LEGAL AND REGULATORY DRIVERS OF MANAGERIAL INTENTION TOWARD GREEN BOND ISSUANCE: EVIDENCE FROM LISTED CONSTRUCTION AND REAL ESTATE FIRMS

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Abstract

This study validates a framework explaining how regulatory pressure, leadership commitment, and disclosure capacity influence managerial intention toward green bond issuance among 335 listed Vietnamese construction and real estate firms. Grounded in stakeholder, institutional, signaling, and upper echelons theories, data collected via questionnaires were analyzed using statistical product and service solutions (SPSS). Regression results indicate that information transparency and disclosure capacity have the strongest positive effect on managerial intention to issue green bonds. Leadership commitment lacks statistical significance. The model explains 19 percent of the variance. Findings show that corporate capability and regulatory compliance are more critical than managerial sustainability orientation, highlighting the role of clear legal frameworks in emerging markets.

Keywords: Accounting, Finance, Legal Framework, Regulatory Pressure (REG), Leadership Commitment to Sustainability (LDC), Information Transparency and Disclosure Capacity (ITC)

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1. INTRODUCTION

The rapid expansion of sustainable finance has transformed global capital markets, with green bonds emerging as a pivotal instrument for mobilizing funds toward environmentally responsible projects. Since the first green bond issuance by the European Investment Bank in 2007, the global green bond market has grown exponentially, exceeding USD 2 trillion in cumulative issuance (Climate Bonds Initiative, 2023). This growth reflects increasing investor demand for environmentally responsible investment vehicles and stronger regulatory emphasis on climate-related financial disclosures. In emerging economies, green bonds are viewed not only as financing tools but also as strategic instruments for enhancing environmental governance and signaling long-term sustainability commitment.

Vietnam, as a rapidly industrializing economy highly vulnerable to climate change, faces mounting pressure to transition toward sustainable development pathways. The construction and real estate sectors play a particularly critical role due to their substantial carbon emissions, energy consumption, and environmental footprint (Bank Information Center, 2024). At the same time, these sectors require large-scale capital investments, making green bond issuance a potentially viable financing channel. However, despite regulatory initiatives and policy encouragement, green bond issuance in Vietnam remains limited compared to regional peers (FiinGroup, 2024a).

From a legal perspective, the development of green bond markets is closely associated with the establishment of regulatory frameworks that define eligible green projects, disclosure requirements, and verification standards. In Vietnam, the legal framework for green finance has gradually evolved through policy initiatives such as the Environmental Protection Law, the National Green Growth Strategy, and guidelines issued by the Ministry of Finance and the State Securities Commission. These legal instruments aim to encourage sustainable investment and provide regulatory clarity for green financial instruments. However, the implementation of green bond regulations remains relatively recent and still faces institutional and operational challenges (Organisation for Economic Co-operation and Development [OECD], 2022; Bank Information Center, 2024).

From a theoretical perspective, regulatory pressure constitutes a key institutional driver influencing corporate environmental behavior. Institutional theory posits that organizations adapt their strategies and structures to conform to coercive, normative, and mimetic pressures within their institutional environment (DiMaggio & Powell, 1983). In the context of green finance, regulatory frameworks, disclosure requirements, and environmental policies can shape firms' strategic financing decisions. Therefore, understanding how regulatory pressure shapes managerial intention to issue green bonds is crucial for evaluating policy effectiveness in emerging markets.

Beyond regulatory influence, internal organizational factors play a decisive role. Leadership commitment to sustainability has been widely recognized as a central determinant of corporate environmental initiatives. Upper echelons theory suggests that strategic decisions are significantly shaped by executives' values, experiences, and cognitive orientations (Hambrick & Mason, 1984). When top management demonstrates strong sustainability commitment, firms are more likely to allocate resources toward green projects and adopt sustainable financing mechanisms. Consequently, leadership commitment may directly influence the willingness to issue green bonds.

Information transparency and disclosure capacity represent another critical dimension. Signaling theory argues that firms voluntarily disclose information to reduce information asymmetry and signal quality to investors (Spence, 1973). Green bond issuance requires credible environmental reporting, third-party verification, and ongoing disclosure obligations. Firms with stronger disclosure capacity and transparent reporting systems are better positioned to meet investor expectations and regulatory requirements. Thus, information transparency may function as a facilitating mechanism in green bond decision-making processes.

Despite growing interest in green finance, prior empirical research in Vietnam has predominantly focused on market barriers, policy analysis, or descriptive statistics. Few studies have simultaneously examined regulatory, leadership, and disclosure-related determinants using firm-level primary data. Moreover, the interaction between institutional pressure and internal organizational capabilities remains underexplored in emerging markets. This gap highlights the need for a theory-driven empirical investigation that integrates institutional theory, upper echelons theory, and signaling theory to explain managerial intention to issue green bonds.

Accordingly, this study aims to examine the influence of regulatory pressure, leadership commitment to sustainability, and information transparency and disclosure capacity on managerial intention to issue green bonds among listed construction and real estate firms in Vietnam. Specifically, the study addresses the following research questions:

RQ1: To what extent does regulatory pressure influence managerial intention to issue green bonds?

RQ2: How does leadership commitment to sustainability affect firms' willingness to issue green bonds?

RQ3: Do information transparency and disclosure capacity significantly shape managerial intention to issue green bonds?

By answering these questions, the study seeks to contribute to sustainable finance literature and provide policy-relevant insights for emerging capital markets.

Unlike previous studies that primarily relied on a single theoretical perspective, this study adopts an integrated theoretical framework combining institutional theory, stakeholder theory, signaling theory, and upper echelons theory to explain managerial intention toward green bond issuance from both external institutional pressures and internal organizational capabilities.

The rest of this article is structured as follows. Section 2 outlines the theoretical framework and literature review. Section 3 describes the research methods and data. Section 4 reports the empirical results. Section 5 presents the comprehensive

discussion of the findings. Section 6 outlines the theoretical and practical implications of the research. Section 7 concludes the paper and offers suggestions for future research.

2. THEORETICAL FOUNDATIONS AND LITERATURE REVIEW

2.1. Stakeholder theory

Stakeholder theory argues that firms operate within a network of stakeholders—including investors, customers, regulators, and communities—whose expectations influence corporate decision-making (Freeman, 1984). Organizations are increasingly expected to demonstrate environmental responsibility and transparency in their financing activities. Managerial intention to issue green bonds can be viewed as a strategic response to stakeholder pressure for sustainable investment practices.

Recent studies suggest that firms adopt green financial instruments to enhance legitimacy and maintain strong relationships with stakeholders concerned about environmental sustainability (Flammer, 2021). By issuing green bonds, firms signal their commitment to sustainability and responsible governance, thereby improving stakeholder trust.

In the context of construction and real estate firms in Vietnam, stakeholder pressure from regulators, international investors, and project partners can significantly influence financing decisions. Managerial intention to issue green bonds may therefore reflect firms' efforts to align with sustainability expectations and strengthen their legitimacy in capital markets. This theory helps explain why external pressures and sustainability orientation may affect firms' willingness to issue green bonds.

2.2. Institutional theory

Institutional theory explains how organizational behavior is shaped by regulatory, normative, and cognitive pressures from the external environment (DiMaggio & Powell, 1983). Firms often adopt new practices, including sustainability-related financial instruments, to conform to institutional expectations and gain legitimacy.

In the context of green finance, regulatory frameworks, government policies, and international sustainability standards play a crucial role in encouraging firms to adopt green financing mechanisms (Zhang et al., 2019). Institutional support reduces uncertainty and increases firms' confidence in managerial intention to issue green bonds.

For Vietnamese construction and real estate firms, institutional pressures such as environmental regulations, green finance policies, and sustainability reporting requirements may influence their financing decisions. The adoption of green bonds can therefore be understood as a response to evolving institutional environments promoting sustainable development.

2.3. Legal framework for green bonds

The legal framework governing green bonds plays a crucial role in shaping corporate financing behavior. Legal regulations typically define the eligibility criteria for green projects, disclosure obligations, reporting standards, and verification mechanisms required for managerial intention to issue green bonds. These legal requirements are intended to ensure transparency, prevent greenwashing, and maintain investor confidence in sustainable finance markets (OECD, 2022).

In emerging markets, the development of green bond regulations is often closely linked to broader environmental and financial policy reforms. Clear legal frameworks can reduce regulatory uncertainty and provide firms with guidance regarding compliance procedures, reporting obligations, and eligible project categories (Zhang et al., 2019). When regulatory systems provide consistent legal guidance, firms are more likely to adopt green financial instruments as part of their long-term sustainability strategies.

2.4. Signaling theory

Signaling theory explains how organizations convey credible information to external stakeholders under conditions of information asymmetry (Spence, 1973). In capital markets, firms often possess private information about their financial health, governance quality, and long-term strategic orientation that investors cannot directly observe. To reduce this asymmetry, companies engage in signaling behaviors by voluntarily disclosing reliable information or adopting visible actions that demonstrate credibility. Financial decisions, particularly those involving transparency and compliance requirements, can therefore function as signals that communicate firm quality and reduce uncertainty for investors (Connelly et al., 2011).

In the context of managerial intention to issue green bonds, signaling theory suggests that firms may use green bonds as a mechanism to demonstrate their environmental responsibility and sustainability commitment. Managerial intention to issue green bonds requires strict disclosure standards, third-party verification, and ongoing reporting of environmental impacts. Firms with stronger information transparency and disclosure capacity are therefore better able to send credible signals of sustainability performance to investors and stakeholders. Empirical studies have shown that firms' managerial intention to issue green bonds often exhibits higher disclosure quality and stronger environmental, social, and governance (ESG) credibility, which helps attract responsible investors and reduce information asymmetry in sustainable finance markets (Flammer, 2021; Tang & Zhang, 2020). Consequently, signaling theory provides a theoretical explanation for why disclosure capacity may significantly influence managerial intention to issue green bonds.

2.5. Upper echelons theory

Upper echelons theory posits that organizational outcomes and strategic decisions are strongly influenced by the characteristics, values, and cognitive orientations of top executives (Hambrick & Mason, 1984). According to this perspective, leaders interpret environmental challenges and strategic opportunities through the lens of their experiences, beliefs, and priorities. As a result, managerial

attitudes toward sustainability, innovation, and risk can shape corporate strategies, including environmental initiatives and sustainable financing decisions.

Applied to the context of managerial intention to issue green bonds, upper echelons theory suggests that leadership commitment to sustainability can influence whether firms adopt environmentally responsible financing instruments. Executives who prioritize sustainability are more likely to integrate environmental objectives into corporate strategy, allocate resources to green projects, and support innovative financial mechanisms such as green bonds. Prior research indicates that executive sustainability orientation can drive corporate environmental performance and green investment strategies (Larrinaga & Bebbington, 2021). Therefore, leadership commitment to sustainability may serve as an important internal driver shaping firms' willingness to participate in sustainable finance initiatives, including managerial intention to issue green bonds.

Although stakeholder theory, institutional theory, signaling theory, and upper echelons theory each provide valuable insights into green finance, no single theory alone sufficiently explains managerial intention toward green bond issuance in emerging markets. Green bond decisions are inherently multidimensional because they are simultaneously shaped by external institutional pressures, stakeholder expectations, internal managerial values, and firms' disclosure capabilities. Institutional theory explains how regulatory pressure encourages firms to comply with evolving sustainability regulations, while stakeholder theory emphasizes the expectations of investors, regulators, and society regarding responsible financing practices. Signaling theory explains why firms with stronger disclosure capability are more willing to communicate their sustainability quality through green bond issuance. Finally, upper echelons theory accounts for managerial discretion by explaining how executives' sustainability orientation influences strategic financing intentions. Therefore, integrating these four complementary theoretical perspectives provides a more comprehensive explanation of managerial intention toward green bond issuance than relying on any single theory in isolation.

2.6. Literature review

First, firm-level studies highlight that environmental orientation and ESG quality are central drivers of green bond issuance. Using large-scale corporate samples, García et al. (2023) report that issuers tend to have stronger environmental performance (for example, higher environmental scores and/or lower emissions) and governance structures that support sustainability (for example, sustainability committees). This evidence is methodologically strong due to the use of alternative environmental proxies and robustness checks. However, it is constrained by reliance on secondary ESG datasets that may suffer from rating inconsistency across providers and may not capture "implementation capacity" inside the firm. Complementing this, Flammer (2021) demonstrates that certification and credibility mechanisms shape market reception, implying that green bond issuance is intertwined with corporate reputational strategy and external verification. While influential, such studies often infer "issuance motivation" indirectly from market reactions and archival data rather than measuring managerial decision processes directly.

Second, governance and board attributes are increasingly tested as determinants, with mixed findings across settings. Biju et al. (2024) find that board characteristics (for example, gender diversity, independent directors, chief executive officer tenure) and ESG performance are associated with green bond issuance and issuance volume. A strength of this line is its clear theorization (agency and governance channels) and explicit focus on issuance decisions; however, outcomes depend heavily on model specification and the choice of issuance proxy (binary issuance versus volume), making cross-study comparability difficult. Moreover, governance variables may be endogenous: better-governed firms may issue green bonds, but issuance itself may also trigger governance upgrades—a limitation common to many archival studies.

Finally, studies on issuance consequences help explain why issuance might be attractive, but they are not determinants per se and may yield ambiguous implications. Zheng et al. (2023) find that green bond issuance can improve corporate ESG performance, with mechanisms such as financing conditions and debt maturity structure, implying potential "strategic benefits" that can motivate issuance decisions. However, these effect studies typically use quasi-experimental or panel approaches and focus on post-issuance outcomes; they rarely unpack the pre-issuance constraints and organizational readiness that determine whether a firm can issue green bonds in the first place.

Research gap and justification for the current study: international determinants studies mainly rely on archival ESG ratings and secondary datasets, which may not capture organizational readiness, internal capabilities, and perceived constraints that directly shape managerial intention toward green bond issuance—especially in emerging markets (García et al., 2023; Biju et al., 2024).

Furthermore, previous studies rarely integrate institutional, stakeholder, signaling, and upper echelons theories into a unified explanatory framework, leaving limited understanding of how external regulatory forces and internal organizational capabilities jointly shape managerial intention toward green bond issuance.

Accordingly, this study is necessary because it provides micro-level evidence using primary survey data from Vietnam's listed construction and real estate firms, enabling a more direct test of determinants tied to regulatory pressure, leadership commitment to sustainability, and information transparency and disclosure capacity, thereby strengthening both contextual relevance and theoretical grounding in an emerging market setting.

2.7. Hypotheses development

2.7.1. Regulatory pressure

Institutional and legal frameworks play a crucial role in shaping corporate sustainability behavior. Regulatory laws governing environmental protection,

financial disclosure, and sustainable finance policies create legal obligations and incentives that influence firms' financing decisions (OECD, 2022). In the context of green finance, governments play a crucial role in shaping corporate financing decisions through environmental regulations, green taxonomies, disclosure requirements, and financial incentives (OECD, 2022). When regulatory frameworks become clearer and more supportive, firms face both coercive pressure and strategic incentives to adopt green financing instruments such as green bonds.

Empirical evidence supports this argument. Le and Vivian (2025) show that regulatory clarity and supportive policy frameworks significantly affect firms' willingness to issue green bonds in Vietnam. Similarly, García et al. (2023) find that firms operating in stronger institutional environments are more likely to issue green bonds. For construction and real estate firms, which are subject to environmental compliance requirements in project development, regulatory pressure becomes particularly salient. Therefore, the following hypothesis is proposed:

H1: Regulatory pressure positively influences managerial intention toward green bond issuance decision.

2.7.2. Leadership commitment to sustainability

Upper echelons theory suggests that strategic decisions reflect the values and orientation of top management (Hambrick & Mason, 1984). When leaders demonstrate strong commitment to sustainability, organizations are more likely to integrate environmental considerations into financial and strategic decisions, including the adoption of green financing.

Recent studies confirm this relationship. Flammer (2021) finds that sustainability-oriented leadership is associated with greater adoption of green financing instruments. Nguyen and Le (2024) also show that corporate sustainability orientation influences green bond participation in emerging markets. In construction and real estate sectors, leadership commitment is especially important because green projects often involve higher initial costs and long-term financing decisions. Therefore, the following hypothesis is proposed:

H2: Leadership commitment to sustainability positively influences managerial intention toward green bond issuance decision.

2.7.3. Information transparency and disclosure capacity

Stakeholder theory suggests that firms disclose sustainability information to reduce information asymmetry and gain legitimacy (Freeman, 1984). Green bonds require credible reporting on the use of proceeds, environmental impact, and project eligibility. Therefore, firms with stronger disclosure capacity are more capable of issuing green bonds.

Empirical research supports this view. García et al. (2023) show that firms with higher ESG disclosure quality are more likely to issue green bonds. Similarly, OECD (2022) emphasizes transparency as a prerequisite for green finance credibility. In Vietnam's construction and real estate sectors, where investor confidence is closely tied to transparency, disclosure capacity becomes a key enabling factor. Therefore, the following hypothesis is proposed:

H3: Information transparency positively influences managerial intention toward green bond issuance decision.

3. METHODOLOGY

This study employed a quantitative, cross-sectional survey design to examine how regulatory pressure, leadership commitment to sustainability, and information transparency and disclosure capacity influence managerial intention toward green bond issuance among listed construction and real estate firms in Vietnam. A survey-based approach was considered appropriate because the dependent construct captures forward-looking managerial perceptions and organizational willingness rather than observable completed issuance. Structured questionnaires enabled standardized measurement of theoretically derived latent constructs across firms operating within a common institutional and regulatory environment.

The target population comprised construction and real estate firms listed on the Vietnamese stock exchanges. These sectors were selected because of their high capital intensity, substantial environmental footprint, and increasing need to mobilize long-term capital for green buildings, energy-efficient infrastructure, and environmentally responsible property development. The sampling frame was compiled from publicly available lists of firms traded on the Ho Chi Minh Stock Exchange, Hanoi Stock Exchange, and Unlisted Public Company Market, after excluding firms that were inactive, suspended for an extended period, or lacked sufficient contact information.

A purposive key-informant sampling approach was adopted because the questionnaire required respondents with direct knowledge of corporate financing, sustainability strategy, environmental disclosure, and potential green bond issuance. Eligible respondents included chief executive officers, deputy directors, chief financial officers, chief accountants, heads of finance or accounting departments, and senior officers responsible for sustainability reporting. The research team initially contacted 375 eligible firms by email, telephone, and professional networks and distributed 375 questionnaires. A total of 350 questionnaires were returned, corresponding to a gross response rate of 93.3%. After excluding 15 questionnaires because of substantial missing data, patterned responses, failure to meet the respondent-selection criteria, or duplicate responses from the same firm, 335 valid questionnaires were retained, yielding an effective response rate of 95.7%.

To preserve independence at the firm level, only one key informant was retained from each firm. Where more than one response was received from the same firm, priority was given to the respondent holding the most senior position and demonstrating the greatest involvement in financing and sustainability-related decisions. Before completing the survey, respondents were asked screening questions concerning their position, professional experience, and involvement in corporate financing or ESG disclosure. These procedures helped ensure that the respondents possessed sufficient

knowledge to assess managerial intention toward green bond issuance.

The questionnaire was developed through a multi-stage procedure. First, the initial measurement items were adapted from established studies on green bond issuance, sustainable finance, institutional pressure, managerial sustainability commitment, and corporate disclosure. The wording was modified to reflect the institutional and sectoral characteristics of listed construction and real estate firms in Vietnam. Because the dependent construct captures perceptions and prospective organizational behavior rather than completed bond issuance, the four green bond issuance decision items were explicitly framed as measures of managerial intention toward green bond issuance.

Second, the original English items were translated into Vietnamese by two bilingual researchers with expertise in finance and accounting. An independent bilingual academic, who had not participated in the initial translation, subsequently translated the Vietnamese version back into English. The research team compared the back-translated version with the original instrument and resolved differences through discussion, following the back-translation principle proposed by Brislin (1970). This procedure was undertaken to preserve conceptual and semantic equivalence rather than relying on literal word-for-word translation.

Third, content validity was assessed by a panel of five experts comprising one academic specializing in sustainable finance or corporate governance, two chief financial officers or chief accountants from listed construction and real estate firms, and two practitioners with experience in securities, bond issuance, or ESG reporting. The experts evaluated the relevance, clarity, contextual appropriateness, and potential conceptual overlap of each item. Based on their comments, several items were reworded to distinguish regulatory pressure, leadership commitment, disclosure capacity, and managerial intention more clearly.

A pilot test was conducted with 30 eligible respondents who were not included in the final sample; participants were asked to comment on item clarity, terminology, questionnaire length, and response difficulty. Preliminary reliability analysis and respondent feedback were used to refine the instrument before the main survey. No major changes were made to the conceptual structure, although ambiguous wording and sector-specific terminology were revised. All constructs were measured on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Participation was voluntary, and respondents received a brief statement explaining the research purpose, confidentiality arrangements, and their right to discontinue the survey at any time. No personally identifiable information was disclosed in the analysis. Responses were aggregated and used exclusively for academic purposes. To reduce evaluation apprehension and social desirability bias, respondents were informed that there were no right or wrong answers and that neither individual responses nor firm identities would be reported.

Procedural measures were also adopted to mitigate common method bias. The questionnaire assured anonymity, used concise and neutral wording, separated predictor and outcome constructs into distinct sections, and avoided ambiguous or double-barreled questions. Statistical checks for common method bias were subsequently performed before hypothesis testing.

Data analysis was conducted using SPSS software. The reliability of measurement scales was assessed using Cronbach's alpha coefficient, with a threshold of 0.70 indicating acceptable internal consistency (Nunnally & Bernstein, 1994). Exploratory factor analysis was then performed to examine the underlying factor structure and confirm construct validity. The Kaiser–Meyer–Olkin measure and Bartlett's test of sphericity were used to evaluate sampling adequacy and factorability (Hair et al., 2019). Factor loadings greater than 0.50 were considered acceptable.

Subsequently, Pearson correlation analysis was employed to examine the relationships among variables and assess potential multicollinearity. Multiple linear regression analysis was conducted to test the proposed hypotheses and evaluate the relative influence of independent variables on green bond issuance decisions. Diagnostic tests, including variance inflation factor (VIF) and residual analysis, were performed to ensure compliance with classical linear regression assumptions. This analytical approach provides robust empirical evidence for evaluating the determinants of green bond issuance decisions in the context of an emerging market.

The research model is presented in Figure 1. Model 1 includes one dependent variable, managerial intention toward green bond issuance decision *(GBI)*, and three independent variables: regulatory pressure *(REG)*, leadership commitment to sustainability *(LDC)*, and information transparency and disclosure capacity *(ITC)*. The variable scales are described in Table 1.

Figure 1. Research model

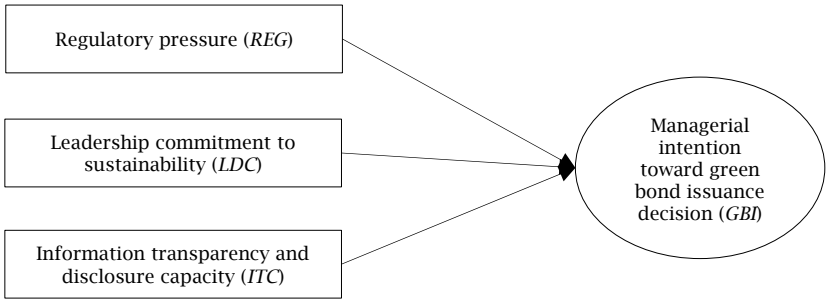


Table 1. Scales for the independent and dependent variables

Code	Description	Sources
Managerial intention toward green bond issuance (GBI)		
GBI1	Our firm intends to issue green bonds in the foreseeable future.	Flammer (2021), García et al. (2023)
GBI2	Management considers green bonds a feasible financing instrument for the firm.	
GBI3	Our firm is willing to finance eligible environmentally responsible projects through green bonds.	
GBI4	Our firm would seriously consider green bond issuance when suitable eligible projects and regulatory conditions are available.	
Regulatory pressure (REG)		
REG1	Environmental regulations encourage green financing adoption.	OECD (2022), Le and Vivian (2025)
REG2	Government policies support green bond issuance.	
REG3	Regulatory frameworks for green bonds are increasingly clear.	
REG4	Compliance requirements motivate sustainable financing decisions.	
Leadership commitment to sustainability (LDC)		
LDC1	Top management supports sustainability initiatives.	Flammer (2021), Nguyen and Le (2024)
LDC2	Leaders encourage green investment projects.	
LDC3	Sustainability is integrated into corporate strategy.	
LDC4	Leaders prioritize long-term environmental responsibility.	
Information transparency and disclosure capacity (ITC)		
ITC1	The firm provides transparent sustainability reporting.	García et al. (2023), OECD (2022)
ITC2	Environmental performance is regularly disclosed.	
ITC3	The firm can track the use of green bond proceeds.	
ITC4	ESG reporting systems are well established.	

4. RESEARCH RESULTS

4.1. Reliability analysis (Cronbach's alpha)

Reliability analysis was conducted to assess the internal consistency of the measurement scales. All constructs demonstrated satisfactory reliability, with Cronbach's alpha coefficients exceeding the recommended threshold of 0.70 (Hair et al., 2019; Nunnally & Bernstein, 1994). Specifically, regulatory pressure ($\alpha = 0.901$), information transparency and disclosure capacity ($\alpha = 0.880$), and managerial intention toward green bond issuance decision ($\alpha = 0.874$) indicate strong internal consistency, while leadership commitment to sustainability ($\alpha = 0.795$) remains within acceptable reliability standards.

The *GBI* (four components/attributes) is influenced by analysis through the investigation of Cronbach's alpha determinant (in this case study, *REG*, *LDC*, *ITC*, as shown in Table 2a and Table 2b below:

Table 2a. Analysis of factors' confidence of scales

Determinants	N	Cronbach's alpha	Corrected item-total correlation
Regulatory pressure (*REG*)	4	0.901	0.725
Leadership commitment to sustainability (*LDC*)	4	0.795	0.547
Information transparency and disclosure capacity (*ITC*)	4	0.880	0.688
Managerial intention toward green bond issuance decision (*GBI*)	4	0.874	0.722

Source: Prepared by the authors using SPSS software, 2025.

Table 2b. Results of Cronbach's alpha testing of attributes and item-total statistics

Code	Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation	Cronbach's alpha if item deleted
Regulatory pressure (REG): α = 0.901				
REG1	9.134	3.542	0.725	0.892
REG2	9.021	3.535	0.785	0.871
REG3	9.027	3.415	0.815	0.860
REG4	9.104	3.166	0.802	0.866
Leadership commitment to sustainability (LDC): α = 0.795				
LDC1	9.534	4.771	0.560	0.766
LDC2	9.475	4.819	0.547	0.772
LDC3	9.278	3.950	0.711	0.686
LDC4	9.791	4.579	0.609	0.742
Information transparency and disclosure capacity (ITC): α = 0.880				
ITC1	10.400	5.702	0.760	0.838
ITC2	10.313	6.024	0.688	0.865
ITC3	10.475	5.681	0.780	0.830
ITC4	10.328	5.682	0.731	0.849
Managerial intention toward green bond issuance decision (GBI): α = 0.874				
GBI1	9.328	4.012	0.742	0.833
GBI2	9.293	4.411	0.740	0.837
GBI3	9.167	3.990	0.723	0.842
GBI4	9.322	4.141	0.722	0.841

Source: Prepared by the authors using SPSS software, 2025.

Table 2a and Table 2b show that all corrected item–total correlations exceed 0.30, suggesting adequate item discrimination. No items were removed, as Cronbach's alpha would not improve meaningfully if any item were deleted. These results confirm that the measurement scales are reliable for subsequent factor and regression analyses.

4.2. Exploratory factor analysis

Component analysis and the extraction of variance coefficients were used to conduct exploratory factor analysis. The sampling adequacy, correlations, and factorability of the 12 measurement items are statistically integrated and evaluated across Table 3.

Table 3. Kaiser–Meyer–Olkin and Bartlett's test

Kaiser-Meyer-Olkin measure of sampling adequacy		0.848
Bartlett's test of sphericity	Approx. chi-square	2,141.486
	Df	66
	Sig.	0.000

Source: Prepared by the authors using SPSS software, 2025.

As structured in Table 3, the Kaiser–Meyer–Olkin measure of sampling adequacy is 0.848, exceeding the recommended threshold of 0.60. Simultaneously, Bartlett's test of sphericity is statistically significant (χ^2 = 2,141.486, p < 0.001), indicating suitability for factor analysis (Hair et al., 2019).

Three factors with eigenvalues greater than 1 were extracted. These three factors jointly explain 71.76% of the total variance, which exceeds the 50% benchmark commonly accepted in social science research. All factor loadings exceed the 0.50 threshold, confirming satisfactory convergent validity. The final factor structure perfectly aligns with the theoretically derived constructs of *REG*, *LDC*, and *ITC*.

4.3. Results of regression model analysis

We have a multiple regression model based on the adjusted model following the execution of exploratory factor analysis:

$$GBI = \alpha + \beta_1 \times REG + \beta_2 \times LDC + \beta_3 \times ITC + \varepsilon \quad (1)$$

where:

- *GBI* is the dependent variable representing firms' managerial intention toward green bond issuance.
- α is the constant intercept term of the regression equation.
- β_1 is the standardized regression coefficient measuring the direct influence of *REG*.
- β_2 is the standardized regression coefficient measuring the direct influence of *LDC*.
- β_3 is the standardized regression coefficient measuring the direct influence of *ITC*.
- ε is the stochastic error disturbance term capturing unobserved firm-level variance.

The empirical diagnostics, variance distributions, and estimated parameters of this model are systematically presented and integrated across Table 4, Table 5, and Table 6.

Table 4. Model summary[b]

Model	*R*	*R-square*	*Adjusted R-square*	*Std. error of the estimate*	*Durbin-Watson*
1	0.436[a]	0.190	0.183	0.60055	1.777

Note: a. Predictors: (Constant), ITC, REG, LDC. b. Dependent variable: GBI.
Source: Prepared by the authors using SPSS software, 2025.

Table 5. ANOVA[a]

Model		*Sum of squares*	*Df*	*Mean square*	*F*	*Sig.*
1	Regression	28.004	3	9.335	25.882	0.000[b]
	Residual	119.378	331	0.361		
	Total	147.381	334			

Note: a. Predictors: (Constant), ITC, REG, LDC. b. Dependent variable: GBI.
Source: Prepared by the authors using SPSS software, 2025.

Table 6. Regression model

Model		*Unstandardized coefficients*		*Standardized coefficients*	*T*	*Sig.*	*Collinearity statistics*	
		B	*Std. error*	*Beta*			*Tolerance*	*VIF*
1	(Constant)	1.459	0.212		6.869	0.000		
	REG	0.125	0.058	0.114	2.142	0.033	0.864	1.158
	LDC	0.077	0.052	0.079	1.481	0.140	0.856	1.168
	ITC	0.293	0.047	0.346	6.274	0.000	0.805	1.243

Note: a. Dependent variable: GBI.
Source: Prepared by the authors using SPSS software, 2025.

Data in Tables 4–6 demonstrate that all VIFs tested for multicollinearity in separate samples are less than 3, indicating a low level of multicollinearity (Hair et al., 2010; Hoang & Chu, 2008). As a result, the model maintains the regression assumptions.

The estimated regression model is statistically significant (F = 25.882, p < 0.001), indicating that the independent variables jointly explain variations in managerial intention toward green bond issuance decisions. The model accounts for 19% of the total variance (R^2 = 0.190, Adjusted R^2 = 0.183). Although the total explanatory power appears moderate, this level is considered acceptable in behavioral and perception-based research contexts, particularly

within emerging markets where strategic financial decisions are influenced by multiple institutional and contextual factors (Hair et al., 2019).

Results from the empirical model demonstrate that the independent variables of *REG* and *ITC* are statistically significant ($p < 0.05$) to *GBI*, but the independent variable of *LDC* is not ($p < 0.05$) to *GBI* (Hair et al., 2010; Hoang & Chu, 2008).

Among the independent variables, *ITC* exhibits the strongest positive effect on *GBI* ($\beta = 0.346$, $p < 0.001$). This suggests that firms with stronger disclosure systems and reporting capabilities are significantly more likely to consider issuing green bonds. *REG* also demonstrates a statistically significant but weaker positive effect ($\beta = 0.114$, $p = 0.033$), indicating that external institutional pressures moderately influence issuance decisions.

In contrast, *LDC* does not demonstrate a statistically significant effect ($\beta = 0.079$, $p = 0.140$, greater than 0.05), suggesting that a managerial sustainability orientation alone may not directly translate into green bond issuance decisions without supporting institutional and disclosure capacity conditions.

Factors influencing the *GBI* in listed construction and real estate firms in Vietnam are presented as follows:

$$GBI = 0.114 \times (REG) + 0.346 \times (ITC) + \varepsilon \quad (2)$$

Next, Table 7 presents the results of testing the research hypotheses.

Table 7. Results of testing the research hypotheses

No	*Hypotheses*	*Test results*	*Trends of influence*
1	*H1*	Accept	+
2	*H2*	Reject	#
3	*H3*	Accept	+

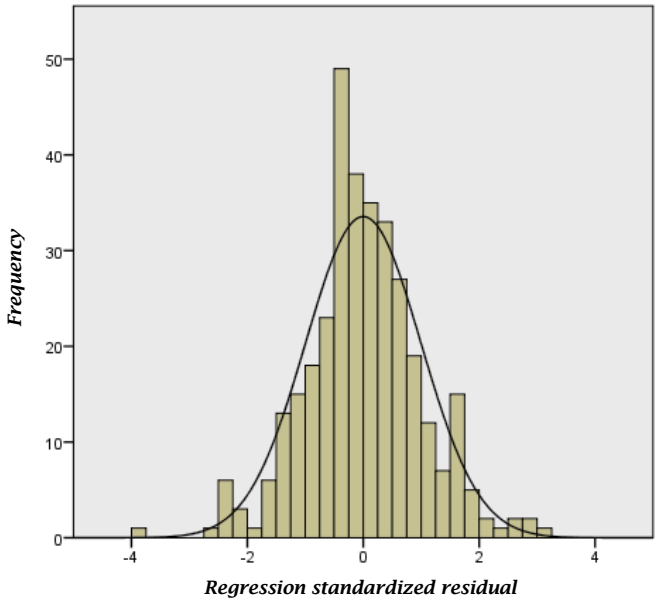
Source: Prepared by the authors, 2025.

4.4. Residual analysis results

The regression diagnostic plots for evaluating the normality of error term distributions are presented in Figure 2 and Figure 3.

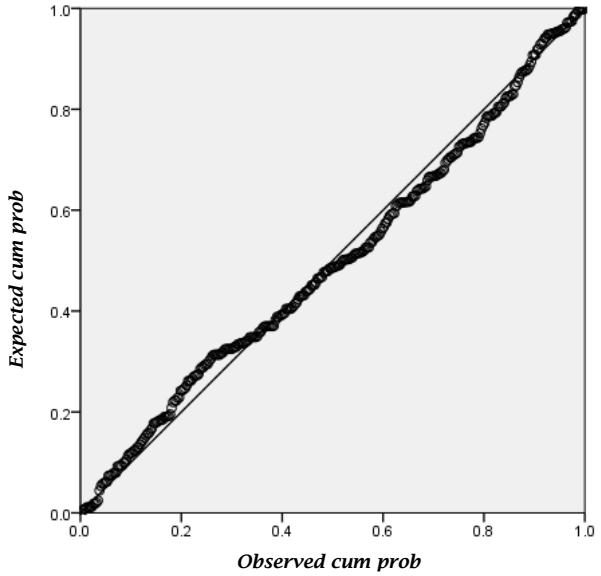
Diagnostic tests confirm that multicollinearity is not a concern, as VIF values range between 1.158 and 1.243, well below the threshold of 5. The Durbin–Watson statistic (1.777) indicates no serious autocorrelation issues. Visual inspection of standardized residuals suggests approximate normal distribution and homoscedasticity, supporting the validity of the regression assumptions.

Figure 2. Regression standardized residual



Note: Dependent variable: Managerial intention toward green bond issuance decision. Mean = -3.87E-16. Std. dev. = 0.995; N = 335.

Figure 3. Normal P-P plot of regression standardized residual



Note: Dependent variable: Managerial intention toward green bond issuance decision.

Overall, the findings indicate that institutional and disclosure-related mechanisms play a more prominent role than internal leadership commitment in shaping green bond issuance decisions among Vietnamese listed construction and real estate firms. This suggests that market readiness and regulatory compliance capabilities may currently outweigh strategic sustainability orientation in emerging capital markets.

5. DISCUSSION

This study examines the influence of regulatory pressure, leadership commitment to sustainability, and information transparency and disclosure capacity on green bond issuance decisions among listed construction and real estate firms in Vietnam. The findings reveal that information transparency and disclosure capacity are the strongest determinants, followed by regulatory pressure, while leadership commitment does not demonstrate a statistically significant effect. These results provide important theoretical and contextual insights for sustainable finance research in emerging markets.

From a legal perspective, these findings suggest that the effectiveness of green bond markets depends not only on regulatory pressure but also on the clarity and enforceability of the legal framework governing sustainable finance. In emerging markets such as Vietnam, regulatory laws and disclosure standards serve as institutional signals that shape corporate expectations regarding compliance requirements and reporting obligations.

5.1. Information transparency and disclosure capacity

The results indicate that information transparency and disclosure capacity ($\beta = 0.346$, $p < 0.001$) have the strongest positive influence on green bond issuance decisions. This finding is consistent with signaling theory (Spence, 1973), which argues that firms reduce information asymmetry by disclosing credible information to investors. Green bond issuance requires stringent environmental reporting, third-party verification, and post-issuance monitoring. Firms with well-developed disclosure systems are therefore better positioned to meet these requirements and gain investor confidence.

This finding aligns with Tang and Zhang (2020), who show that green bond issuers tend to exhibit stronger governance and disclosure quality compared to non-issuers. Similarly, Flammer (2021) finds that firms issuing green bonds often demonstrate superior ESG transparency and reputational capital. However, unlike studies conducted in developed markets where ESG reputation plays a signaling role, the current findings suggest that in Vietnam, operational disclosure capacity is more critical than symbolic sustainability positioning. This highlights a contextual difference: in emerging markets, compliance capability may precede reputational signaling.

5.2. The moderate effect of regulatory pressure

Regulatory pressure ($\beta = 0.114$, $p = 0.033$) also positively influences green bond issuance decisions, though its effect size is smaller than that of disclosure capacity. This finding supports institutional theory (DiMaggio & Powell, 1983), which posits that organizations respond to coercive pressures from regulatory bodies. In Vietnam, government initiatives promoting green finance and environmental accountability appear to exert moderate influence on corporate financing strategies.

The result is partially consistent with Zheng et al. (2023), who find that regulatory frameworks significantly stimulate green bond issuance in China. However, compared to more mature regulatory systems, Vietnam's green finance framework remains evolving, which may explain the relatively weaker coefficient. The finding suggests that regulatory pressure alone is insufficient to drive green bond adoption unless

supported by firm-level capabilities. This nuance advances prior literature by demonstrating that institutional pressure interacts with organizational readiness rather than operating independently.

5.3. The insignificant role of leadership commitment

Contrary to expectations derived from upper echelons theory (Hambrick & Mason, 1984), leadership commitment to sustainability does not significantly influence green bond issuance decisions ($\beta = 0.079$, $p = 0.140$). This result diverges from studies suggesting that executive sustainability orientation drives environmental strategy adoption (Larrinaga & Bebbington, 2021; Nguyen & Le, 2024).

Several contextual explanations may account for this finding. First, in capital-intensive sectors such as construction and real estate, financing decisions are heavily constrained by financial feasibility and compliance requirements. Even when leaders express sustainability commitment, actual green bond issuance may depend more on institutional infrastructure and reporting capacity. Second, leadership commitment may exert an indirect effect mediated through disclosure systems or strategic alignment rather than directly influencing financing decisions.

This finding contributes to the literature by suggesting that in emerging markets, structural and compliance mechanisms may outweigh cultural or value-based drivers in shaping sustainable financing decisions. It also highlights the possibility that sustainability commitment becomes influential only after green finance markets reach higher maturity levels.

5.4. Comparative interpretation with prior Vietnam-based studies

Vietnam-focused research has largely emphasized market barriers, regulatory gaps, and investor awareness issues (FiinGroup, 2024b; Le & Vivian, 2025). However, these studies have not empirically tested firm-level determinants using survey-based data. The present study advances this literature by demonstrating that internal disclosure capacity is more influential than general market support or leadership orientation.

This finding complements prior descriptive analyses by identifying a concrete micro-level mechanism driving green bond decisions. While earlier research framed green bond market development primarily as a macro-level institutional challenge, the current evidence suggests that firm-level readiness plays a decisive role. Thus, the study bridges macro-institutional narratives with organizational-level behavioral evidence.

5.5. Theoretical contributions

The findings contribute to theory in three important ways. First, by integrating institutional theory and signaling theory, the study demonstrates that green bond issuance decisions are shaped by both external regulatory pressure and internal disclosure capability. Second, the results refine upper echelons theory in emerging market contexts, suggesting that executive sustainability commitment alone may not directly translate into sustainable financing adoption without structural support. Third, the relatively modest explanatory power ($R^2 = 0.190$) indicates that green bond decisions are multifaceted and influenced by additional contextual factors such as financial constraints, ESG performance, and investor trust, warranting further theoretical expansion.

Overall, the findings suggest that green bond issuance in Vietnam is currently compliance- and capability-driven rather than value-driven. This reflects the transitional stage of sustainable finance development in emerging markets, where institutional and informational readiness precede cultural transformation.

6. IMPLICATIONS

The empirical findings provide important implications for policymakers, regulators, and corporate managers, particularly when interpreted in light of the standardized regression coefficients.

6.1. Implications for corporate managers

The strongest determinant of green bond issuance decisions is information transparency and disclosure capacity ($\beta = 0.346$, $p < 0.001$). This substantial coefficient indicates that firms with more robust reporting systems, sustainability disclosure mechanisms, and compliance infrastructure are significantly more likely to consider issuing green bonds.

Therefore, corporate managers in construction and real estate firms should prioritize strengthening internal disclosure frameworks, ESG reporting systems, and third-party verification readiness. Investments in sustainability accounting systems, integrated reporting practices, and internal environmental auditing capabilities may substantially enhance green bond eligibility. In emerging markets such as Vietnam, disclosure capability appears to function as a prerequisite condition for sustainable financing adoption rather than merely a reputational signal.

6.2. Implications for regulators and policymakers

Regulatory pressure ($\beta = 0.114$, $p = 0.033$), although statistically significant, exhibits a moderate effect size. This suggests that while regulatory frameworks do influence green bond decisions, their impact is weaker compared to firm-level disclosure capacity.

From a legal perspective, policymakers should prioritize developing a comprehensive legal framework for green bonds, including standardized taxonomies for green projects, mandatory disclosure requirements, and clear verification procedures. Strengthening legal certainty can reduce regulatory ambiguity and encourage firms to participate in sustainable finance markets.

For policymakers, this finding implies that regulatory mandates alone are insufficient to stimulate widespread green bond issuance. Regulatory efforts should be complemented by capacity-building initiatives, such as standardized green taxonomies, disclosure guidelines, certification support mechanisms, and training programs for corporate reporting teams. Strengthening the operational feasibility of compliance may amplify the effectiveness of regulatory pressure.

Furthermore, the relatively modest coefficient for regulatory pressure suggests that Vietnam's green finance framework is still evolving. Policymakers may consider introducing fiscal incentives (for example, tax benefits, guarantee schemes, subsidized certification costs) to enhance regulatory effectiveness and reduce entry barriers.

6.3. Implications regarding leadership commitment

Leadership commitment to sustainability ($\beta = 0.079$, $p = 0.140$) does not significantly influence green bond issuance decisions in the current model. This finding indicates that sustainability orientation at the executive level may not directly translate into financing decisions without structural and institutional support mechanisms.

For practitioners, this suggests that leadership commitment must be institutionalized through formal governance structures, sustainability committees, and measurable disclosure systems. For policymakers, promoting ESG governance standards and board-level sustainability accountability may help transform value-based commitment into actionable financial strategies.

Overall, the results indicate that green bond issuance decisions in Vietnam are currently driven more by compliance capability and regulatory alignment than by managerial sustainability orientation alone. Policy strategies should therefore prioritize strengthening institutional infrastructure and firm-level reporting capacity.

7. CONCLUSION

This study examines the influence of regulatory pressure, leadership commitment to sustainability, and information transparency and disclosure capacity on green bond issuance decisions among listed construction and real estate firms in Vietnam. Using survey-based primary data and multiple regression analysis, the findings reveal that information transparency and disclosure capacity exert the strongest positive influence, followed by regulatory pressure. At the same time, leadership commitment does not show a statistically significant effect.

The results contribute to the sustainable finance literature in several ways. First, they demonstrate that in emerging markets, green bond issuance is primarily capability-driven rather than purely value-driven. Disclosure readiness and reporting infrastructure appear to function as critical enabling mechanisms. Second, the study refines institutional theory by showing that regulatory pressure operates effectively only when supported by organizational capacity. Third, the findings extend signaling theory by highlighting that credible disclosure capability, rather than symbolic sustainability rhetoric, serves as the dominant signal in early-stage green finance markets.

These insights provide important contextual evidence from Vietnam, where sustainable finance remains in a developmental phase. The study thus bridges macro-level institutional analysis with micro-level organizational behavior, offering a more nuanced understanding of green bond decision-making dynamics in emerging economies.

Despite its contributions, this study has several limitations that open avenues for future research.

First, the dependent variable captures managerial intention rather than actual issuance behavior. While intention is a meaningful predictor of strategic action, future research should incorporate longitudinal or archival data on actual green bond issuance to validate behavioral outcomes. A comparative analysis between intention and realized issuance would provide deeper insights into the intention–behavior gap in sustainable finance.

Second, the model explains 19% of the variance in green bond issuance decisions ($R^2 = 0.190$), suggesting that additional determinants remain unexplored. Future studies may consider incorporating variables such as financial leverage, ESG performance ratings, corporate governance quality, environmental risk exposure, or investor activism. Integrating these factors may improve explanatory power and refine theoretical development.

Finally, future research may explore potential mediating or moderating relationships among regulatory pressure, leadership commitment, and disclosure capacity. For example, disclosure capacity may mediate the relationship between leadership commitment and green bond decisions, while institutional maturity may moderate regulatory effectiveness. Such extensions would further enrich theoretical integration across institutional theory, signaling theory, and upper echelons theory.

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