

RESEARCH ON THE IMPACT OF ENVIRONMENTAL INFORMATION DISCLOSURE ON FOREIGN DIRECT INVESTMENT BASED ON THE “NEW NORMAL” IN CHINA

Investigación sobre el impacto de la divulgación de información ambiental de la inversión extranjera directa con base en la "nueva normalidad" de China

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ABSTRACT

In May 2014, China mentioned the concept of the “new normal” for the first time. The “new normal” economy promotes growth through development, replacing GDP growth with the all-round development of society and attaching greater importance to the sustainable development of society. China is a large recipient of foreign direct investment (FDI). Under the background of the “new normal”, it is worth exploring the impact of increased environmental supervision in China on FDI. This paper introduces the Pollution Information Transparency Index, which has been published in China since 2008, to quantify environmental information disclosure. The study also collects data about the Pollution Information Transparency Index and the FDI of all provinces and cities in China from 2014 to 2018. Finally, a regression analysis and a difference-in-difference model are constructed to analyze the impact of environmental information disclosure on FDI. The results show that, under the “new normal” economy, highly-disclosed environmental information has a significant impact on FDI inflow in China. The impact is different in terms of population density, investment in pollution control, and GDP in different regions. This paper provides new ideas for environmental governance and the further utilization of foreign investment under the “new normal”.

Palabras clave: divulgación de información Ambiental, inversión extranjera directa (IED), modelo de diferencias en diferencias

RESUMEN

En mayo de 2014, China mencionó por primera vez el concepto de la "nueva normalidad". La "nueva economía normal" promueve el crecimiento mediante el desarrollo, sustituyendo el crecimiento del PIB por el desarrollo integral de la sociedad y atribuyendo mayor importancia al desarrollo sostenible de la sociedad. China es un gran receptor de inversión extranjera directa (IED). En el contexto de la "nueva normalidad",

vale la pena explorar el impacto de una mayor supervisión ambiental en China sobre la IED. Este artículo presenta el Índice de Transparencia de la Información sobre Contaminación, publicado en China desde 2008, para cuantificar la divulgación de información ambiental. El estudio también recopila datos sobre el Índice de Transparencia de la Información sobre Contaminación y la IED de todas las provincias y ciudades de China de 2014 a 2018. Por último, se elabora un análisis de regresión y un modelo de diferencia en la diferencia para analizar el impacto de la divulgación de información ambiental en la IED. Los resultados muestran que, en el marco de la "nueva economía normal", la información ambiental muy divulgada tiene un impacto significativo en la entrada de IED en China. El impacto es diferente en términos de densidad de población, inversión en el control de la contaminación y PIB en diferentes regiones. Este documento proporciona nuevas ideas para la gobernanza ambiental y la utilización ulterior de la inversión extranjera en el marco de la "nueva normalidad".

INTRODUCTION

In the 40 years since China's reform and opening, foreign direct investment (FDI) has increased significantly, from \$2.866 billion in 1984 to \$144.37 billion in 2020. In 2014, for the first time, China surpassed the United States and became the world's largest FDI recipient. Also in 2014, General Secretary Xi Jinping proposed the concept of a "new normal". "New" means different from the past, and "normal" means relatively stable. The central government assesses the characteristics of the current Chinese economy by using the "new normal" and raises the concept to a strategic height. Clearly, the central government has a deeper understanding of the periodic changes in the current economic growth in China. The government is also having a directional and decisive influence on the economy by choosing macro policies and transforming and upgrading industries and enterprises. Besides, one indisputable fact is that the potential growth rate will decline for some time to come. Economic growth potential is affected by numerous factors, such as the working-age population, environmental governance costs, consumer preferences, the proportion of private capital in the economy and FDI. With declining labor supply, rising environmental governance costs, the inclination toward the consumption of service goods, and caution in FDI, China's potential for economic growth has declined. Correspondingly, GDP growth will also decline.

As can be seen, FDI has played an important role in filling the capital turnover gap, introducing technology, and promoting economic growth. This is of great significance for financial deepening, domestic investment, and cultivating market potential. As one of the important FDI recipients in the world, clarifying the relevant factors that affect China's FDI inflows plays an important and guiding role

in social and economic development in the context of the "new normal". Scholars at home and abroad have studied FDI inflow volatility from the perspective of economic growth (Laura et al. 2004), foreign exchange levels (Blonigen 1997), financial factors (Laura et al. 2004), urban competition (Head and Ries 1996), institutional factors (Glass and Saggi 2002), market capabilities (Keith and Thierry 2004), business entry (David and Richard 2007), tax environment (Andreas and Ian 1999), profits pursuit (Sunghoon 2014), geographic environment (Cheng and Kwan 2000), intellectual property (Ye et al 2019, Ghosh and Yamarik 2019, Zhang et al 2016), and infrastructure (Cheng and Kwan 2000). These studies also analyze the influencing factors and the logical mechanism of location selection and structural adjustment caused by FDI inflow volatility. However, as an important factor influencing sustainable economic development, environmental pollution will inevitably restrict the normal FDI inflows, and impose different restrictions on FDI inflows in the manufacturing and service industries (Scott et al 2017). The degree of environmental information disclosure will also cause fluctuations in FDI inflows.

By the end of 2018, more than 90 countries and regions had formulated and implemented relevant environmental policies and regulations. These areas have gradually established an open system for environmental information supervision. For example, the US government established a public information system in 1986, reducing emissions of hundreds of pollutants by 45.5 % in 10 years. In 1995, an eco-management and audit system was promulgated in the European Union. This system, which was originally applied in the production field, was also applied in the service industry. To improve the environmental management performance, many parliaments have continued to reduce the negative

environmental impact of government initiatives and have constantly sought ways to enhance their positive impact. Japan, from the perspective of its citizens, has attached great importance to partnerships with enterprises, residents, and environmental NGOs, as well as two-way environmental exchanges. They actively publicized environmental information and were clearly committed to democratic discussions. There are also vivid examples of the urban environmental information disclosure in African countries.

Since the end of the 20th century, the Chinese government has formulated a series of relevant policies dealing with environmental issues, and certain results have been achieved. However, prior to 2007, there were no formal policies and regulations for corporate environmental information disclosure in China. Moreover, the public lacked channels to help them understand the impact of enterprises on the environment and the relevant regulations. Relevant government departments even lacked the detailed data needed to establish and improve the corporate environmental assessment system.

In fact, the environmental information disclosure can indeed promote the selective adjustment of FDI. However, due to the relatively small number of empirical tests, it is difficult to provide clear evidence that helps to perceive their relationship. There are two reasons for this. Firstly, environmental information is difficult to directly observe and measure; its net effect is also not easy to measure. Secondly, environmental information disclosure and the flow and distribution of FDI are extremely endogenous. Their net effect is also difficult to peel off.

However, current studies on the impact of environmental information disclosure on FDI mostly use experience and evidence from developed countries. The external validity and guiding significance of these studies in terms of Chinese practice should also be discussed. At the same time, most studies to date have not considered the influencing factors of the “new normal”; nor do they examine the volatility effect caused by the enterprise transformation under the guidance of this policy. Besides, most studies do not clarify provinces and cities and do not study the heterogeneous problems based on urban population density, investment in pollution control and GDP, which is the starting point of this paper.

Based on the above considerations, this paper will try to identify the causal relationship between the environmental information disclosure and FDI, based on actual evidence in China. At the same time, due to difficulties in measuring information disclosure and the associated endogenous problems, this paper

needs to accurately capture and identify the impact of information disclosure on FDI. In 2007, the central government required local governments to implement an environmental information disclosure system. This has greatly facilitated the identification of the causal relationship between the environmental information disclosure and FDI. This paper will verify the causal inference between the environmental information disclosure and FDI inflows by introducing the established environmental information disclosure system, constructing a “quasi-natural experiment” and adopting a difference-in-difference model. This paper collects data, such as the actual use of foreign capital and the Pollution Information Transparency Index in all provinces and cities in China from 2014 to 2018. The difference-in-difference model was adopted to identify the impact of different environmental information disclosures on FDI, and distinguish the impact on different industries.

LITERATURE REVIEW

Alfaro et al. (2007) believed that the inflow and distribution of FDI are important factors influencing the regional economic development structure and the international investment layout. Earnhart et al. (2014) pointed out that the quality of a country's environmental information disclosure directly affects that country's ability to attract FDI. Generally, FDI decision-makers will favor countries with more ISO 14001 certifications. Shroff et al. (2014) pointed out that multinational companies investing in a particular country will be affected by the country's external information disclosure, information supervision and asymmetry elimination. Open access to environmental information among countries and regions has a more direct impact on FDI inflow and distribution. Incomplete environmental information disclosure is not conducive to the full and free flow of global capital. Establishing a complete and unified environmental information disclosure system, within market integration, is an important guarantee needed to promote the structure and distribution optimization of FDI. Many studies (Cai et al 2016, Daniel L Millimet and Roy 2016, Santos and Rosa Forte 2021, Abay 2017) reveal that stricter environmental supervision has led to a reduction in FDI. That is, FDI can come from countries with strict environmental regulations to countries with less stringent ones. Besides, foreign multinationals from countries with better environmental protection than China will naturally not be sensitive to

stricter environmental supervision. Conversely, those countries and enterprises with poorer environmental protection than China will show strong negative reactions. Chung (2014) believed that polluting industries tended to invest more in countries with tax and environmental regulations. Earnhart et al.'s empirical research on transitional economies (economies moving from relying on the allocation of government resources to market-based allocation) (Earnhart et al. 2014) shows that government and society have weak incentives for corporate environmental compliance, while FDI plays a positive role in improving corporate environmental performance. Research by Shroff et al. (2014) found that the acquisition of external environmental information helps multinational companies to alleviate internal information frictions and enhance the role of FDI. Xu et al. (2021) find that the benign interaction between environmental regulations and FDI is an important factor influencing the improvement of green total factor productivity.

In general, to avoid investment risk, Chinese enterprises tend to disclose positive environmental information; they are less inclined to disclose unfavorable information, such as pollution emissions and disposal costs. Shi Beibei et al. (2019) believed that the environmental information disclosure has significantly hindered the overall FDI inflow in the region, with obvious time-lag and long-term characteristics. At the same time, with increasing foreign capital saturation and regulatory intensity, the hindering effect of environmental information disclosure on regional FDI will become stronger. In addition, polluting enterprises withdrew from the market, and clean enterprises have increased their investments as a direct result of the environmental information disclosure. This has promoted the ecological transformation and optimization of the foreign investment structure. Research by Yaxi (2020) shows that a combination of environmental information disclosure and environmental supervision can significantly improve the environmental governance performance. The implementation of environmental information disclosure policies has both negative and positive effects on FDI inflows in different regions. Research by Yongsheng et al. (2020) shows that the environmental information disclosure in China represents obvious regional imbalances, showing a "coastal-inland" gradient decline. It also represents a strong spatial agglomeration, significant spatial spillover effects within the region and a weak driving effect among regions. In addition, the environmental information disclosure

shows superimposed, peer and demonstration effects in time, space, and space-time dimensions, respectively. Research by Xinjia and Guangmei (2020) shows that environmental information disclosure can promote corporate performance through a signaling effect. However, the degree of transmission will be affected by environmental regulations. Compared to strict formal environmental regulations, "soft constraints" are more conducive for achieving a signaling effect. Peng (2020) believes that FDI under the environmental information disclosure will promote the green transformation and upgrading of the regional economy; there is also a significant "U"-shaped relationship. Besides, the incentive effect of environmental information disclosure and FDI significantly promotes the green transformation and upgrading of the regional economy. The EU has decided to strengthen the environmental information disclosure requirements for large companies and financial institutions to promote the green transformation of economic activities at home and abroad (Qin 2021). Research by Naitong (2020) shows that China does not currently have a complete information disclosure system and a relatively standardized framework for the environmental information disclosure.

In general, domestic and foreign studies have shown that environmental information disclosure has a significant impact on FDI, helps to promote ecological transformation and optimization of the foreign capital structure, and enhances corporate productivity and innovation (Fan 2021, Jiang 2021, Zhan 2021). However, the information disclosure system in China is not complete, standardized, and balanced. The establishment of an environmental information disclosure system fully demonstrates that the public has a right to know and participate in environmental pollution and government-related matters (Hui and Carol 2018). It is vitally important for the government to scientifically formulate and implement environmental policies, improve government-public relations (Yao and Liang 2017), strengthen the environmental pollution protection, and promote the sustainable economic development (Yu et al 2017, Li and Ramakrishnan 2018). Previous studies on the relationship between environmental information disclosure and FDI have focused more on whether environmental information disclosure has been implemented. Besides, most of the data used in these studies were those before the "new normal" was mentioned. As such, the data used could not reflect data changes after the "new normal". Therefore, this paper employs updated

data and focuses on the impact of the quality of environmental information disclosure on FDI, thus providing different ideas for introducing foreign investment in China.

MODEL AND RESEARCH DESIGN

In China, since the environmental information disclosure policy came into force in 2008, the Public Environmental Research Center in China and the Natural Resources and Conservation Commission in the United States have jointly published the Pollution Information Transparency Index. The index is based on the Environmental Information Disclosure Measures (trial), which annually publishes corporate pollution information and environmental publicity of cities. These cities implement environmental protection and China focuses on them. Indices include information on a comprehensive evaluation of corporate environmental behavior, violation records, and public complaints about corporate environmental issues or pollution. The indices also focus on centralized control of pollution sources, audit of cleaning production, and pollution sources that exceed daily standards. The Pollution Information Transparency Index report is released every year, and the scores among cities and provinces in China are uneven. Therefore, it is possible to construct a “quasi-natural experiment” and use the difference-in-difference model to determine the “net effect” of environmental information disclosure on FDI.

Research design

A parallel trend test is used before the regression analysis. From the trend of FDI development in the intervention group and the control group, taking 2014 as the demarcation point, the FDI growth rate in the control group after 2014 is significantly lower than that in the intervention group (due to space limitations, analysis and results not included in the paper). This paper conducts a regression analysis of the environmental information disclosure and FDI, basically evaluating their correlation, and thereby establishing the following model:

$$FDI_{it} = \alpha_1 + \alpha_2 piti_{it} + \Sigma control + \varepsilon_1 \quad (1)$$

Where, FDI_{it} represents the total amount of FDI actually used in Province i in year t ; $piti_{it}$ means the Pollution Information Transparency Index disclosed in Province i in year t . Furthermore, α_1 is a constant term. $control$ is a control variable, and ε_1 is a random factor.

The above is just a simple analysis of the relationship between environmental information disclosure and FDI. To test the impact of information disclosure on FDI, this paper uses the Pollution Information Transparency Index for Chinese provinces from 2014 to 2018. The index is used with the difference-in-difference model to study the environmental information disclosure and FDI, in line with the time when the concept of “new normal” was proposed in 2014. In addition, this paper adopts the average value of the Pollution Information Transparency Index in all provinces and cities in China, to define the degree of environmental information disclosure. Provinces and cities with higher-than-average degrees of information disclosure are the intervention group. Provinces and cities with lower-than-average degrees of information disclosure are the control group. By comparing the samples in the intervention group and the control group, this paper assesses the impact of environmental information disclosure on FDI. For this purpose, the following model has been established:

$$FDI_{it} = \beta_1 + \beta_2 PITI_{it} + \Sigma control + \varepsilon_2 \quad (2)$$

Where, FDI_{it} represents the total amount of FDI used in Province i in year t ; $PITI_{it}$ indicates whether the score of the Pollution Information Transparency Index in Province i in year t exceeds the average value of the region. The intervention group is 1 and the control group is 0. Also, β_1 is a constant term, $control$ is a control variable and ε_1 is a random factor.

Index selection

Three variables were applied in this paper. The variables explained in this paper intend to show FDI inflow according to the total amount of foreign capital actually used in the region. The data are the actual utilization of foreign investment in provinces and cities throughout the country (except Hong Kong, Macao, and Taiwan) since 2014.

The core explanatory variable is the environmental information disclosure index of provinces and cities in China from 2014 to 2018. This paper adopts the Pollution Information Transparency Index, released in 2008, as a quasi-natural experiment. If the value of the environmental information disclosure index is higher than the average value, it is the intervention group. If the index value is less than the average value, it is the control group. The average value is that of the Pollution Information Transparency Index in all provinces and cities in China, or each classification. The value will change according to

the classification of the region. The national average is approximately 50. To further analyze the impact of environmental information disclosure on FDI in different regions, the provinces and cities that have implemented environmental disclosure in China are classified according to population density, investment in pollution control, and GDP.

The control variable is based on the effect of FDI inflow caused by economic development and infrastructure construction. This paper uses the regional GDP index and the proportion of government budget expenditure in regional GDP to measure the impact of those two factors.

Other indices are urban population density, investment in pollution control and GDP.

Data sources

This paper adopts environmental information disclosure as a quasi-natural experiment to examine the impact of information disclosure on FDI. To study the impact of environmental information disclosure on FDI in the background of the “new normal” and high-level environmental disclosure, this paper selects the latest relevant data. Specific data are discussed below.

This paper takes 29 provinces and cities in China that have implemented environmental information disclosure (which was not implemented in Hainan and Tibet) as research objects. The original data come from the database of the National Bureau of Statistics official website and the China City Statistical Yearbook during the years covered by this study. This study analyzes the impact of environmental information disclosure on FDI under the “new normal” from the perspective of a “quasi-natural experiment”, thereby choosing the Pollution Information Transparency Index, which has been implemented since 2008. To expand existing studies, this paper classifies provinces and cities according to urban population density, pollution control investment and

GDP, in order to further study the heterogeneous effect of environmental information disclosure on FDI in different regions. Urban population density data are for provinces and cities in China, from 2014 to 2018, published on the national data website. The data on pollution control investment refer to investment made in controlling industrial pollution in provinces and cities in China, as announced on the national data website. This study uses data from 2014 to 2018. GDP data refer to the GDP of provinces and cities in China, from 2014 to 2018, as published on the national data website. Based on the above three sets of data, this paper makes three classifications to analyze the heterogeneity: 1) low population density and high population density, 2) low pollution control investment and high pollution control investment, and 3) low GDP and high GDP.

RESULTS AND ANALYSIS

According to the above models, data, and indices, this paper analyzes nationwide data through regression analysis and the difference-in-difference model. Then, the level of urban population density, investment in pollution control and GDP are analyzed on the basis of the difference-in-difference model.

Regression analysis

First, this paper conducts a regression analysis of environmental information disclosure and FDI, initially analyzing the impact of environmental information disclosure on FDI inflow. The results of the regression analysis are shown in **table I**.

The results show that the impact of environmental information disclosure on FDI is conspicuous at the 1 % confidence level. This finding preliminarily reveals that there is indeed a positive causal relationship between the environmental information disclosure and

TABLE I. REGRESSION RESULTS OF THE RELATIONSHIP BETWEEN ENVIRONMENTAL INFORMATION DISCLOSURE AND FDI.

	Coefficient	Standard error	P-value
PITI	10765.298***	1852.791	0
Fiscal expenditures/GDP	−529000***	166000	0.002
GDP index	−15100**	6061.596	0.014
Constant term	1410000**	627000	0.026
Samples	145		
R-squared	0.327		

*** p<0.01, ** p<0.05, * p<0.1

FDI. However, what cannot be fully proven is that the environmental information disclosure, which is the main aspect of environmental regulation, promotes FDI inflow.

Difference-in-difference estimation of the impact of environmental information disclosure on FDI

Based on the available data, this paper constructs the difference-in-difference model to analyze the impact of environmental information disclosure on FDI inflows. The results are shown in **table II**.

The results show that the impact of high-level environmental information disclosure on FDI is conspicuous at the 1 % confidence level. It is not difficult to see from the table that, under the “new normal”, in terms of the FDI levels in the region, measured by the total amount of FDI, the environmental information disclosure has a significant promotional effect. To a certain extent, this finding shows that environmental regulations (with information disclosure as the main aspect) play a positive role in promoting FDI inflow. At the same time, the results reveal the phenomena that are strengthening environmental regulation has caused an inflow of foreign capital. This has provided new opportunities for local governments for further development of the process of environmental governance and economic development. In addition, investment in pollution control in the region may also be an important factor in attracting foreign investment. Local governments eliminated relatively backward production capacity, thus providing opportunities for the development of emerging production capacities.

Impact of environmental information disclosure on urban population density, investment in pollution control and regional GDP

As can be seen from **table II**, high-level environmental information disclosure plays a significant role in promoting FDI inflow. However, in cases of

different urban population densities, will this effect of promotion be different? To answer that question, this paper finds the annual average and overall average of the urban population density in all provinces and cities in China, from 2014 to 2018. Then, the provinces and cities are divided into regions with lower and higher population density. At the same time, this paper also divides the provinces and cities into regions with low and high levels of investment in pollution control, based on the average value of industrial pollution control investment in all provinces and cities from 2014 to 2018. To study the impact of environmental information disclosure on regions with different GDP, China’s provinces and cities are divided into regions with low and high GDP. This is done according to their average GDP from 2014 to 2018, and then the regressions are performed. **Table III** shows the impact of environmental information disclosure on regions with different urban population density, investment in pollution control and GDP.

This table mainly analyzes whether the impact of environmental information disclosure on FDI will be affected by the differences in urban population density, investment in pollution control and GDP.

Regression analysis of regions with different urban population density is shown in Column 1 (low density) and Column 2 (high density) in **table III**. The average value of the Pollution Information Transparency Index in regions with low population density is approximately 52, while the average value is about 47 in regions with high population density. Both results show that the impact of high-level environmental information disclosure on FDI is significant at the 1% confidence level. In addition, the environmental information disclosure has a greater promotional effect in regions with high urban population density. However, it is worth noting that environmental supervision in regions with higher population density is not as strong as in regions with lower population density.

TABLE II. DIFFERENCE-IN-DIFFERENCE ESTIMATION OF THE IMPACT OF ENVIRONMENTAL INFORMATION DISCLOSURE ON FDI.

fdi	Coefficient	Standard error	P-value
PITI	210000***	44367.838	0
Fiscal expenditures/GDP	-715000***	160000	0
GDP index	-18600***	6484.828	0.005
Constant term	2280000***	705000	0.002
Samples	145		
R-squared	0.275		

*** p<0.01, ** p<0.05, * p<0.1

TABLE III. IMPACT OF ENVIRONMENTAL INFORMATION DISCLOSURE ON REGIONS WITH DIFFERENT URBAN POPULATION DENSITY, INVESTMENT IN POLLUTION CONTROL AND GDP.

	1	2	3	4	5	6
PITI	167000*** 39861.701 0	342000*** 97029.143 0.001	56465.101*** 19874.451 0.006	395000*** 110000 0.001	60657.276*** 20526.761 0.004	397000*** 106000 0
Fiscal expenditures/GDP	Yes	Yes	Yes	No	Yes	No
GDP index	No	No	Yes	No	Yes	No
Constant term	701000 736000 0.343	2660000 17553.13 0.211	1120000*** 415000 0.008	-529000 3120000 0.866	846000** 369000 0.024	2470000 5490000 0.655
Samples	90	55	95	50	90	55
R-squared	0.371	0.315	0.295	0.254	0.275	0.261

*** p<0.01, ** p<0.05, * p<0.1

Regression analysis of regions with different pollution control investment is shown in Column 3 (low investment) and Column 4 (high investment) in **table III**. The average value of the Pollution Information Transparency Index in regions with low investment in pollution control is approximately 46. The average value in regions with high investment in pollution control is about 56. The results show that the impact of high-level environmental information disclosure on FDI is significant at the 1% confidence level in regions with different investment in pollution control. Moreover, the promoting effect and environmental supervision are relatively stronger in regions with greater investment in pollution control. The results show that, under the “new normal”, active investment in pollution control has a positive and significant influence on attracting FDI when the level of environmental information disclosure increases.

Regression analysis of regions with different GDP is shown in Column 5 (low GDP) and Column 6 (high GDP) in **table III**. The average value of the Pollution Information Transparency Index in regions with low GDP is approximately 46, while the average value is about 56 in regions with high GDP. Both results show that the impact of high-level environmental information disclosure on FDI is significant at the 1% confidence level. At the same time, the promoting effect of environmental information disclosure and environmental supervision in regions with relatively low GDP is not as strong as in the regions with high GDP. As can be seen, under the “new normal”, high-level environmental information disclosure will promote FDI inflow, either in regions with low or high

GDP. In addition, the promoting effect will be more obvious in regions with high GDP.

CONCLUSIONS AND SUGGESTIONS

Conclusions

(1) In the context of the “new normal” of China’s economy, high-level environmental information disclosure has played a role in promoting FDI inflow, regardless of which index is used to measure foreign investment in different Chinese regions.

(2) The effect is different with population densities, investment in pollution control and GDP in different regions. This finding shows that the promoting effect of information disclosure on FDI will also be stronger in regions with higher population density, investment in pollution control and GDP. The promotional effect is not so strong in regions with low population density, investment in pollution control and GDP.

(3) Unlike other indices, environmental supervision does not increase in regions with higher population density and is not as strong as in regions with lower population density.

Suggestions

FDI is one of the important driving forces behind China’s economic growth, playing a pivotal role in national construction and economic development. FDI has long made a significant contribution to optimizing China’s industrial structure, promoting industrial upgrading, and improving the country’s

innovation capabilities. As one of the important FDI recipients in the world, the Chinese government provides an optimistic space for growth and fosters an environment for foreign investors. The government also provides self-development through a combination of “bringing in” and “going global” in its long-term policy practice. However, economic development cannot occur at the expense of environmental and ecological balance. Faced with an increasingly intense contradictions between China’s economic development and environmental pollution, the Chinese government has implemented several environmental regulations and policies. These steps have been taken to create harmonious and sustainable space for growth and an ecological environment that is suitable for economic development.

Combined with the characteristics of the “new normal”, from the perspective of attracting and utilizing foreign investment, this paper studies the impact of environmental information disclosure on FDI. The results provide new choices and developmental considerations for the deepening of supply-side structural reforms. The study also plays a certain enlightening role in formulating China’s environmental protection and anti-pollution policies. Based on the experimental results of this paper, the following suggestions are made:

(1) Expand the environmental information disclosure system and reconstruct FDI distribution. In the context of the “new normal”, it is not enough to have comprehensive laws and regulations to optimize the environmental information disclosure system. The environmental information disclosure system must further play its role in guiding the FDI market. On the one hand, it is necessary to strengthen the environmental information publicity and give certain incentives to enterprises that voluntarily disclose information as required. These could be tax-based incentives, honorary recognition, and other incentives that are used to increase company’s initiative for continuous disclosure of information. On the other hand, it is necessary to strengthen the penalties and the price of policy violations. Stricter penalties would increase corporate attention and policy effectiveness in terms of attracting clean FDI inflows, abandoning the inward transfer of polluting FDI and increasing the entry barriers, in order to achieve local environmental and economic benefits.

(2) Attach importance to the differences in environmental supervision among different regions, and focus on being people-oriented in the development process. Research in this paper reveals that population density is not proportional to the strength of environmental

regulations. This is a problem that local governments must recognize. In the new era, more attention should be paid to environmental supervision in densely populated areas. This would not only help to attract foreign investment and give impetus for economic growth but would also help to promote environmental improvement, thus achieving a win-win situation for both the economy and people’s livelihoods.

(3) Strengthen the introduction of high-quality foreign investment. Only a green and environmentally friendly foreign investment structure with sustainable development prospects will contribute to the orderly growth of China’s economy and the improvement of the ecological environment. To continuously raise awareness of environmental protection, it will be necessary to promote foreign clean technologies, benchmark the management system with international standards, and increase investment in environmental protection. The level of environmental management must also be improved. At the same time, the government should optimize foreign investment options, transform the regional foreign investment structure, and improve the environmental quality from the perspective of long-term interests, with the ecological environment as the threshold.

In the background of the “new normal”, contradictions gradually emerged in the process of economic development. Among these, the imbalance and transformation of economic structure are the main bottlenecks faced by local governments in pursuit of economic development. In the new era, local governments can start with foreign investment, realize the transformation of the investment patterns with the environment as a yardstick, and adjust the structure of foreign investments. This approach will drive the transformation of the economic structure of the entire region, creating a new impetus for further economic growth. Accordingly, this will be a new challenge for local governments.

Although this paper analyzes the effect of environmental information disclosure on FDI from the perspectives of urban population density, investment in pollution control and GDP, it does not further subdivide the impact of environmental information disclosure on clean and polluting FDI. The impact of environmental information disclosure on enterprise investment, cost and innovation is also not studied. At the same time, since the establishment of the environmental information disclosure system is not only for enterprises financed from abroad, but also has a greater impact on local enterprises. This will directly affect the overall market structure, further

influencing the decision-making of foreign-funded enterprises. However, these complex research questions are left for subsequent studies.

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