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CORPORATE READINESS FOR CARBON TAX: BEHAVIORAL AND INSTITUTIONAL DRIVERS OF VOLUNTARY COMPLIANCE INTENTION IN VIETNAM

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ABSTRACT

Purpose – This study examines the behavioral and institutional drivers of firms' voluntary carbon tax compliance intention in the context of Vietnam's emerging carbon pricing transition.

Study design/ methodology/ approach – An integrated theoretical framework combining the Theory of Planned Behavior, Institutional Theory, and the Slippery Slope Framework was developed. Data were collected through a cross-sectional survey of Vietnamese enterprises. Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed to evaluate the proposed relationships.

Findings – The findings indicate that voluntary carbon tax compliance intention is influenced by a multidimensional interaction of behavioral, institutional, ethical, and economic factors. Perceived fairness, trust in tax authorities, institutional pressures, environmental responsibility, and perceived economic impacts significantly affect firms' willingness to voluntarily comply with future carbon taxation. The results further suggest that corporate readiness for carbon taxation depends not only on enforcement mechanisms but also on policy legitimacy, transparency, and institutional credibility.

Research limitations/ implications – The study is limited to a cross-sectional dataset and the Vietnamese context. Future research may extend the analysis using longitudinal or comparative approaches across different institutional settings.

Originality/ contribution – This study contributes to the literature by shifting attention from carbon tax effectiveness under assumed compliance conditions toward the determinants of voluntary compliance intention itself through an integrated behavioral and institutional perspective.

Practical implications – The findings imply that effective carbon tax policies should combine enforcement measures with transparency, institutional trust-building, and corporate environmental awareness to enhance voluntary compliance readiness.

1. Introduction

Climate change, environmental degradation, and the growing pressure to achieve sustainable development goals have intensified global interest in carbon pricing instruments, particularly carbon taxation (Kotchen et al., 2017; Lin & Li, 2011). As countries commit to net-zero emission targets and green transition strategies, carbon taxes are increasingly viewed as an effective fiscal mechanism for internalizing environmental externalities and encouraging low-carbon production and consumption patterns (Fullerton & Metcalf, 2002; Sen & Vollebergh, 2018). Compared with conventional environmental taxes imposed indirectly on polluting goods, carbon taxation provides a clearer and more direct price signal on carbon emissions. (Hammerle et al., 2021).

In line with global trends, Vietnam has gradually strengthened its environmental governance framework and committed to achieving net-zero emissions by 2050. The introduction of environmental protection taxes represented an initial attempt to integrate environmental objectives into the national tax system. However, previous studies suggest that the environmental effectiveness of existing environmental taxes in Vietnam remains limited, particularly in terms of reducing carbon emissions and accelerating green transformation (Nguyen Thi Kim Ngan, 2023; Nguyen Minh Phuc & Nguyen Thi My Linh, 2024). This limitation has intensified policy discussions regarding the potential adoption of more direct carbon pricing mechanisms, including carbon taxation.

Despite the growing policy interest in carbon taxation, an important issue remains insufficiently explored: the effectiveness of carbon taxation does not depend solely on tax rates or technical policy design, but also on firms' willingness to voluntarily comply with the system. Cabo et al. (2025) argue that emission-reporting fraud and imperfect monitoring can substantially reduce the effectiveness of environmental regulatory instruments. Similarly, James and Alley (2002) and Feld and Frey (2002) emphasize that tax compliance is influenced not only by enforcement but also by trust, fairness, and institutional legitimacy.

The tax compliance literature increasingly recognizes that compliance behavior is multidimensional and cannot be explained solely through deterrence mechanisms such as audits and penalties. Traditional economic deterrence models explain compliance as a rational response to enforcement probability and punishment severity (Allingham & Sandmo, 1972; Slemrod et al., 2001). However, later studies emphasize the importance of fairness perceptions, institutional trust, social norms, and ethical responsibility in shaping voluntary compliance behavior (Kirchler, 2007; Kirchler et al., 2008). The Theory of Planned Behavior (TPB) suggests that behavioral intention is influenced by attitudes, subjective norms, and perceived behavioral control (Ajzen, 1991). Institutional Theory further explains how regulatory, normative, and cognitive pressures shape organizational responses and compliance decisions (Meyer & Rowan, 1977; Scott, 2013). In addition, environmental behavioral perspectives highlight the roles of environmental responsibility, stakeholder expectations, and sustainability-oriented values in encouraging environmentally responsible behavior (Freeman et al., 2010; Stern et al., 1999).

To address this gap, the study investigates the behavioral and institutional drivers of voluntary carbon tax compliance intention among Vietnamese firms. The study develops an integrated framework combining TPB, Institutional Theory, the Slippery Slope Framework, and environmental behavioral perspectives to explain corporate readiness for carbon taxation. Methodologically, the study employs Partial Least Squares Structural Equation Modeling (PLS-SEM) to evaluate the relationships among behavioral beliefs, institutional pressures, environmental responsibility, economic considerations, and voluntary compliance intentions.

This study contributes to literature in several ways. First, it shifts the focus from the effectiveness of carbon taxation under assumed compliance conditions toward the determinants of voluntary compliance intention itself. Second, it develops an integrated analytical framework combining behavioral and institutional perspectives to explain corporate readiness for carbon taxation. Third, the study provides empirical evidence from Vietnam, an emerging economy undergoing green transition and institutional adaptation toward carbon pricing mechanisms. The findings are expected to provide both theoretical insights and practical implications for policymakers seeking to design effective, credible, and socially acceptable carbon tax systems.

2. Literture review

2.1. Carbon tax scheme and the compliance challenge

Carbon tax policy has become one of the most widely discussed market-based instruments for addressing climate change and promoting sustainable development. By assigning a direct price to carbon emissions, carbon taxes are expected to encourage firms to reduce emissions, improve energy efficiency, and adopt cleaner production technologies (Fullerton & Metcalf, 2002; Lin & Li, 2011). Compared with traditional environmental taxes imposed indirectly on polluting products, carbon taxation creates a clearer incentive structure for low-carbon transition (Hammerle et al., 2021).

However, the effectiveness of carbon taxation depends not only on policy design but also on how prepared firms are to respond to the new regulatory environment. Many previous studies implicitly assume that carbon taxes are fully enforced and emissions are accurately reported. In practice, incomplete compliance, information asymmetry, and limited monitoring capacity may weaken the environmental effectiveness of carbon pricing mechanisms (Cabo et al., 2025). This challenge is particularly relevant in emerging economies such as Vietnam, where carbon taxation remains under policy development and firms are only beginning to adapt to carbon-related regulations.

In this study, corporate readiness is conceptualized as a multidimensional organizational condition reflecting firms' preparedness to respond to future carbon taxation from behavioral, institutional, and organizational perspectives. Because a nationwide carbon tax has not yet been implemented in Vietnam, voluntary carbon tax compliance intention is adopted as the outcome variable, as it provides the most appropriate observable indicator of firms' current readiness for future carbon taxation. This approach is consistent with the Theory of Planned Behavior, which regards behavioral intention as the strongest predictor of subsequent behavior (Ajzen, 1991).

Early tax compliance studies were largely based on the economic deterrence model, which explains compliance behavior through audit probability and penalty severity (Allingham & Sandmo, 1972; Slemrod et al., 2001). Under this approach, taxpayers comply mainly because they fear detection and punishment.

However, later studies argue that tax compliance cannot be fully explained through enforcement alone. Feld and Frey (2002) emphasize the importance of trust and reciprocity between taxpayers and the state, while Kirchler (2007) suggests that compliance behavior is also shaped by fairness perceptions, institutional legitimacy, and social norms. The Slippery Slope Framework further argues that voluntary compliance emerges when taxpayers trust authorities and perceive the tax system as transparent and legitimate (Kirchler et al., 2008).

In the context of carbon tax, these arguments become particularly important because compliance involves more than paying taxes. Firms may also need to measure emissions, disclose environmental information, and adjust production processes. As a result, willingness to comply depends not only on enforcement pressure but also on whether firms believe that carbon taxation is fair, effective, and aligned with broader sustainability goals.

2.2. Theoretical framework

Although previous studies have examined environmental tax acceptance and general tax compliance behavior, empirical evidence on firms' voluntary carbon tax compliance intention remains limited, particularly in emerging economies. A single theoretical perspective is unlikely to fully explain firms' voluntary carbon tax compliance intention. Accordingly, this study integrates the Theory of Planned Behavior (TPB), Institutional Theory, the Slippery Slope Framework (SSF), and environmental behavior theories, including the Value–Belief–Norm (VBN) Theory, and Stakeholder Theory.

The Theory of Planned Behavior (TPB) provides the primary behavioral foundation of the proposed framework. According to Ajzen (1991), behavioral intention is determined by attitudes, subjective norms, and perceived behavioral control. In the context of carbon taxation, TPB explains how firms develop voluntary compliance intention based on their evaluation of carbon tax policies, perceived expectations from important stakeholders, and confidence in their organizational capability to comply with carbon-related requirements.

Institutional Theory complements TPB by extending the analysis from internal cognitive processes to the external institutional environment. Meyer and Rowan (1977) and Scott (2013) argue that organizations respond to regulative, normative, and cognitive pressures in order to maintain legitimacy. In the context of carbon taxation, these pressures arise from government regulations, ESG requirements, industry standards, and broader societal expectations. Institutional Theory therefore explains why firms may support carbon taxation not only because of their own beliefs but also because of external institutional pressures.

The Slippery Slope Framework (SSF) further complements the proposed framework by emphasizing the relationship between taxpayers and tax authorities. SSF argues that voluntary compliance depends on the combined effects of trust in tax authorities and the perceived power of enforcement (Kirchler et al., 2008). In the context of carbon taxation, firms are expected to demonstrate stronger compliance intention when they perceive tax authorities as transparent, competent, and fair while recognizing the credibility of regulatory enforcement.

Environmental behavior theories provide the ethical and sustainability-oriented foundation of the framework. The Value–Belief–Norm (VBN) Theory suggests that pro-environmental behavior originates from environmental values, ecological beliefs, and personal moral norms (Stern et al., 1999). Although VBN is not explicitly modeled as independent constructs in this study, it provides the theoretical basis for incorporating environmental responsibility as an important antecedent of voluntary carbon tax compliance intention.

Finally, Stakeholder Theory explains how firms respond to the expectations of governments, investors, customers, local communities, and society to maintain organizational legitimacy and long-term sustainability (Freeman et al., 2010). From this perspective, voluntary carbon tax compliance reflects not only legal compliance but also corporate environmental responsibility and sustainable business practices.

Overall, the integrated framework assumes that firms' voluntary carbon tax compliance intention is jointly shaped by five complementary mechanisms. TPB explains internal behavioral formation; Institutional Theory captures external institutional pressures; the Slippery Slope Framework explains the roles of trust and enforcement; VBN and NAT provide the ethical foundation for pro-environmental behavior; and Stakeholder Theory highlights the influence of stakeholder expectations. Together, these perspectives offer a multidimensional explanation of corporate readiness for carbon taxation that is more comprehensive than relying on any single theoretical perspective.

2.3. Previous studies

Previous research on tax compliance has gradually evolved from traditional economic deterrence models toward broader behavioral, institutional, and environmental perspectives. Appendix 1 *(see Appendix 1 online)* summarizes previous studies on tax compliance and carbon taxation. The table compares the theoretical foundations, research contexts, analytical methods, principal findings, and remaining limitations of previous studies.

Early studies primarily explained compliance behavior as a rational response to audit probability and penalty severity (Allingham & Sandmo, 1972; Slemrod et al., 2001). However, subsequent research has demonstrated that voluntary compliance cannot be adequately explained by enforcement mechanisms alone. Instead, taxpayers' perceptions of fairness, trust in government, institutional legitimacy, and social norms play equally important roles in shaping compliance behavior (Feld & Frey, 2002; Kirchler, 2007; Kirchler et al., 2008).

In the field of carbon taxation, previous studies have mainly focused on public acceptance and policy effectiveness after carbon pricing mechanisms have been implemented. Kotchen et al. (2017) and Sommer et al. (2022) show that support for carbon taxation increases when taxpayers perceive the policy as environmentally effective and distributively fair. Bergquist (2025) further argues that perceived fairness is often a stronger determinant of policy acceptance than the expected financial burden. These studies provide valuable evidence regarding public acceptance of carbon pricing but pay limited attention to firms' voluntary compliance intentions before policy implementation.

Another stream of literature emphasizes institutional factors. Drawing on the Slippery Slope Framework, Kirchler et al. (2008) demonstrate that voluntary tax compliance is jointly influenced by trust in tax authorities and the perceived power of enforcement institutions. Similarly, Fairbrother et al. (2019) report that trust in government and institutional credibility significantly increase support for climate-related policies. Although these studies highlight the importance of institutional quality, they primarily investigate trust and governance in isolation rather than considering their interaction with behavioral, environmental, and economic determinants.

Behavioral studies have largely adopted the Theory of Planned Behavior (TPB) to explain tax compliance intention through attitudes, subjective norms, and perceived behavioral control (Ajzen, 1991). Meanwhile, organizational studies grounded in Institutional Theory argue that firms respond to regulative, normative, and cognitive pressures to maintain organizational legitimacy (Scott, 2013). Environmental behavior research further suggests that corporate environmental responsibility, sustainability values, and stakeholder expectations influence firms' environmental decisions (Freeman et al., 2010; Stern et al., 1999). Nevertheless, these theoretical perspectives have generally been examined independently, resulting in fragmented explanations of firms' carbon tax compliance behavior.

Recent empirical studies have further emphasized that voluntary tax compliance depends not only on economic incentives but also on behavioral, institutional, and organizational factors. Using evidence from Ghana, Appiah et al. (2024) demonstrate that tax knowledge, perceived tax fairness, and trust in government significantly enhance voluntary tax compliance, highlighting the importance of behavioral and institutional conditions in emerging economies. Similarly, Adhariani et al. (2024) argue that firms' responses to tax policies may be constrained by organizational inertia, suggesting that policy interventions alone are insufficient to induce behavioral change unless organizations possess adequate internal readiness and institutional support. Together, these studies reinforce the view that effective tax policy requires more than regulatory design or economic incentives. Nevertheless, neither study examines firms' voluntary carbon tax compliance intention or integrates behavioral, institutional, and environmental perspectives within a unified framework, leaving an important research gap that the present study seeks to address.

Evidence from Vietnam remains relatively limited and has primarily focused on policy design, institutional development, and international experience rather than firms' behavioral responses to future carbon taxation. Nguyen Thi Kim Ngan (2023) discusses the opportunities and implementation challenges of carbon taxation in supporting Vietnam's green transition, while Nguyen Minh Phuc and Nguyen Thi My Linh (2024) review international environmental protection tax (EPT) systems and compare them with Vietnam's current EPT framework to identify policy implications. More recently, Pham Tien Dat (2024) synthesizes international experience in developing carbon markets and emphasizes the importance of robust legal frameworks, technical infrastructure, and market governance for Vietnam's future carbon market development. Similarly, Phan Thi Hang Nga et al. (2024) examine international carbon pricing mechanisms and draw policy implications for Vietnam, highlighting the need for a coherent carbon pricing roadmap and stronger institutional capacity. While these studies provide valuable policy and institutional insights, they remain largely conceptual and do not empirically examine firms' voluntary carbon tax compliance intention or the behavioral and institutional determinants of corporate readiness for carbon taxation.

Overall, previous studies provide important insights into individual dimensions of carbon tax compliance. However, these determinants are generally examined separately rather than within an integrated analytical framework. Consequently, the literature provides only limited evidence regarding how behavioral, institutional, environmental, and economic factors jointly shape firms' voluntary carbon tax compliance intention, particularly in emerging economies where carbon taxation has not yet been formally implemented.

3. Methodology

3.1. Research approach

This study adopts a quantitative research approach to examine the determinants of firms' voluntary carbon tax compliance intention in Vietnam. The proposed model aims to explain how different beliefs and institutional pressures jointly shape corporate readiness for carbon taxation.

A cross-sectional survey was employed to collect primary data from enterprises. The quantitative approach is appropriate because it enables empirical testing of the proposed relationships among latent constructs and provides evidence regarding the relative influence of different determinants on voluntary compliance intentions.

3.2. Research model and hypotheses

The proposed research framework builds on three complementary theoretical perspectives: the Theory of Planned Behavior (Ajzen, 1991), Institutional Theory (Meyer & Rowan, 1977; Scott, 2013), and the Slippery Slope Framework (Kirchler et al., 2008). Drawing on these theories, the study proposes that firms' voluntary carbon tax compliance intention is shaped by seven groups of determinants: behavioral beliefs, normative beliefs, control beliefs, regulative pressures, cognitive pressures, normative pressures, and economic factors.

Behavioral beliefs reflect firms' assessments of the expected outcomes of carbon taxation, particularly whether such a policy is perceived as fair, effective, and capable of supporting environmental protection. Normative beliefs represent firms' perceptions of approval or encouragement from individuals and organizations that are important to their decision-making, such as tax authorities, business partners, industry peers, and customers. Control beliefs refer to firms' perceptions of whether they possess sufficient resources, knowledge, and organizational capabilities to comply with future carbon tax requirements.

Following Institutional Theory, institutional pressures are classified into three dimensions. Regulative pressures arise from formal environmental regulations, government supervision, and enforcement mechanisms. Cognitive pressures reflect the extent to which carbon taxation and sustainable business practices are understood, accepted, and embedded within firms and their business environment. Normative pressures originate from broader professional norms, ESG expectations, industry standards, and stakeholder demand that encourage firms to align their practices with widely accepted sustainability principles.

Although normative beliefs and normative pressures both involve social influence, they represent different concepts. Normative beliefs describe how firms perceive the expectations of significant referent groups when forming compliance intentions, consistent with the Theory of Planned Behavior. In contrast, normative pressures emphasize the external institutional environment in which firms operate, reflecting broader professional and societal expectations that promote organizational legitimacy.

Finally, economic factors capture firms' evaluations of the financial implications of carbon taxation, including expected compliance costs, government incentives, financial support, and potential impacts on business performance. Based on these conceptual foundations, the corresponding hypotheses are proposed. Figure 1 illustrates the research framework and the hypothesized relationships.

Hypothesis H1: Behavioral beliefs positively influence voluntary carbon tax compliance intention.

Hypothesis H2: Normative beliefs positively influence voluntary carbon tax compliance intention.

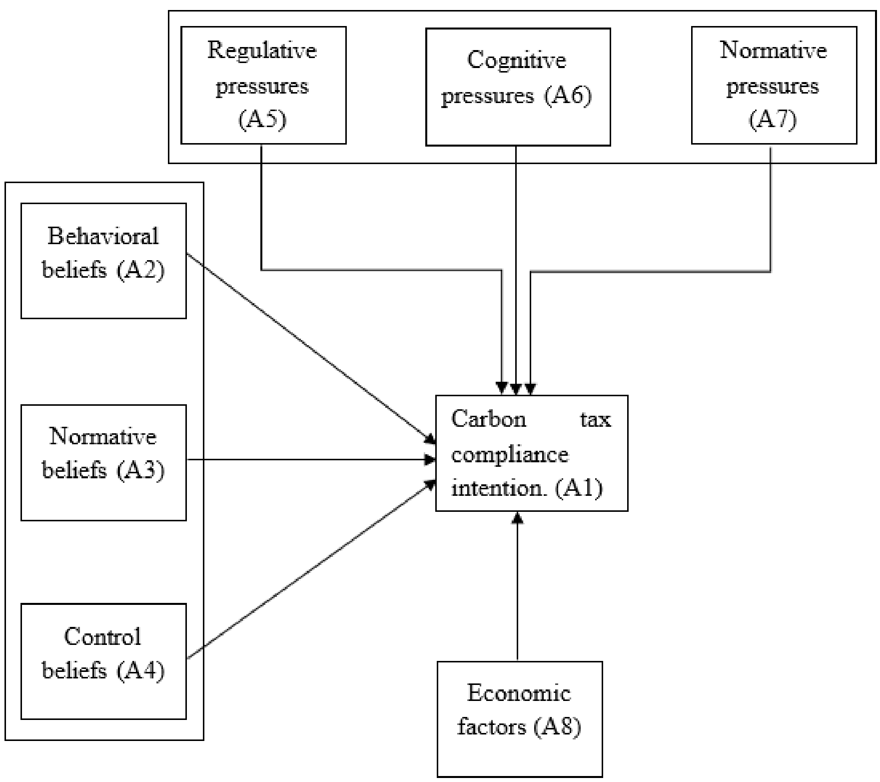
Hypothesis H3: Control beliefs positively influence voluntary carbon tax compliance intention.

Hypothesis H4: Regulative pressures positively influence voluntary carbon tax compliance intention.

Hypothesis H5: Cognitive pressures positively influence voluntary carbon tax compliance intention.

Hypothesis H6: Normative pressures positively influence voluntary carbon tax compliance intention.

Hypothesis H7: Economic factors significantly influence voluntary carbon tax compliance intention.



Firgure 1. Proposed framework for voluntary carbon tax compliance intention

3.3. Questionnaire development and data collection

The questionnaire was developed through a multi-stage process to ensure content validity and contextual relevance. *First*, measurement items were adapted from prior studies on tax compliance, environmental taxation, institutional pressure, and pro-environmental behavior. The original scales were then refined and adjusted to fit the context of carbon taxation and corporate compliance in Vietnam. Given the multidimensional nature of corporate readiness for carbon taxation, this study adopts a hierarchical component model to operationalize the measurement constructs. Specifically, voluntary carbon tax compliance intention (A1) is modeled as a first-order reflective construct, whereas the explanatory constructs (A2–A8) are specified as higher-order constructs (HOCs) composed of multiple lower-order constructs (LOCs). This hierarchical structure enables the study to capture the complexity of behavioral, institutional, and economic dimensions while reducing model complexity and improving theoretical parsimony (Hair & Alamer, 2022). Appendix 2 *(see Appendix 2 online)* summarizes the higher-order constructs, their corresponding lower-order dimensions, theoretical foundations, and representative measurement items.

Second, the preliminary questionnaire was reviewed by academic experts and practitioners in taxation, accounting, and environmental management to evaluate wording clarity, conceptual consistency, and practical relevance. Based on their feedback, several items were revised to improve readability and reduce ambiguity. Finally, a pilot survey was conducted with a small group of enterprise representatives before the official data collection process. Minor revisions were subsequently made to ensure that the final questionnaire was understandable and suitable for the Vietnamese business context. All measurement items were evaluated using a five-point Likert scale ranging from "strongly disagree" to "strongly agree".

Primary data were collected through a structured questionnaire survey. The target respondents included managers, accountants, tax specialists, and business representatives from enterprises in Vietnam. Convenience and purposive sampling techniques were employed due to the exploratory nature of the study and the limited availability of firms.

3.4. Empirical method

This study employs Partial Least Squares Structural Equation Modeling (PLS-SEM) to examine the determinants of firms' voluntary carbon tax compliance intention. PLS-SEM is considered appropriate because the proposed framework includes multiple latent constructs derived from behavioral and institutional theories, while several concepts are modeled as higher-order constructs (HOCs) composed of multiple lower-order constructs (LOCs) (Hair & Alamer, 2022). The use of LOCs and HOCs allows the study to capture the multidimensional nature of corporate readiness for carbon taxation while reducing model complexity and improving theoretical integration.

The empirical analysis consists of two main stages. First, the measurement model is evaluated through indicator reliability, internal consistency reliability using Cronbach's alpha and composite reliability, convergent validity through Average Variance Extracted (AVE), and discriminant validity using the Fornell–Larcker criterion and HTMT ratio. Second, the structural model is assessed through collinearity diagnostics, path coefficients, coefficient of determination (R^2), effect size (f^2), and bootstrapping procedures for hypothesis testing.

4. Results and discussion

4.1. Sample characteristics

A total of 412 questionnaires were distributed to enterprises operating in sectors potentially affected by future carbon pricing policies. After excluding incomplete and invalid responses, 388 valid questionnaires were retained for analysis.

The sample size is considered adequate for PLS-SEM analysis. Following the 10-times rule (Hair & Alamer, 2022), the minimum sample size should be at least ten times the largest number of structural paths pointing to any endogenous construct. In the proposed model, the endogenous construct receives seven direct paths, implying a minimum sample size of 70 observations. Therefore, the final sample of 388 observations substantially exceeds this requirement *(see Appendix 3 online).*

In terms of firm size, the sample includes micro-enterprise, small, medium-sized enterprises as well as large corporations, thereby providing a relatively diverse representation of the Vietnamese business sector.

4.2. Measurement model assessment

The measurement model was evaluated following the recommended procedures for reflective measurement models in PLS-SEM (Hair & Alamer, 2022). The assessment included indicator reliability, internal consistency reliability, convergent validity, and discriminant validity before estimating the hierarchical component model using the disjoint two-stage approach.

Table 1. Reliability and validity assessment of the measurement model

Assessment	Recommended threshold	Result	Evaluation
Outer loadings	> 0.70	0.744-0.924	Satisfactory
Cronbach's alpha	> 0.70	0.827-0.903	Satisfactory
Composite reliability (CR)	> 0.70	0.885-0.932	Satisfactory
Average variance extracted (AVE)	> 0.50	0.660-0.775	Satisfactory
Fornell–Larcker criterion	√AVE > inter-construct correlations	Satisfied	Satisfactory
HTMT ratio	< 0.85	0.176-0.734	Satisfactory
Inner VIF	< 3.30	1.140-1.844	No multicollinearity

Indicator reliability was first assessed through the outer loadings of the observed indicators. All indicator loadings ranged from 0.744 to 0.924, exceeding the recommended threshold of 0.70, indicating satisfactory indicator reliability.

Internal consistency reliability was subsequently evaluated using Cronbach's alpha and composite reliability (CR). The results show that Cronbach's alpha values ranged from 0.827 to 0.903, while CR values ranged from 0.885 to 0.932, both exceeding the recommended threshold of 0.70. These findings confirm satisfactory internal consistency across all constructs. Furthermore, the average variance extracted (AVE) ranged from 0.660 to 0.775, indicating that each construct explains more than 50% of the variance of its indicators and therefore satisfies the requirement for convergent validity.

Discriminant validity was assessed using both the Fornell–Larcker criterion and the heterotrait–monotrait ratio (HTMT). The square root of the AVE for each construct exceeded its correlations with all other constructs, satisfying the Fornell–Larcker criterion. In addition, all HTMT values ranged from 0.176 to 0.734, remaining well below the conservative threshold of 0.85. These results confirm that the constructs are empirically distinct and demonstrate satisfactory discriminant validity.

4.3. Structural model assessment

Figure 2 presents the structural model estimation results obtained from PLS-SEM analysis. The coefficient of determination (R^2) for voluntary carbon tax compliance intention reaches 0.795, indicating that the proposed model explains approximately 79.5% of the variation in firms' voluntary compliance intention. This suggests that the integrated behavioral–institutional framework possesses substantial explanatory power.

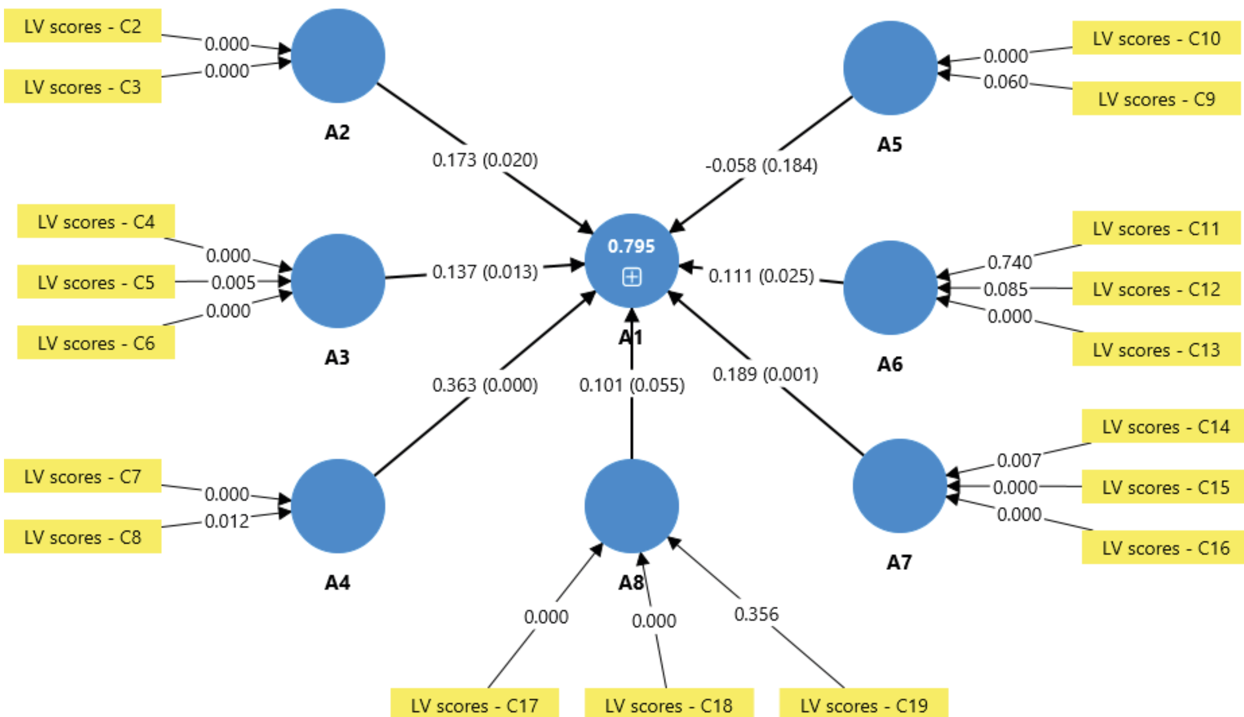


Figure 2. Structural model results of voluntary carbon tax compliance intention

4.4. Discussion

The model explains a substantial proportion of the variance in firms' voluntary carbon tax compliance intention (A1), with an R^2 value of 0.795. This result indicates that the integrated framework combining behavioral, institutional, and economic perspectives provides a strong explanation of corporate readiness for carbon taxation.

Among the explanatory variables, control beliefs (A4) exert the strongest positive influence on voluntary carbon tax compliance intention ($\beta = 0.363$, $p < 0.001$). This finding reinforces the TPB (Ajzen, 1991), suggesting that firms are more willing to comply when they believe they possess sufficient resources, knowledge, and organizational capability to meet future carbon tax requirements. This result also highlights the importance of strengthening firms' technical capacity through training, carbon accounting systems, and MRV development before a nationwide carbon tax is introduced.

The positive effects of behavioral beliefs (A2) and normative beliefs (A3) further support the behavioral assumptions of the TPB. Firms show greater willingness to comply when carbon taxation is perceived as an effective and fair policy, and when important stakeholders are viewed as supporting future carbon pricing. These findings are consistent with earlier studies emphasizing the role of perceived fairness, policy effectiveness, trust, and social norms in promoting voluntary tax compliance and environmental policy acceptance (Feld & Frey, 2002; Kirchler, 2007; Kotchen et al., 2017; Sommer et al., 2022).

From an institutional perspective, both cognitive pressures (A6) and normative pressures (A7) have significant positive effects on compliance intention. Firms appear to respond not only to formal business considerations but also to increasing awareness of sustainability, ESG expectations, and evolving industry norms. This finding is consistent with Institutional Theory (Scott, 2013) and Stakeholder Theory (Freeman et al., 2010), which argue that organizations seek legitimacy by aligning their practices with prevailing social and professional expectations.

By contrast, regulative pressures (A5) do not significantly influence voluntary carbon tax compliance intention. This finding may reflect the current stage of carbon pricing policy in Vietnam. Although environmental regulations have become increasingly stringent, a nationwide carbon tax has not yet been implemented.

Economic factors (A8) exhibit a positive effect on voluntary carbon tax compliance intention, although the relationship is only marginally significant ($p = 0.055$). This finding suggests that financial considerations may play a supporting rather than a dominant role in shaping firms' willingness to comply with future carbon taxation. While enterprises recognize the potential costs and benefits associated with carbon pricing, these economic considerations alone do not appear to be the primary driver of compliance intention.

5. Conclusion and policy implication

This study examines the behavioral and institutional drivers of firms' voluntary carbon tax compliance intention in Vietnam within the context of the country's emerging green transition and carbon pricing orientation. Using PLS-SEM analysis, the findings reveal that voluntary carbon tax compliance intention is significantly influenced by behavioral beliefs, normative beliefs, cognitive pressures, normative pressures, and economic factors, while some institutional dimensions exhibit weaker effects in the current Vietnamese context.

Among the factors examined, cognitive pressures show the strongest influence on voluntary compliance intention, highlighting the critical role of sustainability awareness, environmental understanding, and recognition of carbon-related responsibilities. Economic factors also significantly affect firms' readiness, indicating that enterprises remain highly concerned about compliance costs, competitiveness, and financial implications associated with carbon taxation.

The findings offer several policy implications for the design and implementation of carbon taxation in Vietnam. First, policymakers should move beyond a compliance strategy based solely on enforcement. Enhancing policy transparency, institutional credibility, and perceived fairness is equally important for fostering firms' voluntary compliance and long-term policy acceptance.

Second, the significant effects of cognitive and normative factors highlight the importance of strengthening firms' environmental awareness and institutional readiness. Government agencies should provide technical guidance, training programs, and communication initiatives to improve carbon tax knowledge, emissions reporting, and sustainability practices, thereby enhancing firms' preparedness for future carbon pricing.

Third, although economic factors exert only a marginal influence on compliance intention, reducing transition costs remains essential, particularly for firms facing financial and technological constraints. Supportive measures, including green financing, tax incentives, technology assistance, and capacity-building programs, should accompany carbon pricing policies.

Despite its contributions, this study has several limitations. The research relies on cross-sectional survey data and focuses primarily on the Vietnamese context, which may limit the generalizability of the findings. Future studies may extend the analysis through longitudinal approaches, comparative cross-country evidence, or post-implementation evaluations once carbon tax is formally introduced. In addition, although the proposed model demonstrates substantial explanatory power, it focuses on the direct effects of behavioral, institutional, and economic determinants on voluntary carbon tax compliance intention. Potential mediating and moderating mechanisms were beyond the scope of the present study.

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Data Availability

The processed dataset is available from the corresponding author upon reasonable request.

AI Usage Statement

During the preparation of this manuscript, the authors partially used ChatGPT to assist with language editing. The authors carefully reviewed and revised the content and took full responsibility for the final version of the article.

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