

# The Influence of International Direct Investment on Enterprise Performance

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**Abstract:** *In recent years, with the deepening of "One Belt And One Road" strategy, the scale of China's international direct investment is expanding day by day, but there is no unified conclusion on the impact of international direct investment on enterprise performance. This article during the period from 2014 to 2016 in the a-share listed companies of foreign direct investment as sample data, combined with the enterprise's financial performance and market performance, using the method of principal component analysis, business performance, then use tended to score matching (PSM), regression analysis and other methods to study the effect of international direct investment on enterprise performance. The results show that the performance of enterprises engaged in international direct investment increases after investment, and the improvement of performance has a certain time lag, with a lag period of one year. The heterogeneity of the enterprise test found that the information technology industry, the eastern region, the state-owned nature of the enterprise performance improvement is more obvious. Further research finds that the international direct investment expenditure of listed companies is significantly positively correlated with corporate performance, indicating that the greater the enterprise's international direct investment expenditure is, the more obvious the improvement of corporate performance will be. Therefore, China should continue to encourage the implementation of "going out" plan, but at the same time, it should pay attention to the formulation of foreign investment strategy, and select countries suitable for enterprises to make international direct investment, so that subsidiaries can better serve the global strategy of enterprises and promote the improvement of enterprise performance.*

**Keywords:** International direct investment; Enterprise performance; Principal component analysis; Propensity score matching

## 1. Introduction

China since the implementation of the strategy of "going out" in 2000, after the rapid development of international direct investment, in recent years, international direct investment event, according to the Ministry of Commerce to provide 2019 announcement, the foreign investment in 2019, the world's economic growth rate dropped to the lowest level since the international financial crisis, China's economy overall smooth operation, flow for \$136.91 billion, 2019 foreign direct investment fell 4.3% year on year, but still topped the world's second, accounting for 10.4% of the global share. By the end of 2019, China's 27,500 domestic investors had set up a total of 44,000 outbound direct investment enterprises in 188 countries and regions around the world. The total assets of overseas enterprises reached 7.2 trillion US dollars at the end of the year, and the cumulative net OFDI reached 21988.8 billion US dollars. The study of international direct investment has always been a hot topic in international economics. For China, its investment scale is very large no matter from the perspective of flow or stock. In this context, our concern is whether international direct investment can improve the performance of Chinese enterprises. Are there any differences in the performance of different companies? This research in China's a-share listed companies, for example, using principal component analysis, evaluation of enterprise performance from multiple dimensions, and then use tend to score matching and multiple linear regression method of the comprehensive test of international direct investment influence on enterprise performance, for Chinese enterprises to improve international direct investment and economic

benefits, more rationally expand overseas pertinent theoretical support and policy Suggestions are put forward.

International direct investment, also known as foreign direct investment, foreign direct investment, etc., the world investment report of international direct investment has made a definition: the inhabitants of a country (region) entity (foreign investor or the company) directly on the outside of the country (region) of another country enterprises (branches, foreign direct investment enterprises or foreign branch) to establish a long-term relationship, for lasting benefits, and to control them. Generally, 10% equity of foreign enterprises is the minimum standard for international direct investment. The existing literature on the impact of INTERNATIONAL direct investment on enterprise performance is mainly based on the following points: Some scholars believe that international direct investment can improve enterprise performance. Yang Ji (2019), Song Lin, Xie Wei (2019), Yan Zhang (2017) et al. used the PM-DID method to draw the conclusion that enterprises' outbound investment could significantly improve enterprise performance and productivity. Specifically, it promotes the improvement of total factor productivity and the optimization of capacity utilization rate. Naitate (2015) also Indian multinational companies, for example, to study the reverse knowledge transfer of emerging-market multinationals, found that Indian multinationals overseas merger and acquisition (m&a) activities make the enterprise to obtain the knowledge, narrowed the subsidiary knowledge gap with the developed market, raise the overall performance of multinational companies, Gazaniol and Peltrault of France (2013) using

propensity score matching method the foreign direct investment (fdi) performance of listed companies has carried on the empirical analysis, the conclusion is events effectively increase the foreign direct investment, the investment performance of French companies. Edamura et al. (2014) used the propensity score matching method to study the performance of Chinese enterprises' overseas MERGERS and acquisitions, and believed that many enterprises improved their productivity, intangible assets and sales status after mergers and acquisitions. Scholars also studied the influencing factors of international direct investment and enterprise performance from different perspectives, mainly from the perspective of the host country, including the host country's economic level, government governance, culture, institutional distance and other factors. Zhang jipeng, length jun, and huang jian (2020) found that increased geographical, cultural, institutional and economic distance reduced the performance of Chinese enterprises' direct investment in countries along the "One Belt And One Road" route. Ma Meng (2019) believed that investing in countries with a high level of economic development is more conducive to improving business performance of enterprises. Qi Lin (2019), Chen Cheng (2019), Zhu Yuan (2019) et al. found that enterprises are more inclined to invest in host countries with high economic freedom, low tax burden and high business efficiency, thus achieving higher performance. Some scholars believe that enterprises' international direct investment activities may not necessarily improve their domestic performance, or that the influence of enterprises' international direct investment is uncertain. Under the influence of various complex factors, enterprises' international direct investment activities may even have a negative impact on their corporate performance. In recent studies, Bertrand O and Betschinger M A(2012) also found that in the absence of internationalization experience and ownership advantages, mergers may not necessarily improve the profit margins of enterprises. Buckleyetal(2014) proposed that enterprises' characteristic resources (including access to new markets and cheap production equipment) and lack of investment experience would affect the performance effect brought by cross-border mergers. In previous international direct investment activities, general enterprises can explore the complementarity of resources and accumulate relevant experience in the utilization of resources, which will play a positive role in the subsequent merger activities of enterprises. On the contrary, if limited by information and system in domestic and foreign environment, enterprises are more likely to make mistakes in the process of merger without experience in cross-border merger and cannot gain the positive influence brought by merger. Bertrand Betschinger (2012) also found that mergers may cause agency problems, forming new integration costs and organizational management costs, and the overall performance impact brought by mergers is not clear. Especially in international mergers, enterprises in emerging markets cannot make good use of the resources and value obtained by mergers, leading to the loss of enterprise performance. Wang Guoshun and Hu Sha (2006), after analyzing the sample data of 329 listed manufacturing companies in China in 2004, drew the conclusion that ofDI

and performance were negatively correlated. To sum up, scholars' measurement standards of enterprise performance and international direct investment are not consistent, so the results of the research also show corresponding differences. Du Xiaojun (2010) used the event research method and the financial indicator method in this paper to conclude that the performance of Chinese enterprises' outbound investment was in a period of shock. Liu Yan (2011) mainly studied cross-border MERGERS and acquisitions. His research found that cross-border mergers and acquisitions can improve business performance in the short term, but once the time is extended to the long term, it will lead to a decline in business performance. MAO Na-wei (2020) found through research that the performance level of manufacturing enterprises in the first two to three years after completion of OFDI showed a V-shaped trend of first dropping and then rising. However, the performance level in the third year after completion of investment did not reach the level of the year before OFDI, indicating that the business performance of enterprises did not improve. The operation performance of greenfield investment is better than that of cross-border m&a. Dickerson(1997) collected panel data of UK listed companies for 18 years and also concluded that there was a negative relationship between cross-border M&A and corporate performance.

The above literatures show that there is no unified research conclusion on whether fdi can improve the performance of enterprises in the home country. Possible innovation in this paper, based on the existing literature, point has the following several aspects: first, increasing research articles of foreign direct investment in recent years, but in the research enterprise heterogeneity, most from the perspective of overseas subsidiaries, in this paper, from the Angle of the parent company, and by region and industry, ownership system classification, research the change of the enterprise comprehensive performance, which can better reflect different regions, different industries, different ownership of enterprises under the background of the comprehensive performance before and after the change in investment. In use, on the other hand, tend to score matching method research of foreign direct investment and enterprise performance, all the documents as a single measure business performance, this article chooses multiple indicators, using the method of principal component analysis, to get a comprehensive business performance indicators, the research of enterprise performance more representative, more overall reflect the influence of international direct investment to the enterprise, at the same time, the existing literature on the study of foreign investment on enterprise performance of the impact of the neglected the relationship between investment and enterprise performance, in this paper, the relationship between the two is verified by regression, and gives Suggestions for relevant enterprises.

## 2. Data and Model

### 2.1 Construction of comprehensive performance evaluation system for international direct investment enterprises

#### 2.1.1 Empirical test data sources and data description

Due to the non-listed company information opaque, this paper mainly by the shenzhen stock exchange and Shanghai stock exchange listed companies as samples in general, by reading the manual collection of listed companies from 2014 to 2016 for international direct investment of enterprises, and as of December 31, 2019, has never been to the international direct investment of enterprises, in order to make the result more objective and accurate, and based on the screening of the foreign investment samples also consider the following factors:

- 1) Remove companies that have been ST or \*ST between 2013 and 2019;
- 2) Exclude companies that went public in 2013 and after, and those that went public later than or equal to the time of international direct investment;
- 3) Remove related transactions, such as the merged enterprises under the same control, or the companies that have merged and increased capital;
- 4) The enterprises that have obtained the qualification for foreign investment, but have not actually invested in the year;
- 5) If the same company has an INTERNATIONAL direct investment event in a number of years, it shall be considered as an event to be studied in the first year, and it shall not be counted again in future years;
- 6) If the actual capital contribution is small and does not affect the business performance;
- 7) The financial industry has its own uniqueness. This paper excludes companies in the financial industry.

Main sources of financial data of entity enterprises:

- 1) Wind database developed by Shanghai Wind Information Technology Co., LTD.;
- 2) Relevant data published by China Securities Journal from 2001 to 2008;
- 3) Annual report 2013-2019 of sample enterprises;
- 4) Flush Finance database;
- 5) Website of the Ministry of Commerce of China

On this basis, after the collection of financial data, a preliminary screening was carried out to remove the missing

#### 2.1.3 Construction of comprehensive score

The principal component method was used to conduct factor analysis on 14 indicators of sample companies according to the year of investment, one year after investment, two years after investment and three years after investment, and then four comprehensive score functions were obtained according to the factor score and variance contribution rate. The specific scores are as follows:

Investment year:

$$Y_0 = 0.158 + 0.219 + 0.217 * X_{10} X_9 \text{ by } 8 + 0.194 +$$

key financial indicators (such as business income, total fixed assets, number of employees, etc.) of the enterprise sample; Delete the enterprise samples with unclear information such as the time of establishment, number of employees, ownership type and place of registration. In the data matching, the key words are mainly matched according to the enterprise name and year. After data selection and matching, the financial data of 7 years from 2013 to 2019 are finally obtained, involving a total of 630 international direct investment enterprises and 893 enterprises that have never been engaged in business before. The software used for this article includes Excel2018 and Stata15.

#### 2.1.2 Research methods and selection of performance indicators

Based on the existing research literature, it is found that there is no clear definition for the measurement of ofDI performance of enterprises. Through long-term active exploration, scholars at home and abroad have established the performance evaluation system of INTERNATIONAL DIRECT investment enterprises from various aspects. There are many ways to evaluate the performance of listed companies and some scholars adopt the method of single index to measure business performance, some choose multiple financial indicators to measure business performance (2018) sun margin, this paper argues that the comprehensive performance should include many aspects of the enterprise, especially for international direct investment enterprises, the international direct investment is a strategic measure, not only have an effect on the financial performance of the enterprise, also can produce certain effect on its market performance. Therefore, this paper refers to the performance evaluation system proposed by Xu Xinhua (2020). Starting from the financial performance and market performance of enterprises, 14 representative indicators are selected and principal component analysis and factor analysis are adopted to construct a comprehensive evaluation function to judge the comprehensive performance of listed companies. The specific steps are as follows: after the asset-liability ratio is normalized, all indicators are standardized, and all indicators are statistically processed by principal component analysis. A number of principal components are selected, and a comprehensive evaluation function is constructed by taking the variance contribution rate of each principal component as the sum of the weight and the score product of the principal component. The selected specific indicators are shown as follows:

$$0.22 * X_1 X_2 + 0.115 + 0.166 * X_{13} X_4 + 0.129 + 0.146 * X_5 X_7 + 0.112 + 0.02 * X_{11} X_{12} + 0.096 + 0.089 * X_6$$

One year after investment:

$$Y_1 = 0.097 * X_{10} X_9 \text{ by } 8 X_{10} + 0.0918 + 0.0898 + 0.096 * X_1 X_2 + 0.0819 + 0.0907 * X_3 X_4 + 0.0926 + 0.0969 * X_5 X_{13} X_{11} + 0.0931 * 0.0964 * 0.0626 + 0.0736 * X_6 X_{12} X_{14} + 0.037 + 0.017 * X_7$$

Two years after the investment:

$$Y_2 = 0.252 X_1 + X_2 X_3 + 0.179 + 0.225 * 0.254 * X_{11} +$$

$X_{14} X_{12} - 0.2 * 0.136 * 0.228 * X_9 X_{10} - 0.212 - 0.23 * * \text{by } 8 X_4 + 0.147 + 0.156 * * x 5 X_7 + 0.07 + 0.091 + 0.042 * X_6 * * X_{12}$

Three years after investment:

$Y_3 = 0.063 * X_2 X_3 + 0.074 + 0.093 * * X_{11} X_{12} + 0.097 + 0.103 * * X_9 + 0.095 * 10 + 0.095 * \text{by } 8 X_4 + 0.064 + 0.098 * * X_{12} + + 0.063 * 0.074 * X_{14} X_5 X_6 X_1 + + 0.028 * 0.074 * 0.0577 * X_7$

## 2.2 Empirical analysis of international direct investment on corporate performance

### 2.2.1 Measurement method and variable selection

#### (a) Propensity score matching method

To effectively identify the performance of international direct investment enterprises improve is by "self-selection effect" or "learning effect" caused by foreign direct investment, the paper adopts Heckman PSM proposed by (1997) "the facts" solution, basic steps of this method are as follows: first, the samples were divided into experimental group (with international direct investment enterprises) and control group (no international direct investment enterprises); Second, the PS values of each enterprise in the experimental group and the control group were obtained according to the Probit model, and the enterprises with the closest PS values in the experimental group and the control group were selected for matching. In fact, it is impossible for us to compare the performance changes of the same enterprise with "INTERNATIONAL direct investment" without "international direct investment". The propensity score matching method provides a solution to this problem, that is, the control group is set as enterprises without "INTERNATIONAL direct investment", and the enterprises in these enterprises are found to be as similar as possible to the enterprises in the experimental group except whether they are different from "international direct investment". This paper mainly studies the average treatment effect (ATT) of enterprise performance between experimental group and control group. Secondly, the Probit model was used to estimate the PS values, and the PS values were matched according to the degree of closeness between the experimental group and the control group. Third, the comprehensive performance difference between the experimental group and the control group was compared, so as to determine the causal relationship between international direct investment and the comprehensive performance of enterprises.

#### 2.1.2 Variable setting and data source

In this paper, the comprehensive score is used to measure the comprehensive performance of enterprises. The specific calculation method has been revealed above.

#### 2.1.3 Selection of matching variables

Using PSM method, variable, by setting the appropriate matching as experimental enterprises find the most similar to the control group is the key, the matching selection of variables and number will influence the results, the appropriate matching variable to make estimates more

accurate follow-up, variables are not conducive to match too much or too little, too much matching variable will be conducted to the enterprise is too harsh choice, result in the experimental group enterprises cannot match to the control group; The matching results obtained from too few matching variables are not accurate enough. According to existing literature (Jiang Guanhong and Jiang Dianchun, 2014; MAO Qilin and Xu Jiayun (2014); Mingxiu Nan, Yan Hongrong (2019); Cozzaetal (2015) etal.) and data availability. The setting of matching variables in this paper mainly takes into account the enterprise age, enterprise capital intensity, total assets of the enterprise, enterprise asset-liability ratio, and enterprise liquidity.

### 2.1.4 Basic descriptive statistics of samples

It can be seen from the data that the number of newly increased enterprises in 2015 and 2016 was basically flat compared with those in the previous year. According to the division of enterprise ownership, we divided the enterprises into private enterprises, state-owned enterprises, foreign-funded enterprises and others. During the sample period, private enterprises participated in the largest number of outbound investment, with a total of 422 enterprises, accounting for 70%, followed by state-owned enterprises with 172 enterprises, accounting for 27.3%. According to the region of the parent company, the enterprises are divided into the eastern region, the western region, the central region and the northeast region. In the sample period, the eastern region has the largest number of outbound investment enterprises (478, accounting for 75.6%), while the northeast region has the smallest number (only 20, accounting for 3.2%). According to industry division, since most of the sample enterprises are manufacturing and information technology, and the data of other industries are relatively scattered, this paper mainly considers manufacturing and information technology. During the sample period of manufacturing industry, the number of enterprises making international direct investment reached 400, accounting for 63.5%, followed by information technology industry, accounting for 10.5%.

### 2.2.2 Empirical results of the impact of international direct investment on corporate performance

#### (a) Matching effect

Taking the nearest neighbor matching method as an example to illustrate the matching effect, the sub-figures (1) and (2) in Figure 1 respectively show the companies with "international direct investment" (experimental group) and those without "international direct investment" (control Group) kernel density function before and after matching. It can be clearly seen from the figure that there is a significant difference in the probability distribution of the PS values of the two before the matching. After the matching is completed, the probability distributions of the PS values of the two sets of samples are very close, indicating that the characteristics of the two are very close.



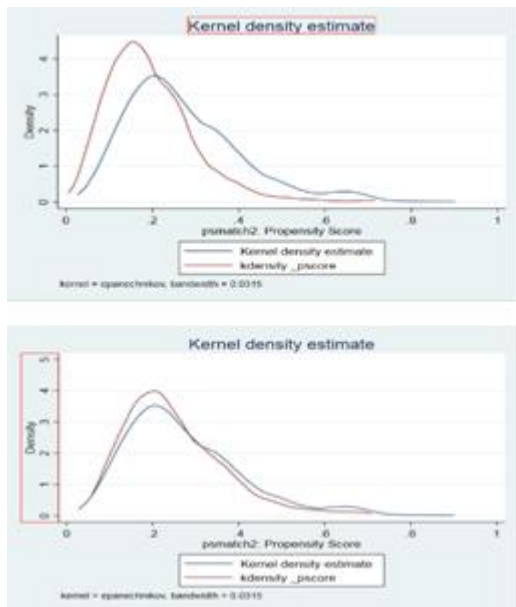


Figure 1: Before psm and after psm

Affected by the "self-selection effect" before matching, the

Before matching, under the influence of "self-selection effect", the difference between the experimental group and the control group was large, manifested as the mean deviation, the mean deviation was both large, the P value of t-test was small, and the null hypothesis that the sample mean of the two groups was the same was highly rejected. Deviation average plunged after matching, a value of 1.8, deviation of value is smaller, significant reduction, the differences between the two groups shows that after the match closer observation variable characteristics, thus can be thought of as experimental group and control group in addition to whether the international direct investment, other features are highly similar directions for international direct investment enterprises find the closest never samples for international direct investment of enterprises as the control group.

Table 1: Balancing Test

X	Ps R2	Mean Bias	MedBias	B	R
before	0.075	20.500	28.400	68.5*	1.010
after	0.000	1.8	1.9	4	1.060

2.2.3 Benchmark results

It can be seen from the table below that the performance of the company has not improved in the current period of international direct investment. This may be because the company is not familiar with overseas markets in the year when the company made international direct investment, because it understands foreign markets, establishes overseas branches, learns from and imitates the host country It will take some time for the advanced technology and management model to be fed back to the parent company. In addition, due to the low level of technology and management of domestic enterprises, the relative lack of talents, and the time lag in the absorption and feedback of

overseas technology and knowledge, the current performance has not been significantly improved.

Table 2: The influence of ofdi on y0

Index		Treated	Controlled	ATT	T
Neighbor (1:2)					
Y0	before	0.045	-0.012	0.057	1.270
	after	0.048	0.037	0.011	0.200
radius (1:2)					
Y0	before	0.045	-0.012	0.057	1.270
	after	0.049	0.039	0.010	0.200

International direct investment by a company is a strategic measure that has a long-term impact on corporate performance. Therefore, focusing on only one period cannot well reflect the impact of international direct investment on corporate performance. The following table shows that international investment is being made. In the next three years, the overall performance of the company has improved significantly. It is significant at the level of 1% one year after the investment, and the impact effect ATT is 15.9%. The impact effect is significant at the level of 1% two years after the investment, and the impact effect is increased to the highest level. It is 20.2%, which is significant at the level of 1% in the three years after the investment. The impact effect has decreased compared with the second period. The ATT is 15.2%. Overall, corporate performance has increased, but the impact effect will first increase and then decrease, and performance may increase The reasons are: First, there is a certain learning effect and competitive effect, that is, companies that make international direct investment may face a more intense overseas market, and international direct investment companies can learn more technology diffusion and knowledge spillover channels (Mingshan Li, XiaoHua Sun, 2020) in order to improve the technology and innovation capabilities of "going out" companies, which will lead to improved performance of home country companies; second, there is a certain scale economy effect, that is, companies set up overseas through foreign direct investment Subsidiary companies expand the scale of the enterprise, resulting in economies of scale, which in turn promotes the performance improvement of the home country enterprise (Herzer, 2008). The impact effect first increased and then decreased, indicating that in the long run, the role of international direct investment in improving corporate performance is weakening. The robustness test was performed by changing the matching method, and the result was still significant

2.3. The impact of international direct investment expenditure on corporate performance

International direct investment by enterprises is a strategic investment, which is to fully obtain resources, markets, technology, etc., so as to create more value for the parent company. Relatively speaking, the more a company's international direct investment expenditure, the more abundant resources and technologies it can obtain, and the better the company's performance improvement effect. Through propensity score matching, we can conclude that

foreign direct investment can improve corporate performance. However, foreign investment expenditures of different companies vary greatly, and their capital use efficiency is also different. Will investment expenditures have an impact on corporate performance? In order to accurately measure the impact of investment expenditures on performance, this section is based on the above and selects the annual report for publication Companies with foreign investment amounts are taken as samples to explore the impact of investment expenditure on corporate performance through linear regression.

**2.3.1 Variable definition**

**(a) Interpreted variables**

The overall performance of the enterprise, you can learn from the previous article

**(b) Explaining variables**

International direct investment expenditure. Since no scholar has done a similar quantitative analysis, this article believes that international direct investment activities belong to the asset category of enterprises, and the ratio of the amount of international direct investment to the total assets reflects the importance of enterprises to international direct investment activities. Therefore, this article uses the ratio of the amount of international direct investment to the total assets to measure the expenditures of enterprises' international direct investment activities.

**(c) Control variables**

There are many factors that affect international direct investment. This chapter draws on the previous article and uses several factors such as corporate age, capital intensity, corporate size, asset-liability ratio, and corporate liquidity as control variables.

**2.3.2 Model construction**

This paper uses the linear regression method to explore the relationship between international direct investment and corporate performance. From the above, we can see that the impact of international direct investment on corporate performance has a certain lag. Therefore, this chapter is consistent with the above and studies the impact of three lags.

The current regression model is as follows:

$$Y_{i,t} = \alpha_0 + \beta_1 ofdi_{i,t} + \beta_2 debt_{i,t} + \beta_3 manage_{i,t} + \beta_4 finance_{i,t} + \beta_5 LK_{i,t} + \beta_6 age_{i,t} + \sum Industry + \sum Nature + \sum region + \epsilon$$

The one-period lagging regression model is as follows:

$$Y_{i,t} = \alpha_0 + \beta_1 ofdi_{i,t-1} + \beta_2 debt_{i,t-1} + \beta_3 manage_{i,t-1} + \beta_4 finance_{i,t-1} + \beta_5 LK_{i,t-1} + \beta_6 age_{i,t-1} + \sum Industry + \sum Nature + \sum region + \epsilon$$

Two-period lag, three-period lag, the same can be obtained, so I won't repeat it here.

Among them,  $Y_t$  represents the current comprehensive performance,  $ofdi_{i,t}$  represents the current international direct investment expenditure/total assets;  $age_t$  represents the current corporate age of the company;  $manage_t$

represents the natural logarithm of the current management cost of the company;  $finance_t$  represents the current company Liquidity;  $lk_t$  represents the natural logarithm of the capital intensity of the current period;  $ofdi_{t-1}$  represents the international direct investment expenditure/total assets of one period lagging;  $age_{t-1}$  represents the age of the enterprise lagging one period;  $manage_{t-1}$  represents the enterprise The natural logarithm of the management cost of the lagging period;  $lk_{t-1}$  represents the natural logarithm of the capital intensity of the lagging period;  $finance_{t-1}$  represents the liquidity of the enterprise in the lagging period.

**2.3.3 Empirical analysis**

**Table 4: Descriptive Statistic**

Variable	n	mean	min	max
Y0	427	.001	-1.78	2.359
Y1	427	.021	-1.583	3.274
Y2	427	.01	-4.853	2.689
Y3	427	.017	-1.445	2.696
ofdi	427	.634	.032	6.425
lk	427	5.426	2.902	7.753
debt	427	39.339	2.46	85.17
age	427	16.211	6	34
manage	427	4.878	4.017	6.995
finance	427	.323	.001	1.454

From the descriptive statistics of various variables, it can be seen that the international direct investment expenditures of enterprises are very different. The minimum value is 0.032 and the maximum value is 6.425, which shows that different enterprises attach importance to international direct investment differently, and the comprehensive performance scores of enterprises are also different. Negative, but the overall distribution is relatively stable. The capital intensity reflects the amount of fixed assets per capita. The average value of the capital intensity of the sample enterprises is 5.42 after the natural logarithm. The maximum asset-liability ratio is 85.17 and the minimum is 2.46, indicating the debt service of different companies Ability varies greatly. After the management cost goes to the natural logarithm, it becomes stable, and it is with research. The maximum value of corporate capital liquidity is 1.454 and the minimum value is 0.001, indicating that different companies have significantly different cash management.

**Table 5: Regression result**

Variable	Y0	Y1	Y2	Y3
ofdi	0.284***	0.338***	0.294***	0.250***
	(7.91)	(8.44)	(6.59)	(6.51)
lk	-0.146***	-0.097**	-0.018	-0.154***
	(-3.65)	(-2.17)	(-0.37)	(-3.59)
Debt	-0.010***	-0.009***	-0.009***	-0.006***
	(-10.07)	(-7.76)	(-6.95)	(-5.33)
Manage	-0.231***	-0.188***	-0.111	-0.235***
	(-3.72)	(-2.70)	(-1.44)	(-3.53)
Finance	-0.319***	-0.219***	-0.161*	-0.395***
	(-4.34)	(-2.67)	(-1.76)	(-5.01)

Age	-0.002 (-0.55)	0.001 -0.29	0.005 -1.19	-0.001 (-0.17)
industry	yes	yes	yes	yes
year	yes	yes	yes	yes
district	yes	yes	yes	yes
N	427	427	427	427
R <sup>2</sup>	0.405	0.325	0.232	0.278

It can be seen from the above table that corporate investment expenditure and comprehensive performance are positively correlated at the 1% significance level, indicating that the greater the international direct investment expenditure, the higher the overall performance of the company, and the impact of international direct investment expenditure on performance has a long-term nature. Both the current investment period and the three lagging periods are significant. Among other control variables, the asset-liability ratio, corporate liquidity and comprehensive performance are significantly negatively correlated. This is because the higher the capital intensity, the higher the corporate cost of capital and the greater the risk. ; The lower the liquidity, the higher the income risk of the enterprise, and the more likely to have bad debts; the less cash that can be used to meet daily business expenses, the less conducive to the operation of the enterprise; the negative correlation between management expenses and enterprise performance, the higher the management expenses, The lower the corporate profit, the worse the profitability. There is no obvious correlation between company age and company performance.

### 3. Conclusions and recommendations

The main purpose of companies making international direct investment is to improve corporate performance, and the empirical research on whether international direct investment improves corporate performance has not reached a consistent conclusion. This article takes Chinese listed companies as an example to reveal whether international direct investment improves corporate performance. Through the previous research, this article draws the following conclusions: On the one hand, international direct investment can promote the improvement of corporate performance, and there is a lag period, which is one year. On the other hand, companies of different natures have significantly different changes in their overall performance after making international direct investment. Among them, the performance of state-owned enterprises in the eastern region and the information technology industry has improved significantly. Furthermore, there is a significant positive correlation between international direct investment expenditure and performance improvement, indicating that companies can improve their overall performance through higher strategic investment.

Based on the above conclusions, this article proposes the following suggestions. On the one hand, the government should continue to optimize the investment environment and strengthen its guiding and supporting role. Although China's international direct investment process is relatively short

compared with developed countries, and the experience of international direct investment is relatively insufficient, in recent years, the main body of China's international direct investment has shown a diversified trend, and the number of private enterprises participating in international direct investment has been increasing. Therefore, the government needs to strengthen policy support for the international direct investment of private enterprises, give more information guides and tax incentives to non-state-owned enterprises, so that non-state-owned enterprises can seize the opportunity of foreign direct investment, improve their investment capabilities, and promote the improvement of the overall performance of non-state-owned enterprises. At the same time, it is necessary to vigorously support enterprises in the central and western regions. Due to lack of economic advantages and insufficient resource utilization capacity in these regions, the performance improvement of foreign investment enterprises is far inferior to that of the eastern region. Therefore, the government must take into account the international direct investment activities in developed and undeveloped regions, and , The manufacturing industry should also be given more attention. On the other hand, when companies make strategic investments, they should formulate a clear development strategy in advance, closely integrate their own resources, technology and industry characteristics, fully understand the host country, and carefully consider Based on the current economic scale, future development goals and the market situation of the host country around the world, we can formulate a reasonable investment plan to maximize the use of resources and advantages brought by international direct investment, so as to better improve our own performance and avoid blind investment ,a waste of resource.

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