

Analysis and Mechanism Research on The Effect of Foreign Capital Withdrawal on Chinese Enterprise Environment

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Abstract: In recent years, problems such as the "exodus of foreign investment" and the decoupling of China and the United States have been widely reported. What impact will the "withdrawal of foreign investment" have on the environmental performance of Chinese companies? On the basis of analyzing the environmental performance of enterprises with foreign investment, it is of great practical significance to study this problem for the green development of Chinese economy and high quality investment. This paper expounds the influence of foreign investment withdrawal on pollution emission of Chinese enterprises from multiple perspectives, and explores the mechanism of foreign investment withdrawal on pollution emission of enterprises through theoretical analysis. The final conclusion is that foreign enterprises bring advanced technology and experience to local enterprises, and their withdrawal will aggravate pollution and cause negative environmental impact. This paper also provides feasible suggestions for the government to formulate environmental protection policies in response to the withdrawal of foreign investment.

Keywords: Foreign investment withdrawal, Environmental effects, Influence mechanisms, Pollution aura.

1. Introduction

Since the COVID-19 pandemic, global cross-border direct investment has dropped sharply, and it is no coincidence that the global economy has weakened due to the multiple impacts of the US trade protectionism and the "reindustrialization" strategy of developed countries. When domestic FDI is relatively saturated and production costs expand, foreign-funded enterprises begin to adjust their development strategies and change the regional pattern of investment. The withdrawal of foreign capital will inevitably take away production technologies and methods that are different from those of domestic enterprises. For example, some foreign enterprises will use environmentally friendly pollution discharge technologies when they enter the country. The spillover of their technologies will improve the environmental conditions, and their withdrawal will correspondingly aggravate pollution.

In view of whether transnational corporations cause environmental pollution to host countries, foreign scholars have put forward two major arguments -- "pollution paradise" and "pollution halo" hypothesis. The former believes that if the environmental regulation of the host country is relatively loose, the investment of the developed country in the polluting industry of the developing country will transfer the pollution to the developing country and aggravate the environmental pollution of the host country. The latter believes that transnational corporations have already possessed advanced pollution treatment technologies. When foreign investors invest abroad, their advanced production and pollutant discharge technologies will also spread to the host country, and the spillover effect of technology will improve the production process of the host country, improve the utilization rate of resources, and thus improve the environmental quality of the host country. That is, the latter thinks that the withdrawal of foreign capital will aggravate the environmental pollution of enterprises in the host country.

More and more domestic scholars choose to study the relationship between foreign investment and enterprise environmental pollution from the perspective of micro enterprises. By studying the research results of domestic scholars, we can find that the conclusions of the environmental spillover effects of foreign investment on Chinese enterprises are generally the same, and the impacts of FDI on domestic environment tend to be "halo effect".

In this paper, enterprises with foreign investment withdrawal in recent years are selected as the research object, and the difference of environmental impact between enterprises with foreign investment withdrawal and enterprises without foreign investment withdrawal is analyzed in multiple dimensions, as well as the mechanism of impact generation, so as to explore the correlation between foreign investment withdrawal and pollution emission of Chinese enterprises, and provide environmental governance policy suggestions for the government.

2. Comparison of Environmental Effect Between Foreign Enterprise and Local Enterprise

In general, Chinese foreign-funded enterprises have better environmental performance than Chinese local enterprises. In order to understand the internal reasons, we must compare and analyze the relevant data between Chinese foreign enterprises and Chinese local enterprises from many angles.

2.1. Overall Level

From the overall level, with soot and COD as the indicators of pollution classification, relevant studies show that the average pollution emission intensity of foreign-funded enterprises is lower than that of local enterprises in terms of both soot and COD, depending on their advanced technology and emission mode.

2.2. Different Levels of Origin

According to the comparison of foreign-funded enterprises from different sources, foreign-funded enterprises from different places have different environmental pollution effects. According to relevant studies, the main sources of foreign investment in China are divided into two categories: one is foreign investment from Hong Kong, Macao and Taiwan, and the other is foreign investment from developed countries. Due to the special geographical advantages of Hong Kong, Macao and Taiwan, the main types of foreign investment are mainly production, manufacturing, processing and other fields with high pollution. Foreign investment from developed countries, with its advanced production technology and management mode, makes the intensity of emission pollution relatively low.

2.3. Different Pollution Intensity Industry Level

In addition to the above comparison methods, comparing different pollution-intensive industries is also a way to prove that foreign enterprises have better environmental effects. Pollution-intensive industries are classified as polluting if their capital intensity is above average, and clean if not. There is no doubt that the emissions of soot and COD in polluting industries are higher than those in clean industries, while the emission intensity of foreign-funded enterprises in the same industries is lower than that of local enterprises.

2.4. Different Regulatory Industry Levels

Finally, different environmental regulation industries reflect different environmental effects. The so-called classification of different environmental control industries actually comes from the Standard Catalogue of Cleaner Production formulated by the Ministry of Ecology and Environment of China, which makes a detailed and clear classification of the relevant production activities of enterprises: industries are classified into those subject to environmental control and those not subject to environmental control. According to this classification, combined with the specific research results, it can be seen that the pollutants discharged by foreign-funded enterprises are lower than those of local Chinese enterprises in both the industries subject to environmental control and the industries not subject to environmental control. On the other hand, in terms of soot and chemical oxygen demand, the emission intensity of foreign-funded enterprises in industries not subject to environmental regulation is lower than that of domestic enterprises.

Combining the above four aspects, it can be concluded that Chinese foreign-funded enterprises have better environmental performance than Chinese local enterprises, and the pollution halo effect can be realized in China.

3. The Impact of Foreign Investment Withdrawal on The Environmental Effect of Chinese Enterprises

With the continuous improvement of the level of social development, China has always adhered to the basic concept of "Lucian waters and green mountains are invaluable assets". However, as the withdrawal of foreign capital is increasingly prominent, it has a serious negative impact on the environmental effect of Chinese enterprises, which is reflected in the decline of enterprise environmental performance and the rise of environmental governance costs.

3.1. The Withdrawal of Foreign Capital Seriously Affects the Environmental Performance of Enterprises

The environment-friendly technologies adopted by foreign-funded enterprises when they enter the Chinese market improve the environmental conditions, while the withdrawal of foreign capital correspondingly increases the pollution level. Therefore, the withdrawal of foreign capital is negatively correlated with the environmental performance of Chinese enterprises. According to the data of sulfur dioxide emission intensity and chemical oxygen demand emission intensity of divestment enterprises and non-divestment enterprises published in the industrial enterprise database and industrial enterprise pollution database from 1998 to 2013, the results show that the pollution emission intensity of divestment enterprises is much higher than that of non-divestment enterprises. It can be concluded that the withdrawal of foreign capital has a serious negative impact on the environmental performance of Chinese enterprises. At the same time, the existing domestic research conclusions also show that the withdrawal of foreign capital has a negative impact on the environmental performance of enterprises. For example, Lin Liguang (2014) used the emission data of 461 supervised enterprises provided by the Environmental Protection Bureau to find that foreign-funded enterprises discharged less water and gas pollutants than domestic enterprises. The negative effects of foreign investment withdrawal on Chinese enterprises' environment are mainly reflected in the aspects of technology level, resource utilization and consumption, which will be discussed in detail in the next section.

3.2. The Withdrawal of Foreign Investment Increases the Cost of Environmental Governance

While the "exodus of foreign investment" has a negative impact on the environmental performance of Chinese enterprises, the rising cost of environmental governance cannot be underestimated. In 1996, The State Council approved the Report on the Pilot Work of Sulfur Dioxide Emission Charge, and in 2007, The State Council issued the Comprehensive Work Plan for Energy Conservation and Emission Reduction, which clearly pointed out that the sulfur dioxide emission charge would be raised to 1.26 yuan per kilogram in three years. In 2015, all provinces and cities in China implemented this policy. Based on the comprehensive analysis of this policy and the emission data of divested enterprises and non-divested enterprises, the results show that the withdrawal of foreign direct investment will cause the decline of enterprises' environmental performance and seriously increase the cost of environmental governance, and the profit-driven capital will lead to the excessive pursuit of benefit maximization and neglect of environmental governance problems, which will inversely aggravate the emission intensity of divested enterprises.

4. Influence Mechanism Analysis

The withdrawal of foreign capital has produced multiple impacts on the environmental effect of Chinese enterprises. Combining with the research results of domestic and foreign scholars, this paper will decompose the impact mechanism of the withdrawal of foreign capital on the environmental effect

of enterprises from three aspects: technical effect, scale effect and structure effect.

4.1. Technical Effect

Foreign capital has more advanced production technology and environmental treatment technology, advanced production technology can improve the utilization rate of resources and release less pollution, advanced environmental treatment technology can reduce or eliminate the pollution produced by enterprises at the end of production. The withdrawal of foreign investment will make it harder for domestic enterprises to access advanced production technology and environmental governance technology, which will have a negative impact on technological progress. Specifically, the withdrawal of foreign investment will bring cleaner technologies and more advanced equipment out of China, making Chinese enterprises less susceptible to technology spillover and technology transfer. After the withdrawal of foreign capital, enterprises can improve their production level and environmental governance level through technological innovation, but its effect is much less than that before the loss of foreign technology spillover and technology transfer. Secondly, the withdrawal of foreign capital will weaken the competition in the domestic technology market to some extent, resulting in a lack of motivation for enterprises to improve production efficiency and resource utilization. Some backward enterprises with low productivity, high pollution and little innovation will survive in the market for a longer time and reduce the overall domestic technology level. In addition, higher level of production technology and management methods owned by foreign investment will bring a certain demonstration effect to Chinese enterprises, which will make our enterprises to improve production capacity and reduce pollution in the power of sufficient, clear direction. And this demonstration effect will be lost after foreign investment withdrawal.

4.2. Scale Effect

First of all, the withdrawal of foreign capital from China will reduce the scale and number of Chinese enterprises, and the reduction of the scale and number of enterprises in the production chain will weaken the agglomeration effect formed before the withdrawal of foreign capital, resulting in the increase of enterprise production costs and environmental regulation costs. The cost of centralized treatment of pollutants from production increases and the environmental effect weakens. Secondly, the reduction in the scale or number of enterprises caused by the withdrawal of foreign capital will reduce the employment opportunities in the country, thus reducing the per capita income level, and people's requirements for environmental quality will be relatively reduced when material conditions are difficult to meet. From this point of view, the withdrawal of foreign capital will have a negative impact on the environmental effect of enterprises. Finally, the withdrawal of foreign capital will take away some of the economies of scale, resulting in lower production and higher costs, and thus lower corporate profits. The reduction of corporate income enables enterprises to spend less money on environmental regulation and pollution control.

4.3. Structural Effect

In terms of industrial structure, the degree of technology intensity and capital intensity of foreign enterprises is generally high, while our country is mostly labor intensive

and resource intensive enterprises. On the whole, the enterprises in our country are mainly the secondary industry, which discharge more pollution. Foreign enterprises, on the other hand, are mostly tertiary industries, which consume less energy and pollute less. The withdrawal of foreign capital will reduce the proportion of the tertiary industry, reduce the overall technology-intensive level of Chinese enterprises, change the industrial structure, and increase the level of pollution emission. From the market competition aspect, the technology and management level of foreign capital enterprises have more advantages than Chinese enterprises, and the foreign capital entry will bring greater competition to domestic market. The principle of "survival of the fittest" will force enterprises to continuously improve their technological level, and the industrial structure will be rapidly upgraded in this competition. The withdrawal of foreign capital will have the opposite effect, weakening the impetus of enterprise innovation, slowing down the speed of industrial structure upgrading, and negatively affecting the environmental effect of enterprises.

5. Policy Suggestion

5.1. Improve Access to Foreign Investment and Deepen Opening-up

For our country, FDI is still one of the important ways of financing and developing capital of local enterprises. Local governments should attach importance to the local absorption of foreign investment, increase the efforts to introduce foreign enterprises, and establish and improve the relevant foreign investment service system and related policies, accelerate the pace of foreign investment into the system, to give foreign investment into a more optimized environment. In addition, when the foreign investment into the local government must select, introduce more clean foreign enterprises, not all accept. Local governments should further expand the opening to the outside world, improve the efficiency of resource replacement, strengthen the reform pilot of free trade zones, appropriate lending capital account, in order to attract foreign investment.

5.2. Enhancing the Positive Effects of Environmental Regulation

The government should maximize the regulatory effect of environmental regulation on environmental pollution and the positive effect on the coordinated development of two-way FDI, and must adhere to the principle of sustainability and coordinated development of existing environmental policies. At the same time, the application of high-tech in the implementation of environmental regulations should be increased, and policy subsidies or other rewards should be given to FDI enterprises that contribute to green environmental innovation, so as to stimulate more FDI enterprises to participate in green innovation. In addition, the government should also strengthen the control and treatment of pollution emissions and adjust the structure of investment in environmental protection.

5.3. Give Government Support to Foreign-capital Enterprises

Under the situation of economic industrial structure adjustment, it has caused some foreign enterprises with insufficient innovation ability, low productivity and poor management strength to withdraw from our market, which is in line with the purpose of optimizing foreign enterprises. In

the new round of industrial structure adjustment, some labor-intensive and pollution-type enterprises may be at the disadvantage in the competition, and our government can guide such enterprises. On the contrary, some capital-intensive clean enterprises with strong operation capacity are at an advantage in the competition. The Chinese government should strive to seize such enterprises, create a good business environment for foreign investment and reduce the resistance.

6. Conclusion

This paper studies the environmental impact of the withdrawal of foreign capital on the host country. By comparing the environmental impact of foreign capital enterprises and local enterprises, we find that on the whole, foreign capital enterprises have more advanced technology and emission measures, and the pollution of foreign capital enterprises is lower than that of the enterprises in this figure. Therefore, the entry of foreign capital not only does not cause further environmental pollution, but also has a positive impact on the environment due to the cleaner production mode of foreign capital enterprises. But the current withdrawal of foreign capital can aggravate environmental pollution, which has adverse effect on our environment. Based on the research results of this paper, we also put forward three policy suggestions, hoping that China can optimize the absorption of foreign investment, introduce more clean enterprises, and improve the phenomenon of environmental pollution. At the same time of attracting foreign capital, learning from foreign enterprise experience, innovating the relevant clean

technology of Chinese local enterprises, improving emission means, the internal and external combination of further realize environmental control in our country, improve environmental performance, adhere to the environmental policy of sustainable and coordinated development.

Acknowledgment

2023 College Students' Innovation and Entrepreneurship Training Program project "Empirical Analysis and Mechanism Research on the Impact of Foreign Investment Withdrawal on the Environmental Effect of Chinese Enterprises" (202310421113).

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