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## 主 論 文 の 要 旨

論文題目	The Impact of Outward Foreign Direct Investment on the Employment and Industrial Structure in Japan (日本の対外直接投資が国内の雇用と産業構造に及ぼす影響)
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## 論 文 内 容 の 要 旨

With the development of economic globalization, outward foreign direct investment (OFDI), as one of the most important methods of capital transfer between countries, has become the most significant engine to accelerate the increase of economic growth. OFDI is an important method to get resource and participate in the international division of labor. Also, it benefits to seek revenue from economic globalization. However, with the expansion of outward foreign direct investment, a fear peaked among researchers that outward FDI, which transferred production plants overseas, will cause the closure of domestic plants and decrease of export and domestic productivity of the home country. Consequently, it will result in the depression and unemployment problem in the home country, which is the so-called “Hollowing-out Effect,” especially in the manufacturing industry.

Japan is a traditional developed country which has a long history in outward foreign direct investment. Japan started foreign direct investment from the 1950s. After 70 years’ development, Japan has become one of the most important countries in global investment market. The development of OFDI affected Japan’s economy in many different ways. It contributed to solving the lack of production resource and steady industrialization of Japan. On the other hand, OFDI also leads to the industrial structure change of Japan’s economy by transferring capitals and industries to foreign countries. Since the 1960s, some economists put forward that OFDI would cause the “Hollowing-out” effect in Japan, which because the domestic production and employment would decrease because of the overseas transformation of manufacturing industries. Also, overseas production activities would substitute for the export of the parent country, which has a negative effect on manufacturing industries in the home country. Therefore, it is meaningful to make a research on the impact of Japan’s OFDI on the domestic economy, which are benefited for Japanese policymakers to promote Japan’s OFDI and domestic economy in the future. Also, the long history of Japan’s OFDI is a good experience for those new emerging investing countries to be used for reference to solve the similar problems in the expansion of OFDI.

China, as a new emerging investor in the global market, has developed very fast in recent years and become one of the most important countries in foreign direct investment. However, there appeared many problems in the process of outward foreign direct investment. The same worry as Japan is that outward FDI may cause “Hollowing-out effect” in the domestic economy of the home country. Considering the similar situation of Japan in the 1970-1990, the experience of Japan in outward FDI is good enlightenment for China.

This dissertation attempts to investigate the impact of outward foreign direct investment on Japan’s domestic economy and employment. Also, to investigate the industrial structure change of Japan with the expansion of OFDI. Then China could get some valuable enlightenment on outward foreign direct investment from Japan’s experience. The structure of this dissertation is as following:

Chapter 1. Introduction

Chapter 2. Literature review

Chapter 3. The History and Increase Determinants of Japan’s Outward Foreign Direct Investment Development

Chapter 4. The impact of outward foreign direct investment on production and employment in Japan’s manufacturing industries

Chapter 5. The Industrial Structure Change of Japan’s Economy

Chapter 6. Conclusion and policy recommendations

Chapter 1 introduces the research background and significance, research questions and objectives, research scheme, and organization of this dissertation. Chapter 2 reviews the traditional theories of foreign direct investment. Then reviews the relevant kinds of literatures about the impact of outward foreign direct investment on domestic economy and employment of the home countries and industrial structure change of the domestic economy. Chapter 3 makes an overview of the development history of Japan’s outward FDI and analyzes the reason why Japanese outward FDI increase in different stages. Chapter 4 utilizes the Input-Output analysis to investigate the impact of Japan’s outward foreign direct investment on domestic production and employment in the manufacturing industry. Chapter 5 quantitatively measures the degree of change in production composition of Japan and factors which had an impact on the change by utilizing the DPG (Deviation from Proportional Growth) analysis. Then measures the impact of industrial structure change on Japanese employment. Chapter 6 concludes this dissertation and put forward some useful policy recommendations for promoting Japan’s outward FDI and domestic economic growth. Also, it gives some recommendations for China according to Japan’s experience.

Chapter 3 divides the history of Japan’s foreign direct investment into five stages: the starting stage of 1951-1970, the steady growth stage of 1971-1980, the rapidly expanding stage of 1981-1990, the depression and recovery stage of 1991-2004 and the huge expansion stage from 2005 up to now. There are three surges in the development history of Japanese outward FDI. The first surge occurred in the middle of 1980s, which characterized by the great increase of Japanese outward FDI to the U.S. and European countries. The second surge is from 1993 to 1997, which

features that Japanese enterprises increase the investment to China and ASEAN countries. The third surge is from 2005. There are different reasons to cause the expansion of Japan's overseas investment in different stages. In 1980s, the main reason of the increase of Japanese outward FDI is to decrease the great trade surplus. In 1985, Japan accepted the Plaza Accord with the U.S., British, France and German because of huge trade surplus. This agreement caused great yen appreciation, which contributed to the decrease of the export and the increased of the overseas investment. After the collapse of Japanese bubble economy in 1990, Japanese enterprises tried to adjust the industrial structure to survive from the economic depression. They transferred production plants to China and ASEAN countries to decrease the production and sales cost. After 2000, the labor shortage in Japan and looking for new emerging markets are main reason for increasing Japanese outward FDI.

Chapter 4 uses the Input-Output analysis to investigate the impact of Japan's outward foreign direct investment (FDI) on domestic production and employment in the manufacturing industry. The overseas investment activities of Japanese multinational corporations cause the change of domestic production in Japan via the demand of Japan's capital. The change of the domestic production can be calculated by Leontief Import Endogenous Open Model. According to the model, we have supply-demand equivalent equation. Therefore, we can achieve Equilibrium Production Model to calculate the domestic production change of Japan. In order to investigate the impact of OFDI on employment, we multiply the domestic production change by Labor Coefficient (the necessary number of employees every unit of production need).

As a result, export promotion effect is positive, export substitution effect and import inverse effect is negative. Export substitution effect has the most negative impact than the other two so that the total effect of Japan's outward FDI has negative impact on domestic production and employment, which means that outward FDI caused the decrease of domestic production and employment in Japan's manufacturing industry. Among these manufacturing industries, the transportation equipment industry has the greatest negative impact. The unemployment in this industry is more than other industries because production plants transferred to foreign countries. From the trend of the result, we can know that the unemployment caused by foreign investment became serious from 2000, although it decreased in 2008 because of depression.

Also, after the comparison of 1990-1999 and 2000-2014, we can observe that the "hollowing-out" effect in Japan's manufacturing industries has actually become serious in recent decades with the development of Japan's overseas expansion. The unemployment problem cannot be neglected in the later stages of outward FDI. It is necessary for Japanese government to find other industries to absorb these unemployment workers caused by foreign investment, such as service industries. How to change the structure of economy to solve the "hollowing-out" problem is an important issue for Japan, considered its outward FDI is increasing continually.

Chapter 5 uses the DPG analysis to explain the growth pattern of Japan's economy from 1990-2015 and factors caused the structure change. Also, we compared the result with the analysis of 1914-1990 to observe the economic evolution of Japan in a long term. The DPG (Deviation from Proportional Growth) analysis is a main method to quantitatively measure the degree of economy

growth and structure change of industries. The deviation is the difference between actual growth and proportional growth which caused by the different growth speed of each industry. To analyze different factors of the structure change of production, the DPG analysis decomposes  $\Delta x$  into several parts based on the output equation: the deviation from the change of domestic final demand (consumption, investment and stocks), the deviation from the change of exports, the deviation from the change of the input coefficient and the deviation from the change of the import ratio. Then we can calculate the impact of industrial structure change on Japan's employment from the deviation of labor change.

The result of this chapter can be summarized as following:

- (1) Japan's economy characterized by the expansion of the service industry from 1990-2011. However, the leading sector shifted from the service industry to the construction and utility industry in the period 2011-2015, which mainly because of "The 3.11 earthquake of Japan" in 2011.
- (2) The main engine of Japan's economy shifted from consumption to investment and export. The import substitution effect is always negative, which implicates that the import is continuously decreasing in Japan.
- (3) Compared DPG decomposition of 1990-2015 with the period 1914-1990, the leading sector shifted from the heavy industry to the service industry after 1970s, which represents that Japan's economy transferred from manufacturing industry-oriented to the service industry-oriented economy, and it continued a long time until 2011.
- (4) The Other Services industry (including official business, education, research, medical, entertainment, catering and accommodation, and other services) has the most significant positive impact on Japan's employment in all three periods. The manufacturing industries have a negative impact on employment in Japan's industrial structure change. It indicates that the Other Services industry can absorb the most labor force which comes from manufacturing industries.

Nowadays, the situation of China's outward FDI is similar to that of Japan in the 1980s. Firstly, China and Japan are all developing outward FDI with rapid economic growth. Secondly, they are all under the pressure of currency appreciation, which promotes the outward FDI. Thirdly, the governments of the two countries all give preferential policies to encourage outward FDI. Fourthly, the same as Japan in the 1980s, China is facing more and more serious trade barriers which would impede the export of China. Therefore, it is meaningful for China to draw lessons from Japan's experience.