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Green Investment Behavior Of FDI Firms In Vietnam: The Role Of Institutions, Firm Capabilities, And Market Pressures

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Abstract
In the context of the global transition toward sustainable development, attracting environmentally friendly foreign direct investment (FDI) has become an increasingly urgent requirement for developing economies. In Vietnam, while the FDI sector has made significant contributions to economic growth, it has also generated considerable environmental pressures.
This paper analyzes the current state of green FDI in Vietnam and approaches the issue from the perspective of investment behavior of FDI firms—an aspect that remains relatively underexplored in the existing literature. Based on a synthesis of theoretical frameworks and empirical studies, the paper identifies that green investment behavior is influenced by institutional quality, firms' absorptive capacity, and pressures from global markets and supply chains.
The findings indicate that green investment behavior among FDI firms is heterogeneous and cannot be explained solely by macro-level policies. Instead, it is shaped by the interaction between firm-level capabilities and external pressures. Based on these insights, the paper proposes several policy implications to promote the transition toward green FDI in Vietnam.
Keywords: *Green FDI, investment behavior, sustainable development, Vietnam, absorptive capacity*

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I. Introduction

In recent decades, sustainable development has become one of the central orientations of the global economy. Countries are no longer solely pursuing economic growth but are also increasingly concerned with environmental protection and social development. In this context, foreign direct investment (FDI)—a key driver of economic growth—is increasingly evaluated not only in terms of scale but also in terms of quality and environmental impact.

In particular, the trend toward the "greening" of investment flows has accelerated under the influence of international climate commitments, ESG (Environmental, Social, and Governance) standards, and requirements from global supply chains. Multinational corporations are increasingly prioritizing environmentally friendly investment projects, the use of renewable energy, and carbon emission reduction. This has led to the emergence and development of the concept of "green FDI" as a new approach to investment attraction.

In Vietnam, FDI has played a significant role in economic growth, particularly in manufacturing and export-oriented industries. However, for a long time, the country's FDI attraction model has primarily relied on low-cost advantages, such as cheap labor and natural resources, resulting in considerable environmental consequences. Major environmental incidents, such as the Formosa case, have highlighted the urgent need to shift the approach to FDI attraction.

Although the Vietnamese government has introduced various policies to promote green FDI and sustainable development, the transition has not yet been truly effective. One important reason is that the investment behavior of FDI firms—the factor that directly determines how "green" investment projects are—has not been sufficiently examined.

Therefore, this paper focuses on analyzing green FDI in Vietnam from a firm-level behavioral perspective, aiming to identify key influencing factors and propose appropriate policy implications.

II. Theoretical Background On Green Fdi And Investment Behavior

The concept of green FDI has been discussed in various studies and international reports from different perspectives. According to the United Nations Conference on Trade and Development (UNCTAD, 2008), green FDI includes: (i) investments that apply environmental standards higher than those required by the host country,

or (ii) investments directly involved in the production of environmental goods and services. This definition emphasizes the role of FDI not only in minimizing negative environmental impacts but also in generating outputs that contribute to environmental protection.

Regarding the scope of environmental goods and services, the Organisation for Economic Co-operation and Development (OECD, 1999) defines them as goods and services used to measure, prevent, limit, or correct environmental damage to water, air, and soil, as well as issues related to waste, noise, and ecosystems. This approach broadens the concept of green FDI from a product perspective to the entire environmentally related value chain.

In addition, UNCTAD (2010) introduces the concept of low-carbon FDI, which is considered a key component of green FDI. Low-carbon FDI refers to the transfer of technologies, production processes, or products from multinational enterprises to host countries—through both equity and non-equity modes—in ways that result in significantly lower greenhouse gas emissions compared to industry averages. This definition highlights not only output outcomes (emission reduction) but also the importance of technology transfer and production practices.

From a broader perspective, OECD (2015) defines "green investment" as investments that promote economic growth while minimizing negative environmental impacts. Such investments include: (i) investment in green infrastructure and the greening of existing infrastructure; (ii) sustainable management of natural resources and ecosystem services; and (iii) the development of industries providing environmental goods and services, as well as the greening of existing value chains. This approach suggests that green FDI is not limited to individual projects but is closely linked to the broader transformation of the economy toward sustainability.

Based on these perspectives, green FDI can be understood as foreign direct investment activities that adopt environmentally friendly production processes, reduce pollution, or focus on producing environmental goods and services, while ensuring a balance between economic growth and natural resource protection. Compared to traditional FDI, green FDI is characterized by higher levels of technological application, stricter environmental standards, and a stronger alignment with sustainable development goals.

In the context of the global green transition, green FDI is becoming increasingly important for developing economies such as Vietnam, particularly in achieving emission reduction commitments and moving toward net-zero targets. However, recent studies indicate that the attraction of green FDI in Vietnam still faces significant limitations, ranging from institutional constraints to firm-level capabilities, thereby requiring deeper analysis of the mechanisms shaping FDI behavior (Nguyen, 2025; Mai, 2023).

On this basis, this paper approaches green FDI not only from the perspective of capital flows but also from the perspective of firm behavior, aiming to clarify the determinants and mechanisms underlying green FDI in the Vietnamese context. At the same time, the study focuses on analyzing FDI flows in several key sectors closely related to the green transition, including electricity, gas, steam, and air conditioning supply; professional, scientific, and technical activities; as well as water supply and waste management.

III. Green FDI In Vietnam: Current Status

After nearly 40 years of attracting foreign direct investment (FDI) since the promulgation of the Foreign Investment Law in 1987, Vietnam has become one of the most attractive destinations for international investors. FDI is present in most economic sectors and plays a crucial role in GDP growth, exports, and technology transfer. According to data from the General Statistics Office (GSO) and the Foreign Investment Agency (FIA), the FDI sector has become increasingly important in Vietnam's economy. In 2024, realized FDI was estimated at approximately USD 25.35 billion, accounting for about 16.5% of total social investment. At the same time, this sector contributed around 71–72% of the country's total export value, reflecting the growing dependence of the economy on foreign-invested enterprises. These figures indicate that FDI is not only a major source of capital but also plays a central role in Vietnam's production and trade structure, particularly in manufacturing and export-oriented industries.

However, in terms of structure, FDI inflows into Vietnam have long been concentrated in manufacturing sectors characterized by medium or low technological levels, as well as labor- and resource-intensive activities. This has resulted in increased emissions, higher energy consumption, and greater environmental pressure. Empirical studies suggest that FDI in Vietnam tends to increase CO_2 emissions in the short run (Tran Van Hung, 2024), reflecting limitations in the selection and management of investment projects.

In recent years, the trend toward green FDI has become more evident, in line with the government's sustainable development orientation. Key sectors attracting green FDI include renewable energy (such as wind and solar power), high technology, waste treatment, and green infrastructure. Notable projects include LEGO's carbon-neutral factory in Binh Duong with an investment exceeding USD 1 billion, operating entirely on renewable energy; the La Gan offshore wind project in Binh Thuan with a total investment of USD 10.5 billion; and several high-tech waste treatment projects in Bac Ninh.

Nevertheless, the proportion of green FDI projects remains relatively small compared to total FDI inflows. This suggests that Vietnam's transition from traditional FDI to green FDI is still at an early stage and has not yet become the dominant trend. The reasons lie not only in institutional limitations but also in the investment behavior of FDI firms themselves.

IV. Analysis Of Green Investment Behavior Of Fdi Firms In Vietnam

Unlike traditional approaches that primarily examine FDI from a macroeconomic or policy perspective, analyzing green investment behavior at the firm level helps reveal the micro-level mechanisms that determine the quality of investment flows. In practice, even within the same institutional environment, FDI firms may adopt very different investment strategies in terms of their "greenness," reflecting differences in capabilities, strategies, and market pressures. This indicates that green investment behavior is not merely a response to policy but rather the result of interactions among multiple factors at both the firm and environmental levels.

Heterogeneity in green investment behavior: from "substantive green" to "cost-driven" investment

In recent years, some FDI firms in Vietnam have proactively adopted sustainable investment models with high environmental standards. A notable example is LEGO's factory in Binh Duong, with an investment exceeding USD 1 billion, designed as a carbon-neutral facility using 100% renewable energy and meeting international environmental standards such as LEED Gold. Similarly, Pandora's manufacturing operations are powered by renewable energy and committed to emission reductions throughout the production chain. In the service sector, DHL Express has implemented green logistics solutions, including the use of electric vehicles and optimized energy management.

A common characteristic of these cases is that green investment behavior is not driven solely by host-country regulations but is primarily influenced by global strategies and ESG commitments of parent corporations. These firms are required to comply with uniform environmental standards across their entire operations, leading them to adopt clean technologies and sustainable production processes even in developing countries. This provides strong evidence for the "pollution halo" hypothesis, whereby FDI generates positive environmental impacts through the transfer of advanced technologies and management standards.

In contrast, a significant number of FDI firms continue to follow cost-driven investment strategies. Labor-intensive industries such as textiles, footwear, and food processing often rely on low-cost technologies that consume large amounts of energy and generate high emissions. The Formosa Ha Tinh case serves as a prominent example of the negative side of FDI, where a severe environmental incident exposed weaknesses in technology selection and regulatory oversight. These cases reflect the "pollution haven" hypothesis, whereby firms exploit regulatory gaps to minimize environmental costs.

Overall, green investment behavior among FDI firms in Vietnam exists along a continuum, ranging from "substantive green investment" to "cost-driven investment," depending on firm characteristics and operating conditions.

The role of absorptive capacity in shaping green investment behavior

One of the most important factors explaining differences in investment behavior is firms' absorptive capacity. This concept refers to the ability to acquire, assimilate, and apply new knowledge and technologies in production activities.

Firms with high absorptive capacity are more likely to invest in advanced, energy-efficient, and low-emission technologies. This not only enhances production efficiency but also improves compliance with international environmental standards. In contrast, firms with limited capabilities often face difficulties in adopting green technologies due to high investment costs, limited technical resources, and insufficient human capital (Nguyen, 2020; OECD, 2025).

Moreover, the spillover effects of FDI—particularly in green technologies—depend heavily on firms' internal capabilities. When absorptive capacity does not reach a certain threshold, firms struggle to adopt advanced technologies and may fail to benefit from the positive effects of FDI (Phung et al., 2024). As a result, firms tend to choose low-cost production solutions rather than investing in green technologies.

Additionally, small and medium-sized enterprises often face financial, technological, and human resource constraints, making it difficult to invest in environmentally friendly technologies (Nguyen Hoang Viet et al., 2021).

Empirical findings from Phung et al. (2024) indicate that the positive impact of FDI on green productivity only emerges when firms reach a certain level of absorptive capacity. This suggests that promoting green FDI cannot be separated from enhancing firms' internal capabilities.

Market and global supply chain pressures

In addition to internal capabilities, pressures from global markets and supply chains play an increasingly important role in shaping green investment behavior. As ESG standards become mandatory, firms participating in global value chains must comply with strict environmental requirements in order to maintain competitiveness.

This is particularly evident in Vietnam's key export industries, such as electronics, textiles, and food processing, where international buyers impose requirements related to emissions, energy use, and traceability. FDI firms that are more deeply integrated into global supply chains tend to have stronger incentives to adopt green investment practices compared to those operating primarily in domestic markets. Therefore, market pressure can be seen as an effective "disciplinary mechanism" that complements public policy in promoting sustainable investment behavior.

Institutional factors and the issue of greenwashing

An increasingly important issue in analyzing green investment behavior is the phenomenon of "greenwashing." This refers to practices whereby firms mislead the public by exaggerating or misrepresenting the environmental benefits of their products or activities in order to attract customers and gain a competitive advantage (Russin & Vecchi, 2025). As consumers become more environmentally conscious and willing to pay a premium for green products, "green" claims have become a powerful marketing tool, but also one that is prone to misuse.

In practice, many firms use terms such as "environmentally friendly," "sustainable," or "carbon neutral" without providing verifiable evidence or clear certification standards (Russin & Vecchi, 2025). This suggests that image-based "green" behavior can occur even when there are no substantial changes in production processes or technologies.

In Vietnam, although there have been few widely documented cases involving large FDI firms, early signs of greenwashing have emerged through misleading environmental advertising practices. One key reason is the absence of a dedicated legal framework addressing this issue, with enforcement currently relying on general regulations such as the Law on Competition, the Law on Consumer Protection, and the Law on Advertising.

The consequences of greenwashing go beyond misleading consumers; they can erode market trust, damage corporate reputation, and limit firms' access to green finance. Therefore, it is essential to distinguish between substantive green investment and symbolic or superficial practices when evaluating the effectiveness of FDI.

Behavioral implications

From the above analysis, several important implications can be drawn. First, green investment behavior among FDI firms is highly heterogeneous and cannot be explained solely by macro-level factors. Second, firm-level capabilities, market pressures, and strategic orientations play a decisive role in shaping such behavior. Third, the presence of greenwashing highlights the need to distinguish clearly between substantive and symbolic green investment when assessing FDI quality.

These differences in investment behavior across firms also reflect the challenges Vietnam faces in transitioning toward green FDI, which will be discussed in the following section.

V. Challenges In Attracting And Promoting Green FDI In Vietnam

Although the trend toward green FDI is gradually emerging in Vietnam, the transition from traditional FDI to sustainable FDI still faces numerous structural challenges. These challenges stem not only from institutional factors but are also closely related to the investment behavior of FDI firms, as discussed in the previous section.

Gaps in the institutional framework and criteria for green FDI evaluation

One of the most significant limitations at present is the lack of a unified set of criteria to define and classify green FDI. Although Vietnam has introduced policy orientations toward green growth and sustainable development, there is still no comprehensive framework for assessing the "greenness" of investment projects. As a result, the selection, appraisal, and monitoring of FDI projects continue to rely primarily on traditional economic criteria such as capital size, job creation, or fiscal contributions, while environmental factors are not adequately quantified.

This creates room for "greenwashing" behavior, whereby firms can label their projects as "green" without providing clear and verifiable evidence.

In addition, existing environmental regulations remain fragmented and insufficiently detailed to address emerging issues in the context of the green economy, particularly ESG disclosures and carbon offset mechanisms. This reduces policy effectiveness and creates challenges for both regulators and firms in implementation.

Limitations in technological capability and absorptive capacity of firms

In practice, most FDI firms in Vietnam—especially small- and medium-sized enterprises or those operating in labor-intensive industries—face significant constraints in accessing and implementing green technologies. One of the key reasons is the relatively low level of firms' absorptive capacity. Studies indicate that Vietnam still faces considerable limitations in technology access, supplier quality, and technological absorption capacity compared to other countries in the region (Nguyen, 2020).

Moreover, the spillover effects of FDI, particularly in green technologies, depend heavily on firms' internal capabilities. When absorptive capacity does not reach a certain threshold, firms struggle to adopt advanced technologies and may fail to benefit from the positive effects of FDI (Phung et al., 2024). As a result, many firms continue to rely on low-cost, energy-intensive technologies instead of investing in greener alternatives.

In addition, small and medium-sized enterprises often face constraints in financial resources, technology, and human capital, making investment in green technologies particularly challenging (Nguyen Hoang Viet et al., 2021). International organizations such as OECD also emphasize that enhancing absorptive capacity - through investment in education, innovation, and human capital development - is a prerequisite for effectively leveraging FDI inflows, especially in the context of the green transition (OECD, 2025).

Therefore, given the high costs of green technologies and the limited capabilities of firms, many FDI firms in Vietnam tend to prioritize low-cost production solutions, thereby reducing the environmental effectiveness of investment flows.

Competitive pressure in attracting FDI and the "race to the bottom"

In the context of globalization, countries are increasingly competing to attract foreign direct investment, particularly developing economies. This competition may lead to the risk of a "race to the bottom," in which countries relax regulatory standards to attract investment.

Empirical evidence supports this hypothesis. Olney (2013) shows that reducing employment protection regulations can increase FDI inflows, and that countries tend to compete by lowering standards to attract capital. This suggests that, under international competition, institutional factors may be adjusted in favor of investment attraction rather than sustainability.

In such a context, without effective screening and monitoring mechanisms, countries may become destinations for outdated or polluting technologies, thereby increasing long-term environmental risks.

For Vietnam, if the strategy of attracting FDI based on low costs continues without appropriate filtering mechanisms, the risk of attracting environmentally harmful and technologically obsolete projects remains significant. This would not only reduce the quality of economic growth but also contradict the country's sustainable development objectives.

Limitations in monitoring systems and environmental policy enforcement

Another major challenge lies in the limited effectiveness of monitoring systems and environmental policy enforcement. Although Vietnam has introduced numerous environmental regulations, their implementation remains uneven across regions and sectors.

The lack of modern monitoring tools, such as automated environmental monitoring systems or integrated environmental databases, makes it difficult to track and evaluate the environmental impact of FDI projects. In addition, existing penalties are not sufficiently stringent to incentivize compliance, particularly in cases of serious violations.

As a result, the cost of environmental violations may be lower than the cost of investing in green technologies, thereby influencing firms' investment decisions toward cost minimization rather than sustainability.

Heterogeneity in firm behavior and the risk of greenwashing

As discussed earlier, green investment behavior among FDI firms in Vietnam is highly heterogeneous. While some firms adopt substantive green investment practices, others engage primarily in image-based "greening" without meaningful changes in production processes.

This phenomenon not only undermines policy effectiveness but also creates an uneven playing field among firms. Companies that genuinely invest in green technologies incur higher costs, whereas "greenwashing" firms can gain marketing advantages without making equivalent investments.

Therefore, controlling greenwashing behavior has become a critical requirement in promoting green FDI in Vietnam.

VI. Policy Implications

Based on the analysis of green investment behavior among FDI firms, it can be observed that promoting green FDI in Vietnam depends not only on macro-level policy orientations but also on micro-level factors such

as firm capabilities and market pressures. Therefore, policy implications should be designed following a comprehensive approach that integrates institutional improvement, enhancement of firm capabilities, and strengthening of monitoring mechanisms.

First, Vietnam needs to promptly complete its institutional framework for green FDI by developing a unified national set of criteria to define and classify investment projects according to their level of "greenness." This framework should be aligned with international standards and integrated into the processes of project appraisal, licensing, and monitoring. Clearly defined criteria will not only improve governance effectiveness but also help mitigate greenwashing, ensuring transparency and fairness in investment attraction.

Second, in the context of increasingly intense competition for FDI, Vietnam should shift from a strategy of "attracting FDI" to one of "selecting FDI," prioritizing quality over quantity. This requires the establishment of screening mechanisms based on criteria such as technological level, energy efficiency, and emission intensity. Projects using outdated or polluting technologies should be strictly controlled, while green and high-tech projects should be encouraged through appropriate policy incentives.

Another critical factor is enhancing firms' absorptive capacity, which is a prerequisite for the effective implementation of green investment. The government should increase investment in high-quality human capital development, promote research and development (R&D), and strengthen linkages between FDI firms and domestic enterprises. As firms' internal capabilities improve, their ability to absorb and diffuse green technologies will be enhanced, thereby facilitating the transition toward a more sustainable growth model.

In parallel, the development of a supportive ecosystem and green investment infrastructure plays a crucial role in enabling firms to implement environmentally friendly projects. This includes expanding renewable energy infrastructure, promoting eco-industrial parks, and building waste treatment systems that meet international standards. At the same time, the development of green financial markets should be encouraged to provide long-term capital for sustainable investment projects.

To ensure effective policy implementation, Vietnam must also strengthen monitoring and enforcement mechanisms, particularly in addressing greenwashing practices. The adoption of modern monitoring tools, combined with requirements for transparency and periodic ESG reporting, will enhance corporate accountability. In addition, more specific legal regulations and stronger sanctions are needed to address misleading environmental claims and ensure compliance.

Finally, in the context of deep international integration, Vietnam should actively participate in global sustainability initiatives and enhance cooperation with international financial institutions to access green finance and technologies. Investment promotion activities should also be reoriented toward a more proactive and selective approach, targeting multinational corporations with strong sustainability strategies and commitments to emission reduction.

Overall, promoting green FDI in Vietnam requires coordinated efforts between macro-level policies and firm-level behavior. Only when institutional frameworks, market forces, and firm capabilities are aligned can green FDI become a genuine driver of long-term sustainable growth.

References

[1]. Unctad. (2008). Creating An Institutional Environment Conducive To Increased Foreign Investment And Sustainable Development. United Nations.
[2]. Unctad. (2010). World Investment Report 2010: Investing In A Low-Carbon Economy. United Nations.
[3]. Oecd. (1999). The Environmental Goods And Services Industry: Manual For Data Collection And Analysis. Oecd Publishing.
[4]. Oecd. (2015). Policy Framework For Investment. Oecd Publishing.
[5]. Oecd. (2025). Oecd Economic Surveys: Vietnam 2025. Oecd Publishing.
[6]. Olney, W. W. (2013). A Race To The Bottom? Employment Protection And Foreign Direct Investment. Journal Of International Economics, 91(2), 191–203. Https://Doi.Org/10.1016/J.Jinteco.2013.08.003
[7]. Phung, M. L., Nguyen, T. T., & Nguyen, K. M. (2024). Fdi Spillover Effect On The Green Productivity Of Vietnam Manufacturing Firms: The Role Of Absorptive Capacity. Journal Of Applied Economics, 27(1). Https://Doi.Org/10.1080/15140326.2024.2382653
[8]. Nguyen, H. H. (2020). Impact Of Foreign Direct Investment And Trade On Economic Growth: Evidence From Vietnam. Journal Of Asian Finance, Economics And Business, 7(3), 323–331.
[9]. Nguyen, H. V., Et Al. (2021). Quantitative Analysis Of The Effectiveness Of Fdi Projects Toward Sustainable Development In Vietnam. Ministerial-Level Research Project.
[10]. Tran, V. H. (2024). The Relationship Between Fdi, Globalization, Economic Growth, Green Growth, And Co_2 Emissions In Vietnam. Journal Of Economics And Development, 321.
[11]. Lam, N. H. T. (2025). Greenwashing In Vietnam: Risks And Legal Implications. Russin & Vecchi (Vietnam).
[12]. General Statistics Office (Gso). (2024). Socio-Economic Report 2024. Hanoi, Vietnam.
[13]. Foreign Investment Agency (Fia). (2024). Report On Foreign Investment Attraction In 2024. Ministry Of Planning And Investment, Vietnam.