

Corporate Governance Mechanisms and Environmental Management Accounting Adoption: A Conceptual Framework for Listed Cement Firms in Vietnam

Quynh Trang Nguyen¹, Tuan Kiet Doan²

^{1, 2}Institute of Accounting and Auditing, Thuongmai University (TMU), Hanoi, Vietnam

Abstract—This paper develops a conceptual framework explaining how corporate governance mechanisms are associated with environmental management accounting (EMA) adoption among listed cement firms in Vietnam. It focuses on an emissions-intensive industry in which managers require integrated physical and monetary environmental information to control resource consumption, waste, emissions and related costs.

Keywords— corporate governance; environmental management accounting; EMA adoption; listed cement firms; Vietnam

I. INTRODUCTION

Climate change, resource depletion and increasingly stringent environmental regulation have intensified pressure on firms to improve both environmental and economic performance. The Paris Agreement and Vietnam's commitment to achieve net-zero greenhouse gas emissions by 2050 have reinforced the need for emissions-intensive industries to measure and manage resource consumption, waste, emissions and related costs more systematically. In addition, Vietnam's environmental protection legislation and regulatory framework for greenhouse gas mitigation and inventory reporting have expanded the environmental information requirements imposed on major emitters.

Cement manufacturing is particularly relevant in this context because clinker production consumes substantial quantities of raw materials and energy while generating carbon dioxide, dust and other emissions. Environmental costs arise throughout the production process, including quarrying, raw-material preparation, clinker burning, grinding, packaging and waste treatment. When such costs are aggregated within production overheads, managers may be unable to identify material losses, non-product outputs and the economic consequences of inefficient resource use. Environmental management accounting (EMA) addresses this limitation by integrating physical information on materials, energy, water, waste and emissions with monetary information on environment-related costs, revenues, savings and investments. EMA is therefore an internal management information approach rather than merely an external reporting practice. Its adoption can support environmental cost identification, material-flow analysis, budgeting, investment appraisal, operational control and cleaner-production decisions (Burritt et al., 2002; Jasch, 2003; IFAC, 2005).

Despite these potential benefits, EMA adoption is not an automatic technical response to environmental pressure. Its implementation requires managerial commitment, cross-functional coordination, reliable data and sufficient resources

to redesign accounting and information processes. Corporate governance mechanisms can shape these organizational conditions by determining how managers are monitored, whose interests are represented, how strategic priorities are established and whether environmental information receives sustained attention. Such mechanisms may therefore strengthen or constrain organizational demand for EMA and the resources committed to its implementation.

Previous studies have examined organizational characteristics, environmental strategy, perceived environmental uncertainty, institutional pressures and firm-specific factors as determinants of EMA adoption. However, research directly examining how individual corporate governance mechanisms are associated with EMA adoption remains limited. Existing corporate governance studies have focused predominantly on environmental performance and external environmental or sustainability disclosure. Although this literature provides relevant insights, external disclosure is conceptually different from EMA, which concerns the internal generation and use of physical and monetary environmental information for managerial decision-making. Consequently, evidence regarding corporate governance and environmental disclosure cannot be applied directly to EMA adoption without specifying the underlying organizational mechanisms.

This research gap is particularly relevant to listed cement firms in Vietnam. These firms operate in an emissions-intensive industry, are subject to increasing environmental accountability and differ in their board structures, audit arrangements and ownership configurations. State, foreign and managerial ownership may create distinct monitoring incentives, stakeholder pressures and resource conditions that influence the adoption of internal environmental information systems. Nevertheless, the mechanisms through which these governance characteristics may be associated with EMA adoption have not been adequately conceptualized in this context.

Accordingly, this paper addresses the following research question: How are corporate governance mechanisms

theoretically associated with EMA adoption among listed cement firms in Vietnam? To answer this question, the paper integrates agency theory, stakeholder theory, legitimacy theory and resource dependence theory to develop a conceptual framework comprising board independence, board size, audit quality, state ownership, foreign ownership and managerial ownership

II. THEORETICAL FRAMEWORK

2.1. Corporate Governance

Corporate governance refers to the structures, processes and relationships through which corporate objectives are established, management is directed and monitored, and accountability to shareholders and other stakeholders is maintained. The Cadbury Committee (1992) defines corporate governance as the system by which companies are directed and controlled, whereas Shleifer and Vishny (1997) emphasize the mechanisms through which providers of finance seek to ensure returns on their investments. The G20/OECD Principles of Corporate Governance adopt a broader perspective by emphasizing the relationships among management, the board, shareholders and other stakeholders, as well as the structures through which corporate objectives are established, pursued and monitored (OECD, 2023).

Corporate governance is distinct from day-to-day management. Management is responsible for organizing and executing corporate operations, whereas governance provides strategic direction, oversees managerial conduct and holds decision makers accountable (Tricker, 2015). Contemporary corporate governance research extends beyond shareholder protection to encompass transparency, stakeholder interests and environmental sustainability. Governance actors can influence corporate environmental practices and outcomes through their motivations, expertise, monitoring capacity and authority over strategic priorities and resource allocation (Aguilera et al., 2021; Karn et al., 2023).

In the context of EMA adoption, corporate governance mechanisms may affect both organizational demand for environmental information and the resources committed to its generation and use. Effective oversight can increase managerial accountability for environmental risks, resource inefficiencies and related costs, while access to appropriate expertise and external resources can strengthen a firm's capacity to implement EMA practices. Corporate governance therefore provides an organizational foundation for explaining why listed firms facing similar environmental pressures may differ in the extent to which they adopt EMA.

For the purposes of this study, corporate governance is understood as a set of internal and external mechanisms that shape strategic direction, managerial monitoring, stakeholder responsiveness and access to organizational resources. Board independence and board size represent board-level mechanisms; audit quality represents an external monitoring mechanism; and state, foreign and managerial ownership represent distinct ownership mechanisms. This disaggregated approach avoids treating corporate governance as a single, undifferentiated construct and enables the theoretical

mechanisms associated with each governance attribute to be examined separately.

2.2. Environmental Management Accounting

Environmental management accounting is an extension of management accounting that identifies, measures, analyzes and uses environment-related information for internal planning, control and decision-making. Schaltegger and Burritt (2000) describe EMA as a component of environmental accounting directed primarily toward internal users. Bennett and James (1998) similarly emphasize the collection and use of financial and non-financial environmental information to improve both economic and environmental performance.

A fundamental distinction within EMA is that between physical environmental management accounting and monetary environmental management accounting. Physical EMA addresses the flows and stocks of materials, energy, water, products, waste and emissions, whereas monetary EMA focuses on environmental costs, revenues, savings and investment-related financial consequences (Burritt et al., 2002). IFAC (2005) integrates these two components by defining EMA in terms of the management of environmental and economic performance through the development and implementation of appropriate physical and monetary environmental information systems and practices. Accordingly, EMA encompasses a range of practices, including environmental cost identification, material-flow analysis, environmental budgeting, environmental investment appraisal and environmental performance measurement.

A central contribution of EMA is its capacity to reveal environment-related costs that may otherwise remain hidden within production overheads. Jasch (2003) demonstrates that environmental costs include not only expenditures on waste treatment and pollution prevention but also the purchase value and processing costs of materials that ultimately become non-product output. Identifying these costs enables managers to connect physical inefficiencies with their financial consequences and to evaluate opportunities to reduce material consumption, energy use, waste and emissions. The integration of physical and monetary information therefore distinguishes EMA from conventional accounting approaches that may record environmental expenditures without identifying the operational processes that generate them.

In this paper, EMA adoption refers to the extent to which a listed cement firm implements and routinely uses physical and monetary environmental information and related accounting practices for planning, control, performance evaluation and decision-making. EMA adoption is therefore broader than the existence of a separate environmental cost account and conceptually distinct from the volume of environmental information disclosed to external users. Although external environmental disclosure may draw on information generated through EMA, disclosure represents an external reporting outcome, whereas EMA concerns the internal generation, integration and use of environmental information. This definition provides the conceptual basis for developing and

validating the measurement of EMA adoption in subsequent empirical research.

III. THEORETICAL FOUNDATIONS

3.1. Agency theory

Agency theory explains corporate governance arrangements as responses to conflicts of interest and information asymmetry between shareholders and managers (Jensen and Meckling, 1976). Because managers may pursue objectives that do not fully align with shareholders' interests, governance mechanisms are needed to monitor managerial conduct and improve the availability and reliability of information used in organizational decision-making. In the context of environmental management, managers may underinvest in environmental information systems when implementation costs are immediate and visible, whereas the associated benefits are long term, uncertain or difficult to appropriate. They may also have limited incentives to disclose internal inefficiencies relating to material losses, energy consumption, waste, emissions and environmental costs. Board independence, external audit quality and ownership structures can influence the extent to which managers are monitored and held accountable for these matters. Stronger monitoring may increase demand for reliable and traceable information about environmental risks, resource efficiency and related financial consequences. From an agency perspective, EMA can reduce internal information asymmetry by making physical resource flows and environment-related costs more visible to managers and governing bodies. The theory is therefore particularly relevant to explaining the proposed relationships of board independence, audit quality and managerial ownership with EMA adoption. However, agency theory alone does not fully explain the influence of broader stakeholder expectations, organizational legitimacy or access to external knowledge and resources. These dimensions are addressed by the complementary theories discussed below.

3.2. Stakeholder and legitimacy theories

Stakeholder theory proposes that a firm's survival and long-term success depend on its ability to respond to the interests and expectations of groups that affect or are affected by its activities (Freeman, 1984). These stakeholders include shareholders, employees, customers, regulators, creditors, local communities and other parties concerned with corporate environmental conduct. In emissions-intensive industries such as cement manufacturing, stakeholders may demand stronger environmental controls, regulatory compliance and credible evidence of improvements in resource efficiency and emissions management. Corporate governance mechanisms influence the extent to which stakeholder interests are represented in strategic decision-making. A board with broader representation, appropriate expertise or stronger external connections may be more responsive to environmental concerns and may consequently demand information that enables environmental impacts and related costs to be evaluated. State and foreign shareholders may also introduce distinct expectations regarding public accountability, regulatory compliance and internationally

recognized environmental practices. EMA provides physical and monetary environmental information that can support managerial responses to these stakeholder expectations. Although EMA is primarily intended for internal use, the information it generates can also support credible external environmental communication. Stakeholder theory therefore helps explain why board and ownership characteristics may strengthen organizational demand for EMA adoption.

3.3. Legitimacy Theory

Legitimacy theory views the relationship between a firm and society as being governed by an implicit social contract. A firm is considered legitimate when its activities are perceived as consistent with socially accepted norms, values and expectations (Suchman, 1995). Environmental incidents, regulatory non-compliance or failure to meet accepted environmental standards may create a legitimacy gap and expose a firm to regulatory sanctions, reputational damage and adverse market consequences. Legitimacy theory has frequently been applied to explain external environmental disclosure. Its relevance to EMA is less direct but remains important. Credible environmental communication and accountable environmental management require underlying data, measurement procedures and internal controls. Without an effective internal environmental information system, external disclosure may become disconnected from actual operational practices and environmental performance. EMA can provide the internal information infrastructure needed to identify environmental impacts, monitor corrective actions and substantiate externally communicated environmental claims. Legitimacy pressures may therefore encourage listed cement firms to adopt EMA not merely to produce additional disclosures but also to strengthen the internal processes underlying environmental accountability. This perspective is particularly relevant to state ownership because state shareholders may subject firms to heightened public and policy-related expectations.

3.4. Resource Dependence Theory

Resource dependence theory emphasizes that firms depend on external actors and environments for access to critical resources, including capital, knowledge, expertise, technology and legitimacy (Pfeffer and Salancik, 1978). From this perspective, the board performs not only a monitoring role but also a resource-provision role by connecting the firm with external knowledge, professional networks and strategic resources. EMA adoption requires accounting expertise, environmental knowledge, appropriate information systems and coordination among accounting, production and environmental functions. A board with a broader knowledge base may be better able to recognize environmental risks and technological opportunities and to facilitate access to the expertise required to implement EMA. Foreign shareholders may similarly contribute international experience, governance practices, technological knowledge and environmental management expectations. Resource dependence theory is therefore particularly relevant to board size and foreign ownership. A larger board may provide greater diversity of

expertise and external connections, while foreign ownership may facilitate knowledge transfer and access to international practices. Nevertheless, these benefits are not automatic. Excessive board size may create coordination problems, slow decision-making and dilute individual accountability. Accordingly, the association between board size and EMA adoption remains an empirical question in the context of listed cement firms in Vietnam.

IV. RESEARCH METHODOLOGY

This study employs a narrative, theory-driven literature review to develop a conceptual framework linking corporate governance mechanisms with EMA adoption. This approach is appropriate because the literature directly examining corporate governance and EMA adoption remains limited and fragmented across the fields of management accounting, corporate governance, environmental management and sustainability reporting.

The review draws on seminal publications defining corporate governance and EMA, together with empirical studies examining EMA adoption, corporate environmental performance, environmental disclosure and governance mechanisms. Relevant literature was identified using combinations of the terms “environmental management accounting”, “EMA adoption”, “corporate governance”, “board independence”, “board size”, “audit quality”, “Big Four”, “state ownership”, “foreign ownership”, “managerial ownership”, “ownership structure”, “environmental performance” and “environmental disclosure”. Priority was given to peer-reviewed journal articles and authoritative professional guidance that either examined EMA directly or provided a clearly identifiable theoretical mechanism linking corporate governance with environmental information and control.

The literature synthesis proceeded in four stages. First, EMA was conceptually delimited as the internal generation and use of both physical and monetary environmental information for planning, control, performance evaluation and decision-making. Second, evidence concerning EMA adoption was distinguished from evidence concerning environmental performance and external environmental disclosure. Third, governance mechanisms were retained when they could plausibly influence monitoring, stakeholder responsiveness, organizational legitimacy, access to resources or managerial incentives. Fourth, the selected mechanisms were interpreted through agency theory, stakeholder theory, legitimacy theory and resource dependence theory to develop the proposed relationships.

Evidence from environmental performance and disclosure studies was treated as indirect rather than direct evidence of EMA adoption. This distinction is important because environmental disclosure represents the communication of information to external users, whereas EMA concerns the internal generation, integration and use of environmental information. The resulting conceptual framework comprises board independence, board size, audit quality, state ownership, foreign ownership and managerial ownership. As the framework is theoretical, its proposed relationships require

subsequent empirical testing among listed cement firms in Vietnam.

V. HYPOTHESIS DEVELOPMENT AND PROPOSED MODEL

5.1 Board independence

Independent directors are expected to provide more objective oversight of managerial decisions and to reduce information asymmetry between managers and shareholders. In an emissions-intensive industry, effective board monitoring requires reliable information about environmental compliance, material losses, energy efficiency, waste, emissions and related costs. Independent directors may therefore encourage managers to establish information systems capable of identifying, measuring and evaluating these matters. EMA can respond to this governance demand by integrating physical and monetary environmental information for planning, control and performance evaluation. From an agency theory perspective, greater board independence can strengthen managerial accountability and increase the demand for reliable environmental information. From a stakeholder theory perspective, independent directors may also be more attentive to the environmental expectations of regulators, investors, communities and other stakeholders.

Existing evidence is not conclusive. Mokhtar et al. (2016) examined governance-related corporate characteristics in relation to EMA implementation among Malaysian listed companies but did not find strong evidence that the proportion of non-executive directors alone differentiated the level of EMA implementation. Nevertheless, broader corporate environmental governance research suggests that board independence can strengthen monitoring and environmental accountability. Because the available evidence is mixed and much of it does not examine EMA directly, the proposed relationship requires empirical testing. Accordingly, the following hypothesis is proposed:

H1: Board independence is positively associated with EMA adoption among listed cement firms in Vietnam.

5.2 Board size

Resource dependence theory suggests that larger boards may provide a firm with a broader range of knowledge, professional expertise, stakeholder representation and external connections. These resources may enhance the board's capacity to understand complex environmental issues and recognize the value of integrating physical and monetary environmental information into managerial decision-making. Larger boards may also include members with experience in accounting, environmental management, technology or regulatory compliance, thereby strengthening organizational support for EMA implementation.

Evidence from heavily polluting industries indicates that board size can be associated with corporate environmental performance, suggesting that broader board resources may support environmental initiatives (Nguyen et al., 2021). However, this evidence concerns environmental performance rather than EMA adoption and should therefore be interpreted as indirect. Larger boards may also experience communication difficulties, slower decision-making and diluted individual

accountability. The proposed positive association consequently assumes that, within the range observed among listed cement firms in Vietnam, the benefits of broader expertise and external connections outweigh the associated coordination costs. Based on stakeholder and resource dependence theories, the following hypothesis is proposed:

H2: Board size is positively associated with EMA adoption among listed cement firms in Vietnam.

5.3 Audit quality

Audit quality represents an external monitoring mechanism that can influence the reliability of corporate information and the effectiveness of related internal controls. Agency theory suggests that external monitoring can reduce information asymmetry and improve the credibility of information provided by management. Reputable audit firms also have stronger incentives to require adequate documentation and reliable reporting because deficiencies may expose them to reputational and litigation risks. Accordingly, studies of corporate disclosure frequently use engagement of a Big Four audit firm as a proxy for audit quality. Al-Janadi et al. (2013), for example, examined external governance mechanisms in relation to voluntary corporate disclosure.

Evidence concerning external disclosure cannot be applied directly to EMA because external auditors do not ordinarily determine how a firm designs or uses its internal management accounting system. The proposed relationship is therefore indirect and organizational. Firms audited by high-quality auditors may face stronger expectations concerning data traceability, documented controls, consistent measurement and support for material environment-related estimates and disclosures. In emissions-intensive firms, these expectations may reveal weaknesses in environmental data systems and encourage greater integration among accounting, production and environmental functions. EMA can provide the internal information infrastructure needed to collect physical flow data, identify environment-related costs and support reliable environmental information. Audit quality may therefore be associated with EMA adoption even though external auditors are not the primary users of EMA information. For subsequent empirical testing, audit quality may be proxied by a binary variable equal to one when a firm's financial statements are audited by a Big Four audit firm and zero otherwise. This measure should be interpreted as a proxy for auditor reputation and presumed capability rather than a comprehensive measure of audit quality. Based on agency and external monitoring arguments, the following hypothesis is proposed:

H3: Audit quality is positively associated with EMA adoption among listed cement firms in Vietnam.

5.4. State ownership

State ownership may influence EMA adoption by increasing expectations concerning environmental compliance, public accountability and the implementation of government policy objectives. In addition to pursuing commercial goals, firms with substantial state ownership may be expected to demonstrate responsibility for environmental protection and efficient use of natural resources. These expectations are

particularly relevant to cement manufacturing because of its intensive use of raw materials and energy and its significant environmental impacts. From a legitimacy theory perspective, listed cement firms with state ownership may experience stronger pressure to demonstrate that their operations are consistent with public policy objectives and socially accepted environmental standards. State shareholders may consequently demand more systematic information about environmental compliance, resource consumption, waste, emissions and related costs. Such information can be generated and integrated through EMA.

State ownership does not necessarily produce stronger EMA adoption in every organizational context. Multiple policy objectives, diffuse accountability or weak monitoring may reduce the effectiveness of state ownership as a governance mechanism. Nevertheless, Mokhtar et al. (2016) found that Malaysian government-linked companies demonstrated higher levels of EMA implementation than non-government-linked companies. Although government-linked company status is not identical to the percentage of state ownership and the evidence is context-specific, the finding provides direct support for a possible association between state participation and EMA adoption. Accordingly, the following hypothesis is proposed:

H4: State ownership is positively associated with EMA adoption among listed cement firms in Vietnam.

5.5. Foreign ownership

Foreign shareholders may introduce governance practices, technical knowledge and sustainability expectations developed in international markets. They may also demand comparable and reliable environmental information to evaluate regulatory exposure, resource efficiency and reputational risk across their investments. These expectations can increase organizational demand for systematic physical and monetary environmental information. Stakeholder theory suggests that foreign shareholders constitute an influential stakeholder group whose information requirements can affect corporate practices. Resource dependence theory further suggests that foreign ownership may provide access to international experience, professional expertise, environmental technologies and management practices that facilitate EMA implementation. Foreign ownership may therefore operate through both the demand channel, by increasing pressure for reliable environmental information, and the capability channel, by supporting the knowledge and resources needed to produce and use that information.

The strength of this association may depend on the proportion of foreign ownership and the foreign shareholders' ability to participate in corporate decision-making. Nevertheless, listed cement firms with greater foreign ownership are generally expected to face stronger international environmental expectations and have greater access to relevant knowledge and practices. Accordingly, the following hypothesis is proposed:

H5: Foreign ownership is positively associated with EMA adoption among listed cement firms in Vietnam.

5.6. Managerial ownership

Managerial ownership alters the relationship between managers and shareholders and may influence managers' incentives to invest in environmental information systems. Agency theory offers two competing explanations for this relationship. Under the interest-alignment perspective, managerial ownership can align managers' interests with the long-term value of the firm. Managers who hold equity may therefore be more willing to invest in EMA practices that improve resource efficiency, strengthen environmental risk management and support sustainable corporate performance. Under the managerial-entrenchment perspective, however, higher levels of managerial ownership may strengthen executives' control, weaken the effectiveness of external monitoring and reduce their willingness to make environmental inefficiencies visible. Entrenched managers may avoid information systems that reveal material losses, excessive energy consumption, waste or environmental costs for which they could be held accountable.

These competing effects prevent a consistently positive or negative relationship from being predicted. The direction and strength of the association may depend on the level of managerial ownership, ownership concentration and the wider governance context. A nonlinear relationship is therefore theoretically plausible. Nevertheless, as an initial test of whether managerial ownership is relevant to EMA adoption, this conceptual framework proposes a non-directional relationship:

H6: Managerial ownership is significantly associated with EMA adoption among listed cement firms in Vietnam.

The theoretical framework was developed as shown in Figure 1:

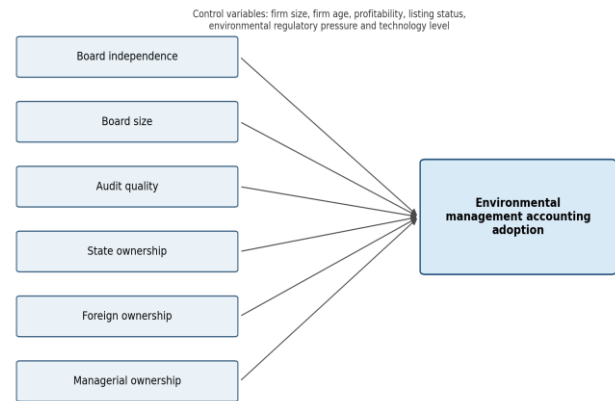


Figure 1. Proposed conceptual framework

The proposed operationalization of the variables is summarized in Table 1. Because the framework is conceptual, the measurements presented in the table are provisional and should be validated before empirical testing.

Table 1. Description of variables

Variable	Code	Measurement	Principal theory	Expected mechanism
EMA adoption	EMA	A multi-item construct measuring the extent to which a firm implements and routinely uses physical and monetary environmental information and related accounting practices for planning, control, performance evaluation and decision-making	EMA framework (Burritt et al., 2002; IFAC, 2005)	Dependent construct reflecting the firm's adoption and use of physical and monetary EMA practices
Board independence	BODI	Independence board members on total board members	Agency and stakeholder theories	Stronger monitoring and greater demand for reliable, decision-useful environmental information
Board size	BODS	Number of members on the board	Stakeholder and resource dependence theories	Broader expertise, stakeholder representation and access to external knowledge and resources
Audit quality	AUD	Dummy = 1 if audited by Big4, 0 otherwise	Agency theory	Greater data reliability, traceability and control requirements
State ownership	STO	Percentage of equity held by state shareholders	Legitimacy and institutional arguments	Public accountability and environmental policy compliance
Foreign ownership	FORO	Percentage of equity held by foreign shareholders	Stakeholder and resource dependence theories	International governance expectations and knowledge transfer
Managerial ownership	MANO	Percentage of equity held by board members and executives	Agency theory	Interest alignment versus managerial entrenchment

VI. DISCUSSION

This study extends EMA research by shifting attention from broad organizational and institutional determinants to specific corporate governance mechanisms. It explains how board structures, external monitoring and ownership characteristics may shape both organizational demand for environmental information and the capability to generate and use that information. The framework also distinguishes EMA from external environmental disclosure. EMA concerns the internal generation and use of physical and monetary environmental

information for managerial decision-making, whereas environmental disclosure communicates information to external users. Although credible disclosure may depend on robust internal information systems, the two concepts should not be treated as equivalent. Finally, the study integrates agency, stakeholder, legitimacy and resource dependence theories through two complementary channels. The demand channel reflects monitoring, stakeholder expectations and legitimacy pressures, while the capability channel reflects access to knowledge, expertise and implementation resources. The framework further distinguishes state, foreign and

managerial ownership because they may influence EMA adoption through different accountability, resource and incentive mechanisms.

REFERENCES

- [1] Aguilera, R.V., Aragón-Correa, J.A., Marano, V. and Tashman, P.A. (2021), "The corporate governance of environmental sustainability: A review and proposal for more integrated research", *Journal of Management*, Vol. 47 No. 6, pp. 1468–1497, doi: 10.1177/0149206321991212.
- [2] Al-Janadi, Y., Rahman, R.A. and Omar, N.H. (2013), "Corporate governance mechanisms and voluntary disclosure in Saudi Arabia", *Research Journal of Finance and Accounting*, Vol. 4 No. 4, pp. 25–35.
- [3] Bennett, M. and James, P. (Eds.) (1998), *The Green Bottom Line: Environmental Accounting for Management: Current Practice and Future Trends*, Greenleaf Publishing, Sheffield.
- [4] Burritt, R.L., Hahn, T. and Schaltegger, S. (2002), "Towards a comprehensive framework for environmental management accounting—Links between business actors and environmental management accounting tools", *Australian Accounting Review*, Vol. 12 No. 2, pp. 39–50, doi: 10.1111/j.1835-2561.2002.tb00202.x.
- [5] Cadbury Committee (1992), *Report of the Committee on the Financial Aspects of Corporate Governance*, Gee, London.
- [6] Freeman, R.E. (1984), *Strategic Management: A Stakeholder Approach*, Pitman, Boston, MA.
- [7] Government of Vietnam (2022), Decree No. 06/2022/ND-CP on Mitigation of Greenhouse Gas Emissions and Protection of the Ozone Layer, Hanoi.
- [8] Healy, P.M. and Palepu, K.G. (2001), "Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature", *Journal of Accounting and Economics*, Vol. 31 Nos. 1–3, pp. 405–440, doi: 10.1016/S0165-4101(01)00018-0.
- [9] International Federation of Accountants (IFAC) (2005), *International Guidance Document: Environmental Management Accounting*, IFAC, New York, NY.
- [10] Jasch, C. (2003), "The use of environmental management accounting for identifying environmental costs", *Journal of Cleaner Production*, Vol. 11 No. 6, pp. 667–676, doi: 10.1016/S0959-6526(02)00122-8.
- [11] Jensen, M.C. and Meckling, W.H. (1976), "Theory of the firm: Managerial behavior, agency costs and ownership structure", *Journal of Financial Economics*, Vol. 3 No. 4, pp. 305–360, doi: 10.1016/0304-405X(76)90026-X.
- [12] Kam, I., Mendiratta, E., Fehre, K. and Oehmichen, J. (2023), "The effect of corporate governance on corporate environmental sustainability: A multilevel review and research agenda", *Business Strategy and the Environment*, Vol. 32 No. 6, pp. 2926–2961, doi: 10.1002/bse.3279.
- [13] Mokhtar, N., Jusoh, R. and Zulkifli, N. (2016), "Corporate characteristics and environmental management accounting implementation: Evidence from Malaysian public listed companies", *Journal of Cleaner Production*, Vol. 136, pp. 111–122.
- [14] National Assembly of Vietnam (2020), *Law on Environmental Protection No. 72/2020/QH14*, Hanoi.
- [15] Nguyen, T.H.H., Elmagrhi, M.H., Ntim, C.G. and Wu, Y. (2021), "Environmental performance, sustainability, governance and financial performance: Evidence from heavily polluting industries in China", *Business Strategy and the Environment*, Vol. 30 No. 5, pp. 2313–2331, doi: 10.1002/bse.2748.
- [16] OECD (2023), *G20/OECD Principles of Corporate Governance 2023*, OECD Publishing, Paris, doi: 10.1787/ed750b30-en.
- [17] Pfeffer, J. and Salancik, G.R. (1978), *The External Control of Organizations: A Resource Dependence Perspective*, Harper & Row, New York, NY.
- [18] Prime Minister of Vietnam (2022), Decision No. 896/QĐ-TTg Approving the National Strategy on Climate Change Until 2050, Hanoi.
- [19] Schaltegger, S. and Burritt, R. (2000), *Contemporary Environmental Accounting: Issues, Concepts and Practice*, Greenleaf Publishing, Sheffield.
- [20] Shleifer, A. and Vishny, R.W. (1997), "A survey of corporate governance", *The Journal of Finance*, Vol. 52 No. 2, pp. 737–783, doi: 10.1111/j.1540-6261.1997.tb04820.x.
- [21] Suchman, M.C. (1995), "Managing legitimacy: Strategic and institutional approaches", *Academy of Management Review*, Vol. 20 No. 3, pp. 571–610, doi: 10.5465/amr.1995.9508080331.
- [22] Tricker, R.I. (2015), *Corporate Governance: Principles, Policies, and Practices*, 3rd ed., Oxford University Press, Oxford.
- [23] United Nations Framework Convention on Climate Change (2015), *Paris Agreement*.