

Global Green Supply Chain Pressures and Investment Location Choice: Empirical Evidence from Thanh Hoa Province, Vietnam

Nguyen Thi Thanh Hai
Hong Duc University

ABSTRACT: As the global economy undergoes a fundamental restructuring toward sustainability, international green mandates are redefining the traditional determinants of industrial location. This study investigates the impact of global green supply chain pressures on the investment location choice (ILC) of enterprises in Thanh Hoa Province, Vietnam. Grounded in Institutional Theory, the research decomposes environmental pressure into three distinct dimensions: coercive, normative, and mimetic. Primary data were gathered through a structured survey of 305 business leaders and senior executives from FDI and large-scale domestic export firms between January and March 2026. The conceptual model was empirically validated using Partial Least Squares Structural Equation Modeling (PLS-SEM) via SmartPLS 4. The empirical results confirm that all three categories of green pressure significantly and positively influence investment location decisions, collectively explaining 53% of the variance in the dependent variable ($R^2 = 0.530$). Specifically, coercive pressure emanating from international regulations and trade mandates exerts the most substantial impact ($\beta = 0.482$), followed by normative pressure from customer expectations ($\beta = 0.341$) and mimetic pressure driven by industry trends ($\beta = 0.162$). These findings indicate that modern investors increasingly prioritize "green ecosystems" that offer renewable energy access and robust waste treatment infrastructure over traditional cost-based advantages. Consequently, the study provides critical insights for provincial policymakers, emphasizing that Thanh Hoa's future competitiveness in attracting high-quality FDI depends on its ability to satisfy the green mandates of global supply chains through the accelerated development of eco-industrial parks and sustainable infrastructure.

Keywords: Green Supply Chain Pressure, Investment Location Choice, Institutional Theory, PLS-SEM, Thanh Hoa Province, Sustainable FDI.

I. INTRODUCTION

In the third decade of the 21st century, climate change has evolved from a distant environmental warning into an immediate existential crisis, compelling a global mobilization toward sustainable development models. This paradigm shift, underscored by ambitious international commitments such as the net-zero emissions targets pledged at the COP26 summit, is catalyzing a fundamental structural reorganization of the global economy. Within this turbulent landscape, corporate green transformation is no longer a peripheral, voluntary exercise in corporate social responsibility, but rather a central strategic imperative essential for long-term viability and competitive advantage in a carbon-constrained world (Sarkis, 2012; Zhu et al., 2013). This profound macroeconomic shift is exerting transformative pressure upon the architecture of global supply chains. Multinational enterprises (MNEs) and large-scale retailers operating in developed economies are facing escalating demands from regulatory bodies, institutional investors, and conscious consumers to mitigate their environmental externalities. Consequently, these dominant chain actors are disseminating stringent environmental standards and compliance protocols to their upstream suppliers, creating a pervasive ripple effect of "green pressures" that reverberates throughout the entire global value chain network (Chu et al., 2018).

This dissemination of green supply chain pressure is simultaneously disrupting the traditional determinants of investment location choice (ILC). Conventional location theories, which historically emphasized advantages such as low labor costs, fiscal incentives, or proximity to markets, are proving insufficient for modern, environmentally-contingent investment decisions. Under the mounting weight of global green imperatives, sophisticated investors - particularly those integrated into export-oriented supply chains - are pivotally shifting their priorities toward the acquisition of a supportive "green ecosystem." They are proactively seeking host locations that offer readily accessible renewable energy infrastructure, standardized waste management systems, and a predictable environmental regulatory framework, thereby enabling them to satisfy the rigorous compliance demands of their parent corporations and global customers (Du et al., 2008; Sarkis & Cordeiro, 2001). Furthermore, as institutional environments become more complex, the ability of a local jurisdiction to provide these green amenities has become a primary driver of territorial competitiveness.

Vietnam, characterized by its highly open economy and pivotal integration as a manufacturing hub within global supply chains, stands directly in the crosshairs of this green mandate. The Vietnamese government has demonstrated significant commitment to this transition through its National Green Growth Strategy for the 2021-2030 period. Operationally, at the sub-national level, provincial administrations are actively competing to enhance their "Provincial Green Index" (PGI) to maintain local competitiveness and attract higher-quality foreign direct investment (FDI). Thanh Hoa Province has emerged as a dynamic growth pole in Northern Vietnam, boasting massive industrial potential centered on the Nghi Son Economic Zone. However, Thanh Hoa's traditional industrial development trajectory now confronts a formidable challenge: how to reconcile rapid economic expansion with the rigorous environmental requirements imposed by international investors who are themselves bound by global green pressures. The core research tension resides in determining whether Thanh Hoa possesses the requisite localized green advantages to satisfy these modern demands, and how specific configurations of global green pressures influence the strategic selection of location within this transforming province.

Despite the burgeoning literature on Green Supply Chain Management (GSCM) and investment determinants globally, empirical evidence systematically analyzing how specific, differentiated dimensions of institutional pressure - namely coercive, normative, and mimetic pressures - impact granular location selection within a sub-national region like Thanh Hoa remains sparse. Critically, there is a distinct void in understanding how these external institutional drivers directly translate into local investment decisions in the Vietnamese context. Addressing this gap, the primary objective of this investigation is to analyze the direct impacts of these distinct categories of global green pressures on the investment location choice decisions among enterprises in Thanh Hoa. Theoretically, this study advances location theory by embedding the dimension of global green imperatives into sub-national selection determinants. Pragmatically, the findings are intended to assist local policymakers in formulating targeted strategies to elevate the PGI, prioritize green infrastructure, and foster eco-industrial parks, thereby aligning local policy with the green mandates of global supply chains and facilitating sustainable FDI attraction.

II. THEORETICAL BACKGROUND AND HYPOTHESIS DEVELOPMENT

The theoretical underpinnings of investment location choice (ILC) have traditionally been rooted in the OLI (Ownership, Location, and Internalization) framework, which posits that firms select destinations based on comparative advantages such as resource availability, market size, and infrastructure quality (Dunning, 1988). However, as global environmental governance intensifies, the classical economic determinants of location choice are being augmented - and in some cases, superseded - by institutional factors related to sustainability. Institutional Theory provides a robust lens through which to understand this shift, suggesting that organizational decisions are driven not only by economic efficiency but also by the need for legitimacy within a given institutional environment (DiMaggio & Powell, 1983). In the context of global supply chains, firms seek "environmental legitimacy" by aligning their operations with the green mandates of powerful stakeholders, which directly influences their strategic geographic positioning (Zhu & Sarkis, 2007).

Coercive pressure, the first pillar of Institutional Theory, refers to formal and informal pressures exerted on organizations by institutions upon which they are dependent, such as government agencies and regulatory bodies (DiMaggio & Powell, 1983). In the contemporary global market, these pressures manifest as stringent environmental regulations, carbon taxes, and international trade barriers like the EU's Carbon Border Adjustment Mechanism (CBAM). For export-oriented firms in emerging economies like Vietnam, compliance with these regulations is a prerequisite for market access. Extant research suggests that when regulatory stringency increases, firms proactively seek investment locations that offer superior environmental infrastructure and "green" policy support to mitigate the risk of non-compliance and avoid future environmental costs (Campbell, 2007; Rivera, 2004). In Thanh Hoa, as provincial environmental standards align with national and international mandates, firms are expected to prioritize locations that facilitate regulatory compliance. Therefore, we propose:

Hypothesis 1 (H1): Coercive green pressure from global and national regulations has a positive impact on the investment location choice toward destinations with high-quality environmental ecosystems.

Beyond formal regulations, firms are subject to normative pressures, which arise from the expectations, values, and standards established by professional networks, industry associations, and, most critically, customers (Zailani et al., 2012). Within global supply chains, multinational corporations often impose private environmental standards on their suppliers that exceed local legal requirements. These normative expectations create a "cascading effect," where suppliers must adopt green practices to maintain their position within the value chain and avoid reputational damage (Christmann & Taylor, 2001). When selecting an investment site, firms under high normative pressure will favor locations that enable them to satisfy these stakeholder demands - such as those providing easy access to renewable energy or certified eco-industrial parks. The pursuit of normative legitimacy thus acts as a decisive factor in geographic strategic planning. Based on this logic, we suggest:

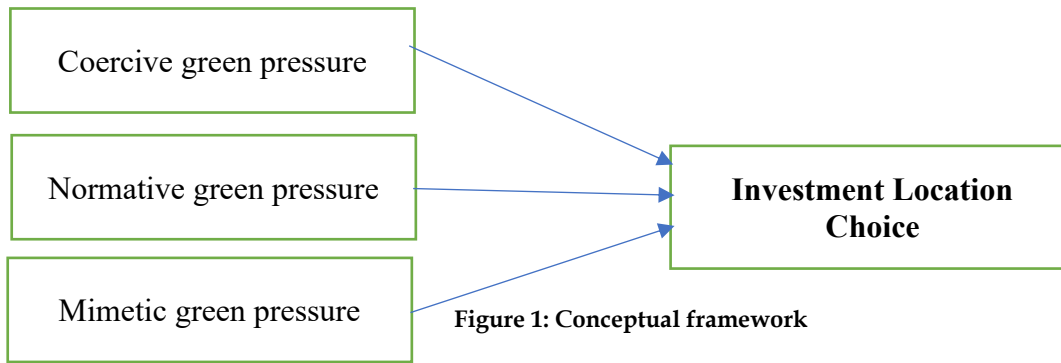
Hypothesis 2 (H2): Normative green pressure from customers and industry stakeholders has a positive impact on the investment location choice toward destinations with high-quality environmental ecosystems.

Finally, mimetic pressure occurs in environments characterized by high uncertainty, leading organizations to model themselves after successful rivals perceived to be more legitimate or efficient (DiMaggio & Powell, 1983). As green transformation becomes the dominant industry trend, firms often face "competitive uncertainty" regarding the best path toward sustainability. To reduce this uncertainty and mitigate the risk of being perceived as environmental laggards, firms

tend to imitate the location choices of industry leaders who have already established "green" operations (Guler et al., 2002). If leading multinational enterprises or successful domestic exporters choose a specific location like Thanh Hoa due to its emerging green advantages, other firms in the supply chain are likely to follow suit to maintain competitive parity and signal their commitment to global green trends (Lieberman & Asaba, 2006). This mimetic behavior reinforces the attractiveness of provinces that proactively position themselves as sustainable hubs. Accordingly, we hypothesize:

Hypothesis 3 (H3): Mimetic green pressure from competitors has a positive impact on the investment location choice toward destinations with high-quality environmental ecosystems.

Based on the theoretical arguments and the proposed hypotheses, the research model illustrating the relationships between the dimensions of green institutional pressure and investment location choice is synthesized and specifically illustrated in Figure 1 below.



III. RESEARCH METHODOLOGY

3.1. Research Design and Sampling

This study employs a cross-sectional, quantitative approach to test the hypothesized direct relationships. The target population consists of senior executives, directors, and strategic managers of enterprises - both Foreign Direct Investment (FDI) and large-scale domestic firms - currently operating or actively exploring investment opportunities in Thanh Hoa Province. These respondents were selected because they possess the requisite knowledge regarding their firms' strategic environmental mandates and the localized factors influencing their geographic positioning.

A purposive sampling technique was implemented to ensure the selection of high-quality respondents who are directly involved in corporate investment and supply chain strategy. This approach is consistent with prior studies in industrial management where expert knowledge is paramount (Sarkis, 2012). Following the data cleaning process, a final sample of 305 valid responses was retained. This sample size is statistically robust for Partial Least Squares Structural Equation Modeling (PLS-SEM), significantly exceeding the minimum requirements for achieving high statistical power (Hair et al., 2022).

3.2. Data Collection Procedure

Primary data were collected between January and March 2026 via an online survey administered through Google Forms. To ensure the contextual validity and linguistic accuracy of the measurement instrument, the questionnaire underwent a rigorous back-translation process from English to Vietnamese. A pilot test was conducted with five industry experts and three academics to refine the phrasing and ensure the technical terms were properly understood within the Vietnamese business context.

To minimize Common Method Bias (CMB), the survey was designed with clear separation between independent and dependent variables, and respondents were assured of total anonymity and confidentiality. Furthermore, the questionnaire included screening questions to confirm that respondents held management-level positions and that their firms were indeed participants in, or affected by, global supply chain operations.

3.3. Measurement Instruments

The survey instrument utilized a 5-point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). All constructs were operationalized using scales adapted from established literature, ensuring that the number of items for each factor reflects its theoretical depth rather than an arbitrary uniform count.

Table 1. Summary of Measurement Scales and Theoretical Sources

No.	Construct / Measurement Items	Reference Source
1	Coercive Pressure (COE) - 3 items	Zhu et al. (2013); Chu et al. (2018)
COE1	Stringency of national and regional environmental laws.	
COE2	Requirements from international trade agreements (e.g., EVFTA, CBAM).	
COE3	Severity of formal audits and penalties for environmental non-compliance.	
2	Normative Pressure (NOR) - 4 items	

NOR1	Direct demands from major customers for green certifications (ISO 14001).	Zailani et al. (2012); Zhu & Sarkis (2004)
NOR2	Expectations from industry associations regarding sustainable practices.	
NOR3	Influence of environmental NGOs and public opinion on corporate strategy.	
NOR4	Requirements for ESG transparency and reporting from supply chain partners.	
3	Mimetic Pressure (MIM) - 3 items	Aerts et al. (2008); Zhu et al. (2013)
MIM1	Success of direct competitors who have implemented green transitions.	
MIM2	The prevailing "green" trend within the specific industry sector.	
MIM3	Perception of environmental excellence as a driver of prestige and status.	
4	Investment Location Choice (ILC) - 5 items	Cheng & Kwan (2000); Du et al. (2008); VCCI & USAID (2024)
ILC1	Availability and accessibility of renewable energy (Solar, Wind, Biomass).	
ILC2	Quality and capacity of centralized waste and wastewater treatment facilities.	
ILC3	Local government fiscal and non-fiscal incentives for sustainable projects.	
ILC4	Administrative efficiency in processing environmental permits in the province.	
ILC5	The province's reputation and score in the Provincial Green Index (PGI).	

3.4. Data Analysis Strategy

The conceptual model was analyzed using SmartPLS 4, a state-of-the-art software for PLS-SEM. This method was chosen due to its superior ability to handle complex models, its non-reliance on normal distribution assumptions, and its effectiveness in exploratory research (Hair et al., 2022). The analysis followed a systematic two-stage procedure:

Measurement Model Assessment: Evaluated the reliability and validity of the constructs. Reliability was assessed using Indicator Loadings (> 0.707), Cronbach’s Alpha (> 0.70), and Composite Reliability (> 0.70). Validity was confirmed through Average Variance Extracted (AVE > 0.50) and discriminant validity checks using the Heterotrait-Monotrait (HTMT) ratio (< 0.85) (Henseler et al., 2015).

Structural Model Assessment: Tested the hypothesized direct effects (H1, H2, H3). Significance levels were determined via the bootstrapping procedure with 5,000 resamples. Key metrics reported include path coefficients (β), p-values, the Coefficient of Determination (R²), and the effect size (f²).

IV. RESULTS

4.1. Respondent Demographics

The primary data were collected from 305 business leaders in Thanh Hoa Province, ensuring a representative sample of decision-makers integrated into global supply chains. The demographic profile, summarized in Table 2, indicates that the majority of respondents hold high-level management positions in FDI and large-scale domestic manufacturing enterprises.

Table 2. Demographic Profile of Respondents (N=305)

Category	Characteristic	Frequency	Percentage (%)
Position	CEO/Board Member	86	28.2
	Department Manager	142	46.6
	Strategic Planner/Supply Chain Officer	77	25.2
Ownership	Foreign Direct Investment (FDI)	185	60.7
	Large Domestic Export Enterprise	120	39.3
Industry	Manufacturing & Processing	134	43.9
	Garment, Textile & Footwear	98	32.1
	Electronics & Energy	73	24.0

(Source: Survey data, 2026)

4.2. Measurement Model Assessment

The measurement model was evaluated through indicator reliability, internal consistency, convergent validity, and discriminant validity.

4.2.1. Reliability and Convergent Validity

As shown in Table 3, all indicator loadings range from 0.803 to 0.896, significantly exceeding the recommended threshold of 0.707. Internal consistency is confirmed as Cronbach’s alpha values (0.860 to 0.881) and Composite Reliability

(rho_c) values (0.913 to 0.918) are all well above the 0.70 benchmark. Convergent validity is satisfied as the Average Variance Extracted (AVE) for all constructs ranges from 0.678 to 0.788, exceeding the required 0.50 level. Furthermore, all Variance Inflation Factor (VIF) values are below 3 (ranging from 1.971 to 2.447), indicating the absence of multicollinearity issues among the indicators.

Table 3. Results of Measurement Model Assessment

Construct	Items	Loading	VIF	Cronbach's Alpha	rho_c	AVE
Coercive Pressure (COE)	COE1	0.884	2.152	0.860	0.914	0.781
	COE2	0.873	2.087			
	COE3	0.894	2.306			
Normative Pressure (NOR)	NOR1	0.871	2.447	0.879	0.917	0.734
	NOR2	0.850	2.184			
	NOR3	0.867	2.315			
	NOR4	0.838	1.978			
Mimetic Pressure (MIM)	MIM1	0.887	2.074	0.866	0.918	0.788
	MIM2	0.896	2.406			
	MIM3	0.880	2.315			
Investment Location Choice (ILC)	ILC1	0.834	2.137	0.881	0.913	0.678
	ILC2	0.820	2.042			
	ILC3	0.824	2.102			
	ILC4	0.803	1.971			
	ILC5	0.836	2.140			

(Source: SmartPLS 4 output)

4.2.2. Discriminant Validity

Discriminant validity was assessed using both the Fornell-Larcker criterion and the Heterotrait-Monotrait (HTMT) ratio. Following the Fornell-Larcker criterion, the square root of the AVE for each construct (the diagonal values) is higher than the correlation coefficients with other latent variables. Additionally, all HTMT ratios are below the conservative threshold of 0.85 (maximum 0.709), confirming that each construct is empirically distinct from others.

Table 4. Discriminant Validity Results

	Fornell-Larcker Criterion				HTMT Ratio			
	COE	ILC	MIM	NOR	COE	ILC	MIM	NOR
COE	0.884							
ILC	0.619	0.823			0.709			
MIM	0.252	0.355	0.888		0.290	0.404		
NOR	0.284	0.511	0.210	0.857	0.325	0.580	0.237	

(Note: Diagonal values in bold represent the square root of AVE)

4.3. Structural Model Assessment

The structural model was examined to test the hypothesized relationships. Figure 2 illustrates the results of the path analysis, including path coefficients and significance levels derived from the bootstrapping procedure.

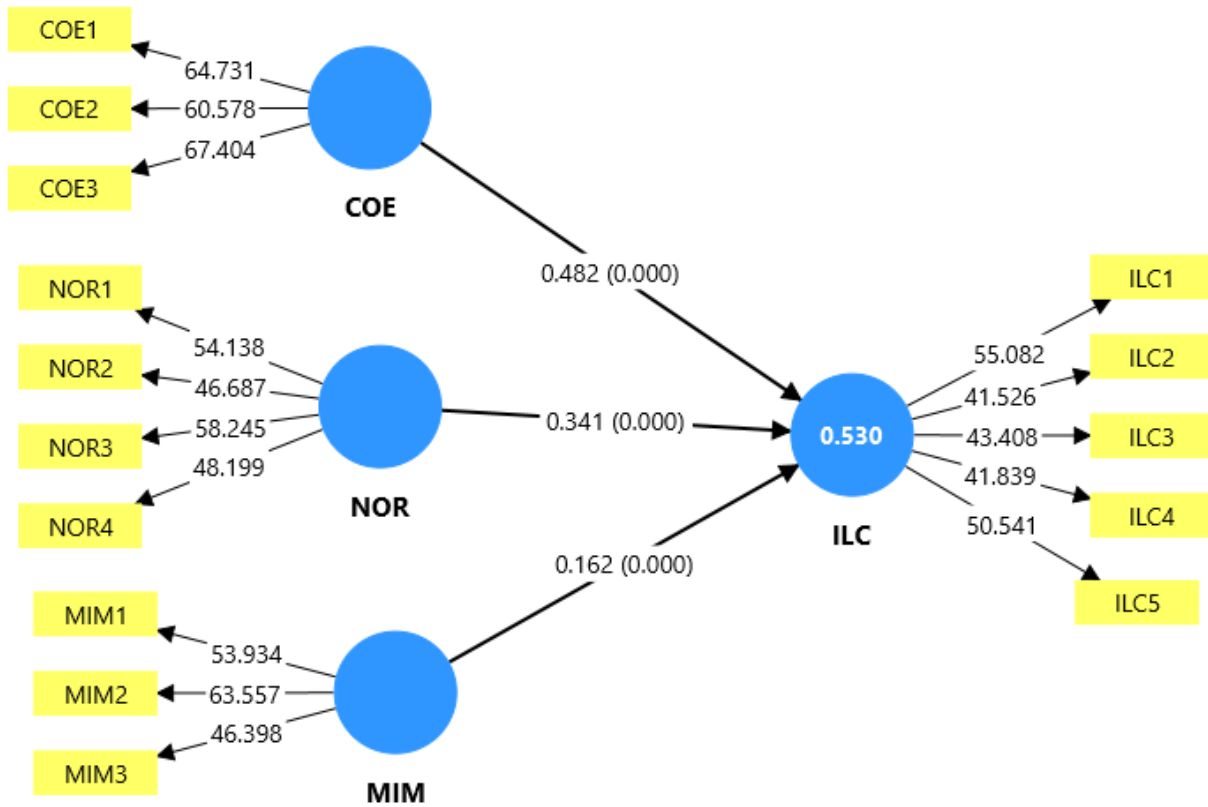


Figure 2: Structural Model

4.3.1. Explanatory Power and Fit Indices

The model demonstrates substantial explanatory power, with an R² value of 0.530 and an adjusted R² of 0.525, indicating that 53% of the variance in Investment Location Choice is explained by the three types of green pressures. The predictive relevance is confirmed by a Q² predict value of 0.518, which is well above zero. Furthermore, the model fit is considered adequate with an SRMR value of 0.050, which is below the recommended 0.08 threshold.

4.3.2. Hypotheses Testing

The path analysis results in Table 5 confirm that all three hypotheses are supported with high statistical significance (p < 0.01). Coercive Pressure (COE) exerts the strongest impact on ILC (β = 0.482, p = 0.000). Normative Pressure (NOR) also has a significant positive influence (β = 0.341, p = 0.000), followed by Mimetic Pressure (MIM) (β = 0.162, p = 0.000). In terms of effect size (f²), COE has a large effect (0.435), NOR has a medium effect (0.222), while MIM has a small effect (0.051) on the investment decision.

Table 5. Summary of Hypothesis Testing

Hypothesis	Path	β	T-stats	P-values	f ²	Result
H1	COE -> ILC	0.482	13.196	0.000	0.435	Supported
H2	NOR -> ILC	0.341	8.641	0.000	0.222	Supported
H3	MIM -> ILC	0.162	3.924	0.000	0.051	Supported

(Source: SmartPLS 4 Bootstrapping results)

V. DISCUSSION

The empirical results from the PLS-SEM analysis confirm that all three dimensions of global green supply chain pressure - coercive, normative, and mimetic - significantly and positively influence the investment location choices of enterprises in Thanh Hoa Province. The model’s substantial explanatory power, indicated by an R² value of 0.530, suggests that more than half of the variance in location selection for these firms is driven by external green imperatives. This underscores a fundamental shift in investment logic within the region, where traditional cost-based advantages are being supplemented, and in some cases overshadowed, by environmental legitimacy requirements. This findings align with the core tenets of Institutional Theory, which suggests that organizational behavior is increasingly shaped by the need to conform to external social and regulatory expectations to ensure long-term survival.

Coercive pressure emerged as the most potent driver of investment location choice, boasting a path coefficient of 0.482 and a large effect size of 0.435. This dominance aligns with the findings of Zhu and Sarkis (2007), who argued that regulative pressures are the strongest antecedents for adopting green practices in emerging economies. In the context of Vietnam, this pressure is particularly acute due to the country’s deep integration into high-standard free trade agreements

such as the EVFTA and CPTPP. Furthermore, the European Union's Carbon Border Adjustment Mechanism (CBAM) has created a "compliance floor" that export-oriented firms operating in Thanh Hoa cannot ignore. For investors, especially those in heavy industries within the Nghi Son Economic Zone, selecting a location that facilitates compliance with national mandates like Decree 06/2022/ND-CP regarding greenhouse gas emissions is no longer optional. This result confirms that for firms in Thanh Hoa, environmental "greenness" is primarily a matter of legal survival and guaranteed market access.

Normative pressure was found to be the second most influential factor, with a significant positive impact on investment decisions. With a path coefficient of 0.341 and a medium effect size of 0.222, this reflects the "cascading effect" of sustainability standards within global value chains. Major multinational brands, such as those in the garment and electronics sectors prominent in Thanh Hoa, now mandate that their suppliers achieve specific environmental certifications like ISO 14001. The significant impact of normative pressure confirms that firms select Thanh Hoa not just for its labor pool, but for the province's ability to support these "soft" institutional requirements, such as ESG transparency. This resonates with the study by Zailani et al. (2012), which highlighted that customer demand is a vital catalyst for green supply chain initiatives. In Thanh Hoa's industrial clusters, firms are increasingly viewing the province's focus on the Provincial Green Index (PGI) as a necessary alignment with the values and expectations of their global partners.

Mimetic pressure, while statistically significant, exhibited the smallest effect size and path coefficient among the three predictors. The path coefficient of 0.162 and an f^2 of 0.051 indicate that while firms do imitate the green location strategies of industry leaders to reduce uncertainty, they prioritize direct legal compliance and customer demands over mere peer imitation. This mimetic behavior is evident in Thanh Hoa as newer investors observe the successful establishment of "green" operations by FDI pioneers in zones like WHA or Nghi Son. However, the lower magnitude of this effect compared to coercive and normative pressures suggests that green investment in Thanh Hoa is a calculated strategic response rather than a purely reactive behavior. This aligns with the observations of Aerts et al. (2008), who noted that mimetic pressures often have a secondary influence compared to direct regulatory threats or market requirements in industrial settings.

The collective impact of these pressures provides clear evidence that Thanh Hoa's competitive advantage is increasingly tied to its environmental infrastructure and policy framework. The strong link between these external drivers and location choice implies that the province must accelerate its transition toward an "Eco-Industrial" model to remain attractive. The high loadings for items related to renewable energy and waste treatment in the measurement model indicate that investors are specifically seeking these "hard" green assets. Consequently, Thanh Hoa's success in future investment attraction will depend on its ability to satisfy the coercive, normative, and mimetic requirements that now define global industrial standards. By prioritizing the development of renewable energy access and improving the administrative efficiency of environmental permitting - key components of the PGI - the province can signal a welcoming institutional environment for high-quality, sustainable foreign direct investment.

VI. CONCLUSION AND POLICY RECOMMENDATIONS

This study provides robust empirical evidence that global green supply chain pressures significantly shape the investment location choices of enterprises in Thanh Hoa Province. The findings confirm that as the global economy transitions toward a low-carbon model, the criteria for selecting industrial destinations are undergoing a fundamental shift. The results derived from the analysis of 305 business leaders demonstrate that coercive, normative, and mimetic pressures collectively explain 53% of the variance in investment decisions within the province. Coercive pressure, rooted in international regulations and trade agreements, stands as the most critical driver, followed by normative expectations from global customers and mimetic trends within the industry. This leads to the conclusion that for Thanh Hoa to maintain its status as a premier industrial hub, it must move beyond traditional cost-based competition and proactively establish a comprehensive "green" institutional and physical infrastructure.

Based on the empirical evidence, several policy recommendations are proposed for the provincial administration of Thanh Hoa to facilitate sustainable foreign and domestic investment. First, the provincial government should prioritize the development of renewable energy infrastructure, such as offshore wind and solar power projects, to ensure that investors can access clean energy to meet their supply chain carbon neutrality mandates. This physical asset was highlighted as a top priority for investors in the measurement model. Second, there is an urgent need to transition existing industrial clusters, such as the Nghi Son Economic Zone and Bim Son Industrial Zone, into certified eco-industrial parks. These zones should feature centralized and high-standard wastewater and solid waste treatment facilities to help firms mitigate the risks associated with coercive regulatory compliance. Third, the province must focus on improving its scores in the Provincial Green Index (PGI) by streamlining administrative procedures for environmental permitting and providing specific fiscal incentives for projects that utilize green technologies. By fostering a transparent and supportive green regulatory environment, Thanh Hoa can satisfy the normative and mimetic requirements of modern global investors.

Despite its contributions, this research is not without limitations that offer avenues for future inquiry. The study's focus is limited to a single province in Vietnam, which may constrain the generalizability of the findings to other regions with different industrial structures. Future research could adopt a comparative approach, analyzing how green pressures influence investment differently across multiple provinces or neighboring countries in Southeast Asia. Additionally, while the current study utilizes cross-sectional data collected between January and March 2026, longitudinal research could provide deeper insights into how these pressures evolve as international environmental policies, such as the full implementation of the CBAM, become more stringent. Finally, future models could incorporate mediating variables, such

as local government responsiveness or corporate green innovation capabilities, to more precisely map the path from external pressure to the final investment decision. Notwithstanding these limitations, the study offers a critical foundation for understanding the new "green" logic of industrial location in a transforming emerging economy.

REFERENCES

- [1.] Aerts, W., Cormier, D., & Magnan, M. (2008). Corporate environmental disclosure, financial markets and the media: An international perspective. *Ecological Economics*, 64(3), 643-659. <https://doi.org/10.1016/j.ecolecon.2007.04.012>
- [2.] Campbell, J. L. (2007). Why would corporations behave in socially responsible ways? An institutional theory of corporate social responsibility. *Academy of Management Review*, 32(3), 946-967. <https://doi.org/10.2307/20159343>
- [3.] Cheng, L. K., & Kwan, Y. K. (2000). What are the determinants of the location of foreign direct investment? The Chinese experience. *Journal of International Economics*, 51(2), 379-400. [https://doi.org/10.1016/S0022-1996\(99\)00032-X](https://doi.org/10.1016/S0022-1996(99)00032-X)
- [4.] Christmann, P., & Taylor, G. (2001). Globalization and the environment: Determinants of firm self-regulation in China. *Journal of International Business Studies*, 32(3), 439-458. <https://doi.org/10.1057/palgrave.jibs.8490976>
- [5.] Chu, Z., Wang, L., & Lai, F. (2018). Customer pressure and green innovations at third party logistics providers in China: The moderation effect of organizational culture. *The International Journal of Logistics Management* 30(1). DOI:10.1108/IJLM-11-2017-0294
- [6.] DiMaggio, P. J., & Powell, W. W. (1983). The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review*, 48(2), 147-160. <https://doi.org/10.2307/2095101>
- [7.] Du, J., Lu, Y., & Tao, Z. (2008). Economic institutions and FDI location choice: Evidence from US multinationals in China. *Journal of Comparative Economics*, 36(3), 412-429. <https://doi.org/10.1016/j.jce.2008.04.004>
- [8.] Dunning, J. H. (1988). The Eclectic Paradigm of International Production: A Restatement and Some Possible Extensions. *Journal of International Business Studies*, 19(1), 1-31. <https://doi.org/10.1057/palgrave.jibs.8490372>
- [9.] Guler, I., Guillén, M. F., & Macpherson, J. M. (2002). Global competition, institutions, and the diffusion of organizational practices: The international spread of ISO 9000 quality certificates. *Administrative Science Quarterly*, 47(2), 207-232. <https://doi.org/10.2307/3094804>
- [10.] Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). Sage.
- [11.] Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115-135. <https://doi.org/10.1007/s11747-014-0403-8>
- [12.] Lieberman, M. B., & Asaba, S. (2006). Why do firms imitate each other? *Academy of Management Review*, 31(2), 366-385. <https://doi.org/10.5465/amr.2006.20208686>
- [13.] Rivera, J. (2004). Institutional pressures and voluntary environmental behavior in developing countries: Evidence from the Costa Rican hotel industry. *Society & Natural Resources*, 17(9), 779-797. <https://doi.org/10.1080/08941920490493783>
- [14.] Sarkis, J. (2012). A boundaries and flow perspective of green supply chain management. *Supply Chain Management: An International Journal*, 17(2), 202-216. <https://doi.org/10.1108/13598541211212924>
- [15.] Sarkis, J., & Cordeiro, J. J. (2001). An empirical evaluation of environmental efficiencies and firm performance: Pollution prevention versus end-of-pipe practice. *European Journal of Operational Research*, 135(1), 102-113. [https://doi.org/10.1016/S0377-2217\(00\)00306-4](https://doi.org/10.1016/S0377-2217(00)00306-4)
- [16.] VCCI & USAID. (2024). *The Provincial Competitiveness Index (PCI) and Provincial Green Index (PGI) 2023 Report*. Vietnam Chamber of Commerce and Industry.
- [17.] Vietnam Government. (2022). *Decree No. 06/2022/ND-CP on greenhouse gas emissions reduction and ozone layer protection*.
- [18.] Zailani, S., Jeyaraman, K., Vengadasan, G., & Premkumar, R. (2012). Sustainable supply chain management (SSCM) in Malaysia: A survey. *International Journal of Production Economics*, 140(1), 330-340. <https://doi.org/10.1016/j.ijpe.2012.02.008>
- [19.] Zhu, Q., & Sarkis, J. (2004). Relationships between operational practices and performance among early adopters of green supply chain management practices in Chinese manufacturing enterprises. *Journal of Operations Management*, 22(3), 265-289. <https://doi.org/10.1016/j.jom.2004.01.005>
- [20.] Zhu, Q., & Sarkis, J. (2007). The moderating effects of institutional pressures on emergent green supply chain practices and performance. *International Journal of Production Research*, 45(18-19), 4333-4355. <https://doi.org/10.1080/00207540701440345>
- [21.] Zhu, Q., Sarkis, J., & Lai, K. H. (2013). Institutional-based antecedents and performance outcomes of internal and external green supply chain management practices. *Journal of Purchasing and Supply Management* 19(2):106-117. DOI:10.1016/j.pursup.2012.12.001