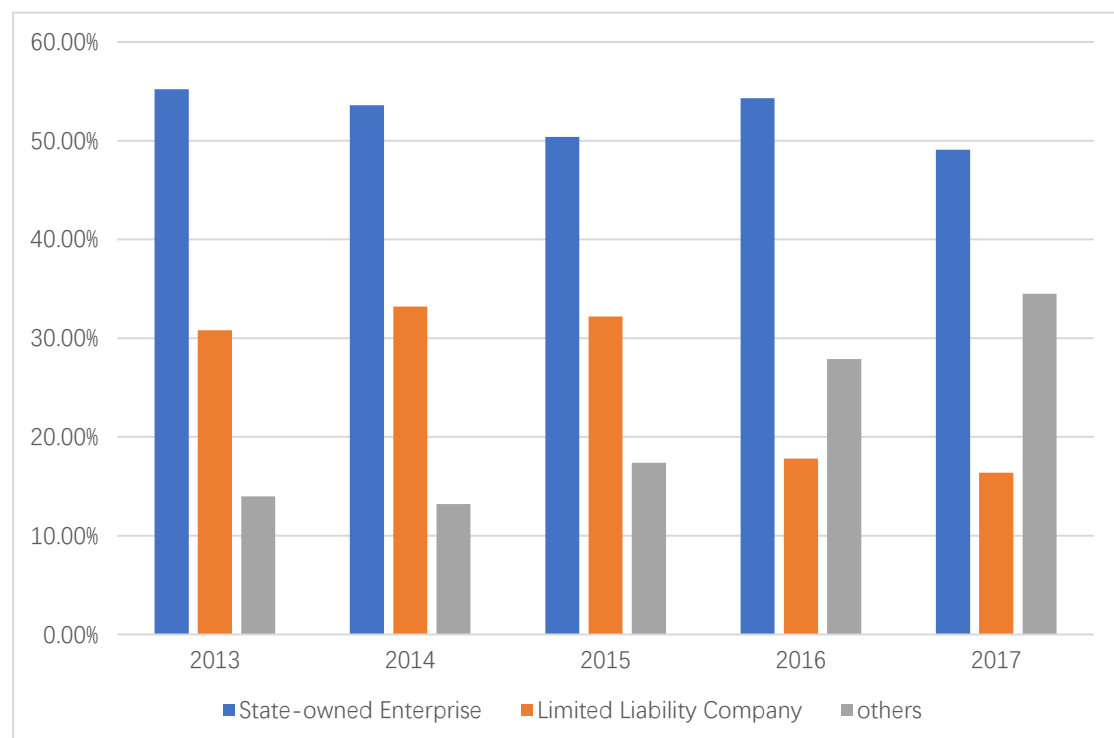


Figure 7: The Distribution of China's FDI According to the Type of Business Registration

Source: 2013-2017 China Foreign Direct Investment Bulletin

At present, a group of non-state-owned enterprises with competitive strength have invested in Central Europe under the guidance of China's "One Belt, One Road" strategy. State-owned enterprises do not have an advantage in terms of quantity, but the overall economic strength of state-owned enterprises cannot be ignored. Compared with state-owned enterprises, the purpose of non-state-owned enterprises to maximize profits is clearer. They have advantages over state-owned enterprises in terms of employment mechanism, management system, marketing, and market insight. At present, China's non-state-owned enterprises have invested in Central Europe. The investment industries are mainly extensive, including not only traditional agriculture, labor-intensive manufacturing, but also high-tech fields such as electronic communications, land and sea transportation, and new energy.

3.2.5 Problems in China's FDI to Central Europe

First, China's direct investment in CEE accounts for a low proportion of China's total FDI. In 2009, China's investment in Central Europe was 389.39million USD, accounting for 6.19% of China's investment in the EU. In 2017, China's stock of investment in Central Europe was 2,630.10million USD. Although the investment increased significantly, it only accounted for 3.06% of China's investment in the EU. Central Europe is the key development direction of China's foreign investment. However, compared with the investments in United Kingdom and Germany, the growth rate and proportion of China's direct investment in Central Europe is still low.

Second, China's direct investment in Central Europe accounts for a low proportion of the total foreign direct investment in Central Europe. Although China's direct investment in Central Europe has developed rapidly, compared with the investment of EU's internal countries, Japan, the United States and other major countries or regions in Central Europe, China's direct investment in Central Europe is still relatively small. Therefore, China's direct investment in Central Europe is still in its infancy and its economic influence on Central Europe is limited.

Finally, China's distribution of direct investment in Central Europe is uneven. China's direct investment in Hungary is relatively high. Due to the high-income level of Austria in the 10 countries, China's direct investment in Austrian has expanded rapidly. After 2016, it continued to be the top one. For lower- and middle-income countries such as Croatia, Slovenia, and Slovakia the investments are lower, and the speed of development are slower.

4 Analysis of China's Competitive Advantages in Direct Investment to Central Europe

4.1 Comparative Advantage of Economic Development Level

4.1.1 Overall Economic Strength

According to United Nations statistics, China's GDP reached 12,238 Billion USD in 2017, ranking second in the world. The total GDP of the 10 countries in Central Europe is 1,810 Billion USD, which is about 1/7 of the GDP in China. It can be seen that China has a clear advantage in economic aggregate. However, due to the large population base, China's per capita GDP is only higher than Bulgaria and Serbia, and it is in a backward position in Central Europe.

Table 1: the GDP and Per Capita GDP in China and CE 2017(Million nominal USD)

Country	GDP	Per Capita GDP	Country	GDP	Per Capita GDP
Poland	526,212	13,785	Croatia	55,201	13,176
Hungary	139,761	14,376	Slovenia	48,456	23,296
Czechia	215,825	20,325	Austria	416,836	47,717
Slovakia	95,618	17,552	Rumania	211,804	10,762
Bulgaria	58,222	8,218	China	12,237,782	8,682
Serbia	41,590	5,912			

Data Source: UN data

<http://data.un.org/Data.aspx?q=GDP+&d=SNAAMA&f=grID%3a101%3bcurrID%3aUSD%3bp cFlag%3a0>

In recent years, China and Central European countries have experienced rapid economic growth and are the regions with more active economic activities in the world. However, compared with Central European countries, China's economic development is more stable (see table 3 below).

GDP growth in most of central European countries were negative in 2010, 2012 and 2015. This is mainly because, in 2010, 2012 and 2015, the exchange rate between the euro and the US dollar has fallen sharply. In 2009, EUR/USD reached a maximum of 1.5, and in 2010 it fell to 1.2. After two years of recovery, EUR/USD fell to 1.2 in 2012 and fell to 1.1 in 2015 (*data source: XE Currency Converter*). The depreciation of the euro has led to a general decline in the GDP growth rate of the Central European countries that year. Other factors, such as the European debt crisis, also have a certain negative impact on the GDP of Central European countries. From 2010 to 2017, China's economic development has continued to grow. Although the growth rate has declined, it has maintained a stable development trend.

Table 2: Per Capita GDP Growth Rate of China and Central European Countries in 2010-2017(% of nominal values in US Dollars)

Country	2010	2011	2012	2013	2014	2015	2016	2017	Total growth rate
Poland	8.99	10.33	-5.37	4.79	4.08	-12.37	-1.06	11.64	21.04
Hungary	0.57	7.85	-8.92	6.06	3.89	-11.88	2.71	11.28	11.56
Czech	0.16	9.59	-9.18	0.90	-0.79	-10.14	4.35	10.55	5.37
Slovakia	0.56	9.59	-4.98	5.26	2.36	-13.16	2.28	6.35	8.27
Bulgaria	-1.78	14.20	-5.54	3.70	2.89	-11.09	6.74	10.08	19.20
Serbia	-7.03	18.65	-11.89	12.27	-2.40	-15.52	3.61	8.95	6.64
Croatia	-4.25	4.59	-9.02	3.30	-0.35	-13.72	4.81	7.54	-7.10
Slovenia	-4.89	6.40	-9.93	3.52	3.45	-13.77	3.42	8.44	-3.88
Austria	-2.53	9.36	-5.68	4.30	2.11	-14.07	2.81	5.50	1.82
Rumania	-2.61	11.43	-6.33	12.16	4.65	-10.39	6.09	13.34	28.34
China	18.74	23.42	12.41	11.61	8.53	5.03	0.68	8.88	89.30

Data source: UN data

4.1.2 Openness to the Outside World

(1) Comparative Advantage in Foreign Trade

As the largest developing country in the world, China has obvious comparative advantages in terms of scale of foreign trade, international market share, foreign trade structure and competitiveness of export commodities. In 2013, China's total import and export volume was 4,159billion USD. In 2019, China's total import and export volume was 4,107.16billion USD. The total import and export volume in China are large and remaining stable.

Affected by the global economic impact, in 2015, the total volume of imports and exports of countries generally declined. The most serious declines were in Austria, Bulgaria and Slovenia. Although the declines of the rest of the countries are smaller than the above three countries, the declines are also between 8% and 11%. One of the main reasons is that these countries are highly dependent on exports and are greatly affected by foreign economic changes. With the improvement of the international trade environment, from 2016 to 2017, the foreign trade situation of the Central European countries improved, basically recovering or exceeding the level of 2013. Among these countries, Austria, the Czech Republic, Poland, and Hungary have higher degrees of openness to the outside world and large scales of foreign trade. The foreign trades of Bulgaria, Croatia, Serbia and Slovenia are very small.

In addition, between 2013 and 2017, except for China, only the Czech Republic, Hungary and Slovakia maintained trade surpluses, while Austria, Bulgaria, Croatia, Romania, and Serbia have been in trade deficits. After the early trade deficits in Poland and Slovenia, they have turned into trade surpluses in recent years.

The total import and export volume of the ten Central European countries are quite different from that of China. In terms of imports, the total imports of the 10 countries of Central Europe are about 45%-50% of China's imports, while in terms of exports, about 40% of China's exports.

Table 3: Trade of China and Central Europe in 2013-2017 (Billion USD)

Country	Trade	2013	2014	2015	2016	2017
China	import	1,949.99	1,959.23	1,679.56	1,587.92	1,843.79
	export	2,209.01	2,342.29	2,273.47	2,097.64	2,263.37
	surplus	259.02	383.06	593.91	509.72	419.58
Austria	import	173.36	172.45	147.94	149.99	166.48
	export	166.27	169.71	145.28	144.7	159.97
	surplus	-7.09	-2.74	-2.66	-5.29	-6.51
Bulgaria	import	34.32	34.74	29.27	28.96	34.26
	export	29.51	29.38	25.78	26.69	31.59
	surplus	-4.81	-5.36	-3.49	-2.27	-2.67
Croatia	import	21.93	22.91	20.58	21.83	24.51
	export	12.74	13.84	12.84	13.65	15.73
	surplus	-9.19	-9.07	-7.74	-8.18	-8.78
Czech	import	142.53	153.23	140.72	142.33	162.9
	export	161.52	174.28	157.19	162.09	182.23
	surplus	18.99	21.05	16.47	19.76	19.33
Poland	import	205.61	216.69	189.7	188.52	217.98
	export	203.85	214.48	194.46	196.46	221.31
	surplus	-1.76	-2.21	4.76	7.94	3.33
Hungary	import	99.3	104.18	90.76	92.04	104.28
	export	108.01	112.54	100.3	103.07	113.38
	surplus	8.71	8.36	9.54	11.03	9.1
Romania	import	73.45	77.89	69.86	74.6	85.32
	export	65.88	69.88	60.61	63.58	70.63
	surplus	-7.57	-8.01	-9.25	-11.02	-14.69
Serbia	import	20.55	20.61	18.21	19.23	22.15
	export	14.61	14.84	13.38	14.85	16.96
	surplus	-5.94	-5.77	-4.83	-4.38	-5.19
Slovakia	import	81.3	81.35	72.96	75.14	82.99
	export	85.18	85.98	75.05	77.53	84.53
	surplus	3.88	4.63	2.09	2.39	1.54
	import	29.38	30.05	25.87	26.69	31.15

Slovenia	export	28.63	30.52	26.59	27.66	31.89
	surplus	-0.75	0.47	0.72	0.97	0.74
Total CE	Impact	881.73	914.1	805.87	819.33	932.02
	Expect	876.2	915.45	811.48	830.28	928.22

Data source: UN Comtrade <https://comtrade.un.org/>

(2) Competitive Advantage in International Direct Investment

With the accelerating process of economic globalization, international direct investment has gradually developed into an important way for a country to integrate into the world economy. Compared with the Central European countries, China has made outstanding achievements in the use of foreign capital. In 2017, China's direct investment inflows were 136,320million USD, became the second largest in the world only after the United States. In 2013, affected by the European refugee crisis, the inflow of foreign investment from Central European countries was small. Moreover, the foreign direct investment flows of Central European countries fluctuated greatly in 2013-2017, indicating that the investment environment of Central European countries is unstable. In 2017, the countries with high foreign investment in central Europe were Austria, the Czech Republic, Poland and Romania. In the Central European countries, the gaps between foreign investment inflows were large.

Table 4: FDI Inflows of China and Central European Countries (Million USD)

Country	2012	2013	2014	2015	2016	2017	total
China	121 080	123 911	128 500	135 610	133 710	136 320	779 131
Austria	3 989	5 720	4 577	1 270	- 9 001	9 630	16 185
Bulgaria	1 697	1 837	1 540	2 746	1 194	1 071	10 086
Croatia	1 510	958	2 877	267	1 756	2 104	9 473
Czech	7 984	3 639	5 492	465	9 815	7 412	34 807
Romania	3 199	3 601	3 211	3 839	4 997	5 160	24 007
Poland	12 424	2 734	14 269	15 271	13 928	6 434	65 069
Hungary	14 409	3 402	7 807	- 14 751	- 5 855	2 492	7 504
Slovakia	2 982	- 604	- 512	106	- 295	2 277	3 953
Slovenia	339	- 151	1 050	1 674	1 260	702	4 875
Sum of CEECs	48533	21133	40311	10887	17799	37282	175959

Data Source: United Nations Conference on Trade and Development

<https://unctad.org/en/Pages/DIAE/World%20Investment%20Report/Annex-Tables.aspx>

In terms of FDI, China's foreign investment level is better than that of Central European countries. In 2017, China's FDI outflow ranked third in the world, only after the United States and Japan. As of 2017, FDI outward Stock of China was 1482 Billion USD, while Central European countries had a total investment stock of 345 Billion USD, accounting for only 23.2% of China's investment stock. Among Central European

countries, Austria has the highest investment stock of 241Billion USD. Bulgaria, Romania, and Slovakia have the lowest stocks of investment. There is a large gap in the stock of investment between China and Central Europe. As can be seen from the investment flow, in 2017, except for Austria, the Czech Republic and Poland, the foreign direct investments of the rest of the countries are small. The above figures show that whether it is foreign investment inflows or foreign investment outflows, the degree of openness to the outside world in China is higher than that of Central European countries, and its link with the world economy is closer.

Table 5: FDI Outflows of China and Central European Countries (Million USD)

Country	2012	2013	2014	2015	2016	2017	total
China	87 804	107 844	123 120	145 667	196 149	124 630	785214
Austria	13 109	15 568	- 726	6 981	- 3 520	10 892	42304
Bulgaria	325	187	370	163	413	296	1 755
Croatia	- 86	- 168	1 962	8	- 338	644	2 023
Czech	1 790	4 019	1 620	2 487	2 182	1 624	13 722
Romania	- 114	- 281	- 374	562	5	10	-191
Poland	2 901	- 1 346	2 898	4 996	8 074	3 591	21 113
Hungary	11 703	1 886	3 868	- 16 192	- 8 552	322	-6 966
Slovakia	8	- 313	43	6	248	350	342
Slovenia	- 259	- 214	275	267	287	107	464

Data source: United Nations Conference on Trade and Development

4.1.3 Industrial Structure

In 2017, China's exports to resource-intensive industries were 5.2%, while imports accounted for 31.44%. This shows that China relied heavily on imports of international resources. At present, China's economic structure is transforming from labor-intensive industries to capital and technology-intensive industries. With the deepening and breadth of China's industrialization, China has comparative advantages in many fields. In 2017, labor-intensive industries accounted for 50.36% of China's imports, while technology and capital-intensive industries accounted for 14.61%. In terms of exports, technology and capital-intensive industries accounted for 40.47%. It can be seen that China is developing well in technology and capital-intensive industries.

The structural structure of foreign trade in Central European countries are unique, but they can complement with China. The main import and export industries in Austria are labor-intensive industries, accounting for 49.22% of total imports and 52.92% of total exports. Austria's import of resource-based industries is 18.75%, and there is little dependence on international resources. Croatia, Bulgaria, and Serbia have developed agriculture, so the proportion of agricultural products in export products is high. Among

the three countries, the proportion of exports of resource-intensive industries were 30.55%, 28.53%, and 23.48%. At the same time, in terms of imports, the three countries have relatively average imports of resource-intensive industries, labor-intensive industries, and capital- and technology-intensive industries. The Czech Republic, Slovakia and Hungary have high levels of industrialization, especially in the field of transportation machinery and equipment such as automobile manufacturing. In 2017, the three countries' exports at SITC7 respectively accounted for 57%, 59.28% and 55.69% of these countries' total exports. Among the 10 countries of Central Europe, except for a small number of countries that have a large proportion of resources exports, the degrees of industrialization have been continuously improved. In 2017, only Austria, Bulgaria and Croatia have trade deficits in capital- and technology-intensive industries. Half of the countries (Bulgaria, Croatia, Romania, Poland, Serbia) have trade deficits with labor-intensive industries.

Table 6: Trade Competitiveness Index in 2017

SITC	SITC 0-4		SITC 5+7		SITC 6+8	
	per-Total	TC	per-Total	TC	per-Total	TC
China	16.979	-0.662	52.409	0.137	28.863	0.642
Austria	15.386	-0.243	51.034	0.016	31.659	-0.023
Bulgaria	30.677	-0.108	34.522	-0.155	29.980	-0.021
Croatia	29.047	-0.178	38.577	-0.241	32.163	-0.289
Czech	10.599	-0.169	60.316	0.105	28.802	0.324
Hungary	13.661	-0.078	63.618	0.102	21.878	0.311
Romania	17.173	-0.164	49.248	-0.083	30.675	0.085
Poland	18.231	-0.033	48.257	-0.017	32.629	0.110
Serbia	22.662	-0.101	37.675	-0.141	30.548	0.003
Slovakia	13.131	-0.253	59.908	0.071	26.568	0.209
Slovenia	17.468	-0.261	52.684	0.082	29.691	0.130

Data source: Eurostat. <https://ec.europa.eu/eurostat/data/database>

Notes: According to the 1-digit commodity code classification in the International Trade Standards Classification (SITC), export commodities can be divided into nine parts. SITC0-4 is generally considered the resource-intensive product, SITC6+8 is considered the labor-intensive product, and SITC 5+7 is considered the capital and technology-intensive product. The more detail can be seen at appendix 2

Per-total: the proportion of each category in the total.

TC: The Trade Competitiveness Index is an important indicator for measuring the international competitiveness of an industry. The calculation method is that the trade surplus (deficit) of a country in an industry accounts for the proportion of the country's total trade of the industry. The closer the trade competitiveness index is to 1, the stronger the international competitiveness of the industry is; the closer the trade competitiveness index is to one liter, the weaker the international competitiveness of the industry is.

The change in a country's trade competitiveness index reflects the evolution of the country's export product structural competitiveness. As shown in the table, in STIC5+7 products, in 2017, nearly half of the trade competitiveness indexes of Central European countries are negative, indicating that these countries have obvious competitive disadvantages in such products. This also reflects the phenomenon of the transformation of China-EU economic structure into capital and technology industries from another angle. In 2017, China's STIC6+8 products have a strong export competitiveness. Except for the Czech Republic and Hungary, the trade competitiveness indexes of such products in Central Europe are low, indicating that the Central Europe is at a disadvantage compared with China. On the SITC5+7 product, China's export competitive advantage is still greater than that of Central European countries. The Czech and Hungarian export competitive advantages are slightly smaller than China's, ranking second and third respectively. In the export of SITC0-4 products, the trade competitiveness indexes of all countries are negative, indicating that the export structure of each country is continuously optimized, and the exports of resource products are reduced in both China and Central Europe.

4.2 Technical management experience competitive advantage

The level of technology in a country is difficult to measure directly through an indicator. It is generally necessary to compare the indicators related to the level of technological development to evaluate the degree of technological development in a country. This paper compares the technical level of China and Central European countries from the number of patent applications, the total and intensity of R&D investment.

4.2.1 The Number of Patent Applications

The level of science and technology in a country can be measured by the number of patent applications. In recent years, China's independent innovation capability has been continuously improved in an open economic environment, the level of science and technology has been widely recognized by the international community.

Table 7: Patents of China and Central European Countries

Year	2009	2017
Poland	3,551	6,120
Hungary	1,853	1,257
Czech	1,637	2,185
Slovakia	324	440
Bulgaria	397	425
Serbia	353	296
Croatia	423	280
Romania	1,150	1,451
Austria	9,974	13,785
China	241,434	1,306,019

Data source: world intellectual property organization. <https://www.wipo.int/ipstats/en/statistics/country>

As shown in the table, the number of patents in Poland, Hungary, Czech Republic, Romania, and Austria are at large proportions in Central European countries. Except Croatia, Serbia and Hungary, the number of patents in most countries has increased over the past nine years, though Romania, the Czech Republic and Slovakia are growing slowly. Austria has a significant number of patents in Central European countries. On the other hand, it can be seen that the number of patents in Central European countries lags far behind China, and China's technological level has the advantage of investment cooperation.

4.2.2 Total R&D investment and intensity

Scientific research and experimental development (R&D) activities are at the heart of scientific and technological activities. Increasing the investment scale and input intensity of R&D funds are important means for a country to achieve independent innovation, which has been significantly reflected in the development process of major developed countries and some newly industrialized countries.

Table 8: The GERD and GERD as a Percentage of GDP in 2016

Country	GERD (Million USD)	GERD % of GDP
Austria	13.63	3.09
China	451.41	2.11
Slovenia	1.35	2
Czech	6.16	1.68
Hungary	3.16	1.21
Poland	10.04	0.97
Serbia	0.91	0.89
Croatia	0.84	0.85
Slovakia	1.31	0.79
Bulgaria	1.07	0.78
Romania	2.19	0.48

Data: the UN Comtrade database

GERD: Gross domestic expenditure on R&D

GERD % of GDP: The indicator provided is GERD as a percentage of GDP. "Research and experimental development (R&D) comprise creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society and the use of this stock of knowledge to devise new applications" (Frascati Manual, 2002 edition, § 63).

It can be seen from the UN Statistical Bulletin that China's R&D investment intensity has increased year by year in the past decade. After breaking through 1% in 2010, it reached 2.11% in 2016. From the perspective of R&D expenditure, China's domestic R&D expenditure in 2016 reached 451.41 Million USD, ranking the top in the world.

From the perspective of the proportion of R&D in GDP, the R&D investment of Austria, Slovenia, Czech Republic and Hungary accounts for more than 1% of GDP. Austria's proportion is 3.09%, and the total investment is 13.61 million USD. Its innovative ability has reached the international advanced level. In Slovenia, the proportion of R&D in GDP is 2%, but due to its small GDP, the total investment is only 1.35 million USD. In the rest five Central European countries (Serbia, Croatia, Slovakia, Bulgaria and Romania), the investment intensities of R&D do not have much difference between 0.5% and 1%. From the total amounts of investment, the investments are less in these countries. Although the R&D proportion in GDP accounts for less than 1% in Poland, its total input is 10.04 million USD, which is among the top in Central European countries.

On the whole, in addition to Austria, the Czech Republic and Poland, the Central

European countries have insufficient R&D investment and weak R&D capabilities. The data above shows that, no matter in the indicator of R&D input intensity or indicator of total R&D investment, China has obvious technical comparative advantages for Central European countries.

5 Analysis of the Motivation of China's Direct Investment in Central Europe

Since the implementation of the OBOR initiative, China has entered a new stage of rapid development in OFDI. According to statistics, as of the end of 2017, the outward of FDI stock in China has reached 1491 billion USD, an increase of 37.4% compared with the end of 2014 (*Sources: United Nations Conference on Trade and Development, 2018*). Under the OBOR policy, China's investment in the 9 countries of Central Europe was 2.63 billion USD in 2017, accounting for 0.2% of China's FDI stock. The investment in ASEAN is 89 billion USD, accounting for 5.9% of it. It shows that investment of China in Central European countries is very low, but with the gradual deepening of the OBOR, China will pay more attention on cooperation with these countries.

5.1 Introduction to the Panel Data Model

In the experimental model, common data forms are time series data, cross-sectional data and panel data. The first two are one-dimensional data types. Panel data can be seen as a mixture of time series and cross-section data, so it is a kind of two-dimensional data. The research on direct investment in this paper is more complicated. Considering multiple reference variables from 2009 to 2017, I choose the panel data for analysis. Compared with others, the panel data has many unique advantages. It can reflect the increase of GDP, the impact of technological investment and so on from the time horizon, also it can reflect the influence of each variable on direct investment from the cross-sectional dimension.

Below, I will introduce the general static panel data model, including the formal setting of the model; the classification and selection of the model.

5.1.1 The Formal Setting of the Model

The panel data contains cross-section dimension and time dimension. Suppose i ($i = 1, \dots, N$) denote the number of sections and t ($t = 1, \dots, T$) denote the time. The following linear model can be set:

$$y_{it} = \alpha_i + \lambda_t + x_{it}\beta + \epsilon_{it}$$

In this model, y_{it} represents the $N \times 1$ dependent variable, x_{it} represents the

$N \times k$ independent variable, ϵ_{it} represents the model error term, β represents the parameter to be estimated, indicating the marginal influence of x_{it} on y_{it} . α_i represents the individual effect, those influencing factor that do not change with time. λ_t represents the time effect and is used to control the effects of factors that change over time.

Obviously, α_i and λ_t are difficult to observable or quantify, so we cannot add them in the model. In the cross-sectional analysis, the problem of missing variables is often caused. One of the uses of the panel data model is to deal with these unobservable individual effects or time effects. If all i and α_i are equal, the model degenerates into a mixed data model (pooled OLS).

Usually, we also divide the panel data into macro panels and micro panels according to the number of individuals N and periods T . Macro panels generally have a large N and a small T . Micro panels generally have a small N and a large T . Depending on the size of N and T , the parameters used in the estimation methods and analysis focus are different.

5.1.2 The Classification and Selection of the Model

There are two types of panel data models: Fixed effect model and Random effect model. When α_i and x_{it} are related, that is, the correlation coefficient is not 0 ($\text{corr}(\alpha_i, x_{it}) \neq 0$), the model should be a fixed effect model. Conversely, it is a random effect model (*Blundell, et al., 2000*).

The difference between the two models is mainly reflected in the treatment of the “individual effect”. The fixed model assumes that the individual effects are fixed within the group, the differences between individuals are reflected in each individual having a specific intercept term; the random effects model assumes that the individuals have the same intercept term, the differences between individuals are random, and these differences are largely reflected in the setting of random interference terms. when sample comes from a smaller population, we should use a fixed effect model, and when the sample comes from a large population, a random effect model will be better. However, in the specific example application, there is no strict limit between the large population and the small population. We cannot clearly know the size of population which our sample comes from. Therefore, we believe that the fixed effect model and random effect model are distinguished by examining whether the assumptions are met. Next, I will discuss the choice of mixed data model, fixed effect model and random effects model.

(1) Fixed Effect Test

The nature of the test of the fixed effect is to test whether the difference between the intercept terms between individuals is significant, that is, whether $\alpha_1 = \alpha_2 = \dots = \alpha_N = 0$ is satisfied. According to the hypothesis testing principle, the following hypothesis test is set:

$$H_0: \alpha_1 = \alpha_2 = \dots = \alpha_{N-1} = 0$$

If the result rejects H_0 , it indicates that there is a significant difference between the inter-subject terms, and the model always needs to consider the fixed effect. Conversely, a pooled OLS model is more appropriate. Usually we can use the F statistic (*Hora & Conover, 1984*) to test whether the above assumption is true:

$$F = \frac{(R_u^2 - R_r^2)/(N - 1)}{(1 - R_u^2)/(NT - N - K)} \sim F(N - 1, NT - N - K)$$

Among them, R_u^2 is the goodness-of-fit coefficient of the fixed-effect model (unconstrained model), R_r^2 is the goodness-of-fit coefficient of the mixed data model (constrained model); N is the number of sections; T is the period; K is the number of explanatory variables. If the H_0 is rejected, the individual effect is significant, and the fixed effect model is better than the mixed data model. In the same way, it is possible to construct a similar F statistic to test whether the period effect is significant (*Simonetta, 2014*).

(2) Random Effect Test

Breusch and Pagan (*Breusch & Pagan, 1980*) proposed an LM statistic based on the residual of the panel random effects model, constructing the following null hypothesis to test the random effects:

$$H_0: \sigma_\alpha^2 = 0; H_1: \sigma_\alpha^2 \neq 0;$$

The corresponding test statistic LM is:

$$LM = \frac{NT}{2(T - 1)} \left[\frac{[\sum_{i=1}^N \sum_{t=1}^T e_{it}]^2}{\sum_{i=1}^N [\sum_{t=1}^T e_{it}^2]} \right]^2$$

Under the null hypothesis, the statistic is subject to the $\chi^2(1)$ distribution. If H_0 is rejected, it indicates that there is a random effect.

(3) Hausman Test

It can be used as a basis for choosing models by testing whether the individual effect α_i is related to other explanatory variables. At this point, Hausman test is very useful. The basic idea is that under the assumption that it is not related to other explanatory variables, the estimation of the fixed effect model using the intra-group transformation method and the parameter estimation obtained by the GLS random effect model are unbiased and consistent, but the former is not effective. If the H_0 is not true, the parameter estimates of the fixed effect model are still consistent, but the random effects model is inconsistent. Therefore, under the null hypothesis, there should be no significant difference in the parameter estimation between the two, and the statistical test quantity can be constructed based on the difference between the two parameter estimates.

Assuming β_{within} is a combined estimate of the fixed effect model, β_{GLS} is the GLS estimate of the random effects model. Under the assumption of the original hypothesis (Hausman, et al., 2005):

$$cov(\beta_{GLS}, \beta_{GLS} - \beta_{within}) = 0$$

According to the formula of variance,

$$Var(\beta_{within} - \beta_{GLS}) = Var(\beta_{within}) + Var(\beta_{GLS}) - 2 cov(\beta_{within}, \beta_{GLS})$$

Since:

$$Var(\beta_{GLS}) = cov(\beta_{within}, \beta_{GLS})$$

Therefore:

$$Var(\beta_{within} - \beta_{GLS}) = Var(\beta_{within}) - Var(\beta_{GLS}) = \Psi$$

The Hausman test is based on the following Wald statistic:

$$W = (\beta_{within} - \beta_{GLS})' \hat{\Psi}^{-1} (\beta_{within} - \beta_{GLS}) \sim \chi^2(K - 1)$$

If the null hypothesis is rejected, it indicates that the individual effect α_i is related to the explanatory variable. At this time, the results of the random effect model are inconsistent, and the fixed effect model should be selected.

5.2 Variable selection

(1) Seeking the Market

The scale of the host country market is an important determinant for other countries to invest. If the host country market is large, the country's resource utilization rate will increase, and the degree of economic development will increase.

Dunning mentioned that the scale and characteristics of the host country market are important factors for the investment country to invest in (Dunning, 1977). Krugman supplemented this view (Krugman, 1994). He has classified the motivations of FDI and found that due to the different purposes of investment, the importance of market size in the host country is different to attract investment. When foreign investment is market-oriented, the relationship between FDI and market scale is significant.

Researches on Chinese investment in Central Europe show that one of the purposes of Chinese direct investment under the OBOR Initiative is to expand the Central European market and alleviate overcapacity problems in China (Fukuyama, 2016). The electronic communication technology industry in China is in a leading position in the international market. By investing in Central European countries, these companies can expand more markets and improve their international competitiveness. At the same time, through investment in Central European countries, trade barriers can be reduced, investment and trade cooperation between China and the EU can be promoted, and the European market can be expanded (Djankov & Miner, 2016, p. 7).

Hypothesis 1: China's direct investment in Central Europe is positively related to the scale of the Central European market

This paper selects the GDP of 10 Central European countries to measure the market scales. GDP not only includes the economies of Central Europe, but also reflects the purchasing power of Central European countries.

(2) Seeking resources

Energy is the basis for maintaining the economic development of a country. It is also one of the important purposes of Chinese FDI. China is the most populous country in the world, and its industrial development is relatively fast. Therefore, China's demand for international resources is very large. China's investment in resource-rich countries can ensure the safe development of its economy.

Hypothesis 2: China's direct investment in Central Europe is positively related to the endowment of resources in Central Europe.

This paper selects the percentage of ores and metals exports in all merchandise exports in the Central European countries as a variable. This ratio reflects the resource reserves and export intensity of Central European countries. It is a good representation of the resource endowments of Central European countries.

(3) Seeking technology

The theories of FDI in developing countries generally believe that technological innovation and technological progress are important factors for developing countries to take FDI. The development of enterprises in science and technology can increase the added value of products and help enterprises gain more competitive advantages, thus expanding their influence in the international market. Dunning argues that developing countries investing in knowledge- and capital-intensive countries and countries with highly skilled talent can enhance the competitiveness of their businesses (Dunning, 2006). Taylor discovered through research (Taylor, 2002) that China invests in advanced proprietary technologies, non-current assets and skills through greenfield investments and cross-border mergers. The investment environment of Central Europe is stable, and the economy is developing better. Most of the CE countries are members of the European Union, and the technical cooperation between these countries is close. As mentioned in Chapter 2, China relies heavily on traditional energy sources. Through investment in Central European countries, Chinese companies can learn more experience and technology, promote the use of clean energy, and achieve their own development. In addition to clean energy, Central European Countries such as Czech and Austria have high levels of technology in manufacturing, pharmaceuticals, transportation and many other fields.

Hypothesis 3: China's direct investment in Central Europe is positively related to the endowment of Central European technology.

This paper takes the investment of science and technology as a research variable, which can reflect the technical level of Central European countries.

(4) China's economic development level

Economic growth is the reason for Chinese FDI, and there is a strong causal relationship between the two. Since the reform and opening up, China's economy has developed rapidly, especially in some industries. After China's accession to the WTO, the investment market has continued to expand. Economic development has promoted more and more competitive enterprises to make FDI. In 2017, China's GDP ranked second in the world, only after the United States. China's current high economic level has greatly promoted the foreign investment of Chinese companies.

Hypothesis 4: China's direct investment in Central European countries is positively related to China's economic development.

This paper selects China's total GDP as a variable for research.

(5) Trade

Trade and FDI have close and complex links. On the one hand, direct investment can promote foreign trade, on the other hand, direct investment can also replace foreign trade. Mundell first proposed the relationship between trade and FDI (*Mundell, 1957*). He proposed that there is an alternative between trade and investment, trade barriers will promote direct investment, and investment barriers will promote trade development. Researchers such as Itaki found that, trade and investment are complementary (*Itaki, 1991*). Further research by Johansson and Vahlne found that this complementarity relationship is due to the fact that the occupation of the host country by multinational companies can be achieved through a combination of exports and investment (*Johansson & Vahlne, 1997*). Patri argues that different investment motives have different effects on trade (*Petri, 1994*). Market-oriented direct investment considers the demand for investment in the host country's product sales market, which can form an alternative to international trade; production-oriented direct investment considers location choices to reduce production costs and promotes international trade.

Hypothesis 5: the relationship between China's direct investment and bilateral trade of China in Central European countries are uncertain.

This paper selects the bilateral import and export data between China and CE countries as research variables, which not only reflect the economic ties between China and CE countries, but also reflect the market competitiveness of the products of these countries.

(6) Investment environment

A good investment environment is an important foundation for attracting investment. The foreign investment and environment are mutually reinforcing relationships. The entry of foreign capital drives the local government to improve the investment environment to meet the demand, while the good investment environment attracts more foreign investment. Globerman and Shapiro studied the effects of political, institutional and legal environments in developed and developing countries on FDI (*Globerman & Shapiro, 2002*). The studies have shown that a good investment environment is an important determinant of FDI inflows and outflows. It can not only create conditions for foreign investment of its own multinational companies, but also

attract foreign capital. The investment environment of CE countries is generally good. The economies of Central European countries are greatly affected by the economic crisis and the European debt crisis. In order to restore and develop their own economic level, most Central European countries adopt loose policies to attract foreign direct investment, which provides better environment for Chinese companies to invest in CE countries.

Hypothesis 6: China's direct investment in Central European countries is positively related to the quality of investment environment.

The measurement of the investment environment mainly uses the average of the six indicators of accountability, political stability, government efficiency, regulatory quality, legal regulation, and corruption control published by the World Bank's Global Governance Index database. Percentile Rank (0-100) indicates rank of country among all countries in the world. 0 corresponds to lowest rank and 100 corresponds to highest rank.

(7) Unemployment rate

The unemployment rate reflects the extent to which the host country is affected by the economic crisis. In general, countries with economic recession or instability have higher unemployment rates. The Central European countries are affected by the European debt crisis, the refugee crisis and the global economic recession. The unemployment rate of various countries has fluctuated to varying degrees. Especially in countries such as Slovenia, Croatia. Their economic level ranks low in European countries and their ability to withstand the effects of the financial crisis is poor. Austria, the Czech Republic, Hungary and other countries have matured economies and accumulated some experience in fighting the financial crisis, so their unemployment rate fluctuated little.

Hypothesis 7: China's direct investment in Central Europe is negatively correlated with the domestic unemployment rate in Central European countries.

The measurement of economic stability in this paper mainly uses the unemployment rate.

(8) Industrial structure

China is currently in a critical period of economic transformation. It needs to learn from the experience of Central Europe for advanced technology, management experience, product development and so on. At the same time, due to the rising labor costs in China and the emphasis on the ecological environment, China's energy-

intensive products are decreasing, and China's low-end products are gradually losing their competitive advantage in international trade. Most of the Central European countries have a relatively moderate economic structure. The export is mainly based on the second industry. The traditional manufacturing products have a large proportion of exports, and some of the less developed countries have higher exports to the primary industry. After the European debt crisis, the middle and high-level countries of Central Europe have further developed high-tech emerging industries in order to promote economic growth. China's direct investment in Central Europe can help China learn from the experience of Central European countries, improve its production technology and production capacity, transform its economic development model, and optimize China's industrial structure. The lower-level countries in Central Europe also hope to attract investment, transform the industrial structure, and promote stable economic development.

Hypothesis 8: China's direct investment in Central Europe is positively related to the quality of industrial structure of Central European countries

In this paper, the measurement of the quality of industrial structure mainly uses two indicators:

A: export of manufactured goods/exports of primary products. The higher the index means the industrial structure of the country is higher, exports of low-end products and energy-intensive products is lower, and the competitive advantage of medium and high-end products is higher.

B: exports of capital and technology-intensive products/labor intensive products. The higher the index, the higher the level of development of emerging industries in the country and the more competitive in the international market.

5.3 Data and Explanation

This paper uses the panel data of China's investment in nine countries⁴ in Central Europe in 2009-2017 to conduct investment motivation research. The specific variables and data sources are as follows:

	Variable	Explanation	Data Source
1	OFDI	Outgoing FDI Stock of China in Central European Countries (nominal million dollar)	China Statistical Report on Foreign Direct Investment
2	IGDP	GDP_CN (nominal million dollar)	United Nations Statistics Division

⁴ Austria, Bulgaria, Croatia, Czech, Poland, Hungary, Romania, Slovakia, Slovenia.

3	HGDP	GDP_CEC (nominal million dollar)	United Nations Statistics Division
4	NATU	Ores and metals exports in Central European Countries (% of merchandise exports)	World Bank Indicator
5	TECH	Science and Technology Expenditure in Central European Countries (nominal million dollar)	Eurostat
6	EXPO	Chinese Export to Central European Countries (nominal million dollar)	UN Comtrade
7	IMPO	Chinese Import from Central European Countries (nominal million dollar)	UN Comtrade
8	UNEM	Unemployment, total (% of total labor force) (national estimate) in CEC	World Bank: International Labor Organization
9	INV_ENVI	Investment Environment The measurement of the investment environment mainly uses the average of the six indicators of accountability, political stability, government efficiency, regulatory quality, legal regulation, and corruption control. Percentile Rank (0-100) indicates rank of country among all countries in the world. 0 corresponds to lowest rank and 100 corresponds to highest rank.	World Bank: Worldwide Governance Indicators
10	MAN	export of manufactured goods / exports of primary products in Central European Countries	Eurostat
11	HIGH-TECH	exports of capital and technology-intensive products / labor intensive products in Central European Countries— (SITC 5+7) / (SITC 6+8)	Eurostat

Notes: As mentioned on page 39, SITC 0-4 is generally considered the resource-intensive product, SITC6+8 is considered the labor-intensive product, and SITC5+7 is considered the capital and technology-intensive product.

5.4 Analysis of Regression Results

Based on 9 years of observation data from 10 countries, this paper uses the panel data model for analysis.

In order to avoid the virtual regression problem, we must make a stationarity test on the panel data model. And then test the factors affecting China's direct investment

in Central European countries based on correlation analysis

Descriptive Analysis

Variable	Obs	Mean	Std.Dev.	Min	Max
LnOFDI	81	4.262	1.644	.438	6.747
LnIGDP	81	15.987	.283	15.447	16.32
LnHGDP	81	11.808	.825	10.671	13.209
NATU	81	4.454	4.117	1.16	18.82
LnTech	81	6.436	1.222	4.013	9.012
LnExpo	81	7.988	.836	6.39	9.791
LnImpo	81	7.021	1.269	3.932	8.677
Unem	81	8.762	3.309	2.89	17.29
Envi	81	72.668	10.393	54.56	94.17
Manu	81	5.508	2.453	1.58	10.89
High-tech	81	.666	.297	.26	1.65

Stationarity Analysis

First, we should check the smoothness of the data before regression. Some non-stationary economic time series sometimes also show common trends of change, and these sequences are not directly related to each other. Therefore, regression of these data, the result has no practical significance, this situation is called pseudo-regression.

In order to avoid the “pseudo-regression” in the dynamic panel data model and ensure the validity of the empirical results, we should check the panel data for stationarity. The most common method for verifying data stationarity is the unit root test. I choose LLC test to perform a unit root test on each panel variable. The specific test results are shown in the table below:

Variable	LLC-Test T-value	stationarity
LnOFDI	-9.887***	stable
LnHGDP	-6.816***	stable
NATU	-4.403**	stable
LnTech	-3.896***	stable
LnExpo	-5.372***	stable
LnImpo	-6.722***	stable
Unem	-5.050***	stable
Envi	-6.368***	stable
Manu	-6.379***	stable
High-tech	-4.760***	stable

* $p < .1$, ** $p < .05$, *** $p < .01$

The results of the LLC test show that $P < .05$, that is, the variables are stationary sequences, and there is no “pseudo-regression” in the data model.

Regression Analysis

First, the data is subjected to the positive F test and the Hausmann test. The three models have different individual effects, so there is a difference in the processing of individual effects, so the regression results obtained by the three models are different. The pooled OLS model does not consider the individual effect. The fixed model assumes that the individual effects are fixed within the group, the differences between individuals are reflected in each individual having a specific intercept term; the random effect model assumes that the individual has the same intercept term, the differences between individuals are random, and these differences are mainly reflected in the setting of random interference terms. In this chapter, the fixed effect model was chosen as the basis for the final interpretation. The specific results are shown in the table below.

	Pooled-OLS LnOFDI	Fixed-effect LnOFDI	Random-effect LnOFDI
lnigdp	1.8025*** (2.90)	2.7137*** (3.88)	1.8025*** (3.89)
lnhgdp	1.0996*** (2.72)	0.2919* (1.80)	1.0996*** (2.86)
natu	0.2763*** (3.45)	0.1773** (2.39)	0.2763*** (3.50)
Intech	0.4695** (2.03)	0.4583** (2.01)	0.4695* (1.76)
lnexpo	0.0880 (0.38)	-0.2323 (-0.36)	0.0880 (0.40)
lnimpo	0.2116 (0.93)	0.0375 (0.09)	0.2116 (1.08)
unem	0.0599 (1.46)	0.0886 (1.63)	0.0599 (1.30)
envi	-0.1212*** (-6.12)	0.0328 (0.65)	-0.1212*** (-4.79)
manu	0.0821 (0.96)	0.1817 (1.26)	0.0821 (0.85)
High-tech	-3.8560*** (-3.53)	-4.6115*** (-3.51)	-3.8560*** (-3.27)
_cons	-33.5806*** (-2.92)	-43.2362** (-2.18)	-33.5806*** (-3.79)
<i>N</i>	81	81	81
F-test= 2.54, P= 0.0185; Hausman-test: $\lambda^2= 31.50$, P= 0.0005			

* $p < .1$, ** $p < .05$, *** $p < .01$

In the regression model of fixed effects, we find that *IGDP* has a significant positive impact on the amount of direct investment in Central Europe, with a regression coefficient of 2.7137; *HGDP* have a significant positive impact on the level of investment, regression coefficient It is 0.2919; *NATU* has a significant positive impact on Chinese direct investment, with a regression coefficient of 0.1773; *TECH* has a significant positive impact on Chinese direct investment, with a regression coefficient of 0.4583; *EXPO* and has no significant negative impacts on China's direct investment in Central Europe; *IMPO*, *ENVI*, *MANU* and *UNEM* all have no significant positive impact on Chinese direct investment in Central European countries. Based on the comprehensive regression analysis, we can conclude that the hypothesis 1,2,3,4 are accepted, and the hypothesis 5,6,7,8 are not accepted.

From Hypothesis 1, China's FDI is positively correlated with the GDP of the host country. The type of China's FDI for Central Europe is mainly market-seeking. The

higher the GDP level of the host country, the larger the market size of the country is, and it can attract more direct investment.

From Hypothesis 2, China's FDI is positively correlated with the resource of the host country. In infrastructure construction investment, high value-added building materials, such as high-speed rail, are provided by China, which can solve the problem of overcapacity in China's steel industry. On the other hand, in order to reduce the transportation cost of materials and achieve common development with Central European countries, the low value-added materials required for China's local infrastructure construction are supplied by local steel and other enterprises. Most of the industrial bases of Central European countries are weak (Croatia, Serbia, Slovenia...), local companies provide resources for the construction of their own infrastructure, can solve local employment problems, drive the development of relevant local industries and stimulate local economic development. This also reflects the concept of working together to promote a win-win situation under the OBOR.

From Hypothesis 3, China's FDI is positively related to the investment in research by companies in the host country. The higher the investment in technology by host countries, the more they can attract Chinese investment. China invests in the area which has high level science and technology can absorb local technical talents, gain foreign high-tech and management experience, and improve competitiveness of Chinese companies.

From Hypothesis 4, China's FDI is positively related to its own GDP. The well economic development in China can promote more enterprises to invest abroad and expand overseas markets.

From Hypothesis 5, there is no significant correlation between China's FDI and China-Central Europe bilateral trade. The explanations for this are as follow:

First, China's direct investment projects in Central European countries are less than investments in other countries and regions. Second, China's investment in Central European countries is concentrated in industries such as energy, transportation, infrastructure and telecommunications. These areas need large investments but have long payback periods, making it difficult to achieve returns in the short term. At the same time, most of the infrastructure such as railways and ports are still in the early stages of construction and have not yet made a profit. The Chinese government is required to invest a large number of financial subsidies. Third, after the formal completion of these investment projects, transportation costs will be greatly reduced, the trade market will be expanded, the development speed of bilateral trade will be accelerated, and the total trade volume will be increased. Direct investment has little impact on trade in the short term, but in the long run, China's direct investment can promote the development of bilateral trade.

Hypothesis 6 shows that China's FDI is not related to the investment environment of the host country. Countries along the OBOR have different characteristics. Compared with the highly developed regions such as Western Europe and the United States, their economic development level and investment environment are relatively weak. China has high investment risks in investing in these countries. Take Central European countries as an example: not only countries such as Austria with a good investment environment, but also countries such as Serbia with a poor investment environment. At present, China's eastward expansion is hindered. China needs to cooperate with countries within Eurasia to seek new markets. The purpose of the One Belt One Road Initiative policy is to drive the countries along the line to take advantage of China's economic development. This means of expanding the market is very necessary, that is, environmental factors are not an obstacle to investment.

Hypothesis 7 shows that among the countries of Central Europe, such as the Czech Republic and Austria, the unemployment rate is low, the fluctuation is small, and the economic development is relatively stable. A stable economic environment provides the foundation for China's FDI. Among the Central European countries, countries such as Croatia and Serbia also have high unemployment rates. In the years of financial crisis, there were high national debts and high unemployment rates. In order to solve their own problems, these countries have responded to economic reforms. In this case, they have higher demand for direct investment in China. In order to attract investment, they adopt preferential measures including taxation policies which also can attract more direct investment from China.

It can be seen from Hypothesis 6 and 7 that most of the Central European countries along the OBOR route do not have a good investment environment and a stable economy. These factors have little impact on their investment compared to China's investment objectives. China's OBOR Initiative hopes that more countries will join in and establish a circle of friends, enhance friendly exchanges, mutual trust, mutual assistance, and jointly make the cake bigger. The Belt and Road Initiative is a long-term strategic plan. Although China has high risks in investing in these places and its economic interests are weak, it can support the development of local enterprises and stimulate local economic growth, which can greatly enhance China's international influence, improve China's authority.

Hypothesis 8 shows that China's FDI is negatively correlated with the level of development of emerging industries in Central European countries. This has a greater relationship with China's investment in the Central European region. Although the high-tech of the Central European countries continues to develop, the overall strength still has a large gap compared with countries such as Britain, France and Germany. Therefore, China's direct investment in Central Europe has a lower proportion of technology-seeking FDI, while market-seeking FDI has a higher proportion. China's

main investment areas in Central Europe are railways, terminals and other infrastructure. This is a labor-intensive industry that can solve local employment and enterprise development. Most of the countries in Central Europe have a low industrial structure and a large space for optimization. China's investment can bring its own technology to promote local economic development and industrial structure optimization. At the same time, investment in these areas can solve the problem of overcapacity in China and expand the market share of Chinese goods.

5.5 Qualitative Analysis of Other Motivation

China-US Economic Confrontation

In recent years, China has made great achievements in the economic field. However, China and the United States still have large gaps in the economic field. Specifically, it is manifested in the following aspects: 1 China's industrial level is low; 2 China has a large gap in the field of cutting-edge science and technology; 3 The US is still in the world's hegemony in the financial sector; 4 In the international economic order, the United States has a great dominance; 5 Most countries in the world rely heavily on the United States, making the "economic allies" in United States very large.

However, China also has its own competitive advantages: 1 China's industrial structure is relatively complete, low-end and high-end production systems are complete; 2 in the field of cutting-edge technology, although China has a gap with the United States, it is also in the forefront of the world; 3 in the formulation of the international economic order, China began to make its own voice.

China and the United States have a leading position in the world in terms of economic aggregate, foreign trade, foreign exchange, information technologies and consumption power. The rise of China has threatened the economic dominance of the United States. Therefore, in terms of the economy, there is both cooperation and confrontation between China and the United States. Rik Coolsaet also said in the interview (Coolsaet, 2013) that in world politics, there are two inherent relationships, conflict of interest and cooperation. These are inherent in world politics, especially in today's multipolar world order. As the authority of the United States in the international world is disintegrating, the current China-US relations are constantly complicated.

(1) The Protection of RMB

The deeper starting point of the OBOR policy is to increase the economic dependence of countries along the line on China, increase China's "economic allies" and expand China's influence in these countries.

It is very urgent for China to actively establish friendly relations with countries around the world. China's current domestic inflation is high, the RMB exchange rate is appreciating, and the development of foreign trade and domestic demand is decreasing (This is because the appreciating of RMB exchange rate in China has curbed its level of export, while the domestic economy has experienced a real estate bubble, and the domestic industrial restructuring has been slowing down). Therefore, if the United States hits the RMB it will have a serious impact on the Chinese economy. In 2016, the RMB joined the SDR. If the RMB is partially reserved by countries, these countries will become China's "economic allies." Once the US slams the RMB, it will cause the RMB assets of these countries to depreciate. These countries will participate in the China-US financial war. Among them, this can reduce China's economic risks. Therefore, China needs to accelerate the pace of the "Belt and Road", increase the output of industrial capital, and make more countries become its "economic allies" due to mutual socio-economic advantages of both partners. To this moment, China has to persuade the world that its strategic objectives are not merely political but also economically beneficial to FDI host countries.

For a long time, oil has been settled by the US dollar. The United States can control the dollar to depreciate and operate the oil index, artificially raise or lower the international oil price, and strategically suppress the economic development of major international competitors. China, the EU and other major oil importing countries, as well as Russia, Iran and other oil exporting countries are affected.

After the St. Petersburg meeting, Putin officially announced that countries can use the renminbi to settle Russia's oil and natural gas exports. Currently, Russia exports more than 10 billion USD of oil per year, but with Trump's sanctions against Russia, Russia's oil and gas exports have problems. In order to get rid of the difficulties, Russia quickly turned its attention to the Far East and supported countries to settle natural gas and oil in renminbi. The value of oil settled in renminbi rose rapidly. As Russia focuses on the Far East, the proportion of renminbi oil will reach higher level in the future.

While the United States imposed sanctions on Russian oil, it also exerted pressure on Iran. Iranian President Rohani publicly announced to give up the dollar system in an all-round way, all oil and gas can be settled in renminbi. As the number of renminbi buyers in the international market continues to increase, more countries will flood into Russia and Iran to adopt crude oil in the future, which is a fatal blow to the US dollar. Russia and Iran are the two countries with the largest oil production in the world. If the two countries completely abandon the US dollar, the biggest benefit is the renminbi. The sniper war between the two countries against the US dollar will also rapidly increase the international status of the renminbi.

(2) Internet +

At present, China's e-commerce and logistics system industries are highly independent and prosperous. The Chinese government advocates continuous cooperation with the countries along the OBOR in high-tech industries. The development of mobile Internet, Internet of Things, big data and other technologies have pushed the future capital to no longer use money but a data stream. However, the US world hegemony is based on the dollar, and the development of these technologies will hit the international influence of the dollar. On the one hand, the international status of the RMB has continued to rise, which has shaken the international status of the dollar. On the other hand, China's "Internet +" is weakening the hegemony of the US currency.

Whether in the currency, economic, or information fields, the United States has an unassailable position. For example, Wall Street controls the pricing power of world commodities and controls the world's financial institutions. Microsoft controls the computer system, Intel controls the computer CPU, Qualcomm controls the communication network, and Google controls the mobile phone system. Huawei, ZTE and other global communications equipment manufacturers have vigorously developed 5G networks. In Central Europe, Huawei's mobile phone sales have repeatedly surpassed iPhone. In 2019, the United States took measures to impose economic sanctions on Chinese communications companies such as Huawei and ZTE, which will undoubtedly cause certain blows and impacts on Chinese companies. It can also be seen that China and the United States are highly competitive in the fields of economy and high technology. Although Chinese companies occupy a global leading position in 5G communications, in other core areas, the United States still has important influence. This is also the direction in which China and the countries along the Belt and Road need to cooperate in the future.

(3) China's "Taiji" cooperation with Europe and Asia

Chinese people like to play Taiji, they would like to overcome the strong by applying soft methods, not by giving a heavy punch to KO opponents, the OBOR also reflect this idea. In the process of the rise of all the great powers in history, there has been a globalization movement around its rise. Globalization is not a process that runs from history to today, but each major country has its own process of globalization. Every globalization is driven by every rising empire, such as the globalization of trade in the British Empire. As a rising power, the OBOR is the initial stage of China's globalization. OBOR may be the best big country strategy China has ever proposed. Because it is a hedge against the US strategy.

The Indian Ocean is China's global exchange way of energy and raw materials, and China's dependence on the Indian Ocean is rising. The joint construction of the

Maritime Silk Road between China and Sri Lanka will better serve China's diplomatic strategic layout, promote economic cooperation among countries along the route, and establish a bilateral economic community. The US and Indian governments supported the Sri Lanka reactionaries to overthrow the Sri Lankan government which is friendly to China. The new government immediately stopped China's investment in the construction of the huge Colombo City, creating many troubles for China.

The OBOR is a counterattack of China to against the US eastward shift strategy. The United States exerts pressure on China through the influence of Asia-Pacific countries, and China further promotes economic cooperation in the western Eurasia. This approach is neither to avoid the United States nor to fear the United States, but to subtly resolve the pressure that the United States has brought from east to China. Given that China's maritime forces are still short-term, the focus of the OBOR should be placed on the Eurasian continent, especially with European countries, to promote globalization.

6 Conclusion

Through the previous research, the paper draws the following conclusions:

By the end of 2017, China's direct investment in Central European countries accounted for only 0.15% of China's total foreign direct investment stocks. For Central European countries, FDI from China is also very small, usually lower than that invested by Japan or South Korea. China and Central European countries have far geographical distance, which has hindered investment and cooperation between the two sides. At the same time, some Central European countries do not agree with China's political system and social ideology. In addition, before the policy of the OBOR in China, investment and trade between the two sides were very few. China's investment has been spreading from the neighboring countries and long-term strategic partners. The geographical position of China and Europe is relatively long, and there is not much cooperation with China for a long time. Therefore, the cooperation between China and CE countries is weak, and China directly Investment is still in its infancy. But this does not violate the principle of the OBOR. It is an important gateway for China to further enter the EU market. At the same time, as a relatively new market, Central Europe has great potential for development.

Chinese companies that have invested in CE are mainly state-owned enterprises, mainly involved in energy, electronic communications, infrastructure and other industrial sectors. Chinese government also needs to open up the Chinese market and remove investment barriers to CE countries.

From the perspective of investment feasibility, China has the conditions for direct investment in Central European countries. At the level of economic development, China

has a higher economic scale, openness and industrial structure than Central European countries. In terms of technology, China's R&D investment is higher than most CE countries. In terms of management experience, through years of foreign direct investment, China has competed and cooperated with multinational companies in the international and domestic markets and has more management experience.

these investment in CE countries can satisfy a variety of investment drivers. The economies of CE countries are relatively developed, and the market potential of consumer demand is huge. The investment in this area can satisfy its market-seeking motivation. Bulgaria, Poland and others have rich minerals and metal resources, China can meet the resource-seeking motivation for its investment; Austria, Czech Republic, Slovakia and other countries have advantages in the fields of steel, metal processing, machinery manufacturing, chemicals, automobiles, bioengineering and so on. China can meet its technology-seeking motives for its investments. These factors reflect to some extent the reasons for the investment in Central Europe.

However, compared with Western Europe, the United States and other countries, China and Europe have weaker scientific and technological strength, and the industrial structure is concentrated in labor-intensive industries, and efforts are being made to transfer to technology-intensive industries. The purpose of China's direct investment is not only to achieve China's industrial structure upgrade, to solve the problem of overcapacity, but also to expand the market, establish friendly relations with more Central European countries, enhance international status and enhance its international voice. Direct investment can promote local infrastructure construction and lay the foundation for long-term bilateral economic development.

The OBOR is a counterattack of China to against the US eastward shift strategy. Under the background of the constraints of the development of the southeast coast, China has actively opened the Eurasia market. China has carried out economic and trade cooperation with many countries in Central Asia and CEE to enhance its international influence. The Chinese government continues to raise the international status of the RMB and reduce the impact of US financial sanctions by establishing economic alliances with countries. The cutting-edge technology and technology field has always been the focus of the game. Chinese companies are at the forefront of the world in some respects, but the strength of the United States cannot be underestimated. In the face of US economic sanctions, Chinese companies need to continuously improve their own strength, and at the same time cooperate with the countries along the OBOR to achieve win-win results and promote the progress and development of the world.

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List of appendices

Appendix 1

appendix 1: types of advantages possessed by developing-country TNCs, by sources of advantage

Type of advantage	Firm-specific advantages	Advantages stemming from the home country environment	Advantages stemming from the development process or stage of development
Ownership and access	<p>Segment 1. Expertise and technology</p> <ol style="list-style-type: none"> 1. Appropriate and specialized expertise and technology; 2. Early adoption of new technologies; 3. Some advanced technology or expertise, stemming from sustained investment in R&D and other resources. 	<p>Segment 2. Access to resources and activities</p> <ol style="list-style-type: none"> 1. Primary sector/natural resources, sometimes monopolized by state-owned enterprises; 2. Clusters of knowledge and expertise; 3. Access to funds or alternative forms of financing; 4. Development of utilities and infrastructure. 	<p>Segment 3. Relative advantages</p> <p>Growth poles in a developing country might give temporary relative size and ownership advantages over other developing country firms at home and abroad.</p>
Products/services, production processes and value chain niches	<p>Segment 4. Production and service capabilities</p> <ol style="list-style-type: none"> 1. efficient production of components and products; 2. distribution and 	<p>Segment 5. Access to created assets</p> <p>Production clusters, including associated factor inputs.</p>	<p>Segment 6. Market niches</p> <ol style="list-style-type: none"> 1. Products and services adapted for developing country markets; 2. Cheap products.

	delivery capabilities.		
Networks and relationships	Segment 7. Business models 1. Development of networks to exploit advantages; 2. Stress on customer or supplier bases and relationships.	Segment 8. Kinship Diaspora	Segment 9. Intra-developing country relations Intergovernmental initiatives.
Organizational structure and business culture	Segment 10. Forms of governance 1. Family firms; 2. state-owned, collectives; 3. novel organizational architecture with greater use of networks.	Segment 11. Cultural affinity Cultural and historical associations with other countries.	Segment 12. Institutional affinity Business culture and structured, government-industry relations arising from parallel stages or processes of development.

Data source: UNCTAD, 2006, World Investment Report: "FDI from Developing and Transition Economics: implications for Development. "New York: United Nations Publication.

Appendix 2

According to the 1-digit commodity code classification in the International Trade Standards Classification (SITC), export commodities can be divided into nine parts. SITC0-4 is generally considered the resource-intensive product, SITC6+8 is considered the labor-intensive product, and SITC 5+7 is considered the capital and technology-intensive product. The more detail can be seen at appendix 2

1. SITC0 (food and live animals);
2. SITC1 (beverages and tobacco);
3. SITC2 (crude materials, inedible, except fuels);
4. SITC3 (mineral fuels lubricants and related materials);

5. SITC4 (animal and vegetable oils, fats and waxes);
6. SITC5 (chemicals and related products);
7. SITC6 (manufactured goods classified chiefly by material);
8. SITC7 (machinery and transportation equipment),
9. SITC8 (miscellaneous manufactured articles).