

Literature Review of Corporate Social Responsibility on Environmental Performance through Environmental Strategy and Green Capability

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ABSTRACT: *This study synthesizes the literature on corporate social responsibility (CSR) as a determinant of environmental performance, both directly and through the mediating mechanisms of environmental strategy and green capability, among manufacturing companies in Indonesia. Using a qualitative literature review/document analysis method, theoretical and empirical sources published between 2000 and 2022 were analyzed, framed by the natural resource-based view and motivated by an unpublished undergraduate thesis proposal examining manufacturing companies listed on the Indonesia Stock Exchange. The review indicates that CSR has no significant direct effect on environmental performance, but is consistently and positively related to environmental strategy and green capability, each of which in turn significantly and positively predicts environmental performance. Seven research propositions are advanced, and a conceptual framework linking CSR to environmental performance, both directly and through environmental strategy and green capability, is proposed to guide future empirical validation among manufacturing companies in Indonesia.*

Keywords: *Corporate Social Responsibility, Environmental Performance, Environmental Strategy, Green Capability, Literature Review.*

INTRODUCTION

Environmental degradation is now widely recognized by global observers, industry practitioners, researchers, academics, and policymakers as arising from many interrelated causes, including air emissions, resource depletion, hazardous-material use, rising air and water pollution, climate change, energy consumption, and biodiversity loss (Kraus, Rehman, & García, 2020). Manufacturing companies are among the largest contributors to these problems: Zailani, Jeyaraman, Vengadasan, and Premkumar (2012) find that manufacturing firms create pollution and use resources and energy inefficiently in ways that threaten the planet's continued habitability. Indonesia illustrates the scale of the problem at the national level. IQAir's (2021) World Air Quality Report ranked Indonesia among the countries with the poorest air quality in Southeast Asia, with Surabaya — the country's second-largest city and home to a large concentration of manufacturing activity — named among the region's more polluted cities. Business evaluation, accordingly, can no longer rest on financial performance alone; how a company manages its environmental impact has become a parallel and increasingly visible criterion for assessing corporate performance (Solovida & Latan, 2017).

Companies are responsible for the social, economic, and environmental consequences of their operations, an obligation generally described as corporate social responsibility (CSR). Discharging that obligation is treated in the literature as a strategic decision: companies undertake CSR to address environmental and social problems affecting the communities in which they operate, and to create a positive impact for stakeholders beyond the organization itself (Hardiyanti & Suryaningrum, 2021). Elkington, as summarized in Brundtland's (1987) report on sustainable development, frames CSR around three focal points — profit, planet, and people — in which a responsible company pursues economic gain while also attending to environmental sustainability and social welfare. CSR has, in this sense, increased the need for

companies to conduct business in new ways that integrate environmental, social, and economic concerns into everyday strategy and action (Hernández, Benito, & Juan, 2020). CSR is accordingly understood as more than a profit-oriented undertaking: it is a vital organizational resource that companies can draw on in shaping their environmental performance (Rehman, Bresciani, Yahiaoui, & Giacosa, 2022).

Beyond CSR itself, environmental performance is also shaped by the extent to which companies integrate environmental issues into their strategic planning process — what the literature terms environmental strategy. Companies with a stronger environmental-strategy focus tend to develop a well-articulated framework for addressing environmental problems (Judge & Douglas, 1998), and Kraus et al. (2020) report that environmental strategy positively and significantly improves environmental performance. Rising environmental turbulence — the continuous, destabilizing change in the operating environment that increasingly confronts companies (Sull, 2009; Van Den Bosch, Volberda, & De Boer, 1999) — has, in turn, increased the relevance of dynamic capability as a lens for understanding how companies respond. Following dynamic-capability theory, green capability denotes the critical, environmentally oriented capability reflected in employee behavior, actions, attitudes, skills, experience, commitment, and knowledge (Huang, Chau, Chien, & Shen, 2020), and Rehman et al. (2022) find that green capability positively and significantly affects environmental performance.

Given the scale of Indonesian manufacturing companies' impact on the environment, research on environmental performance in this sector is directly relevant. Although companies that implement CSR may be expected to improve their environmental performance, the literature has not reached a firm conclusion about the relationship between CSR and organizational performance more broadly: Galbreath and Shum (2012) find the CSR–organizational-performance relationship to be inconclusive, and several researchers accordingly recommend introducing a mediating or moderating variable between CSR and firm performance, since most existing studies overlook this mechanism (Galbreath & Shum, 2012; Surroca, Tribó, & Waddock, 2010). This review combines the findings of two studies — Kraus et al. (2020) and Rehman et al. (2022) — that each use environmental strategy or green capability as a mediator between CSR and environmental performance, and synthesizes them within a single framework in which both mediators operate together. Hart's (1995) natural-resource-based view (NRBV) provides the theoretical rationale for combining them: NRBV holds that environmental strategy plays a central role in determining sustainable performance, and that capability — including green capability — explains the relationship between natural resources and that sustainable performance.

This review is motivated by, and builds on, an unpublished undergraduate thesis proposal that set out to examine the effect of CSR on environmental performance, with environmental strategy and green capability as mediating variables, among manufacturing companies listed on the Indonesia Stock Exchange (Rahmawati, 2023). Rather than presenting that proposal's seven untested hypotheses as empirical findings, this article reframes the underlying research question as a literature synthesis, with three aims: (1) to map how CSR, environmental strategy, green capability, and environmental performance have been conceptualized and measured in the literature; (2) to synthesize the reported direct and indirect relationships among these constructs; and (3) to propose a conceptual framework and a set of research propositions to guide future empirical validation among manufacturing companies in Indonesia.

LITERATURE REVIEW

Natural Resource-Based View (NRBV) Theory

Hart (1995) proposes the natural resource-based view (NRBV) as an extension of the resource-based view (RBV), hypothesizing that by addressing the natural environment, organizations can achieve sustained competitive advantage. NRBV was developed specifically to explain sustainable performance through environmental resources and capabilities, and identifies three key strategic capabilities — pollution prevention, product stewardship, and sustainable development — each with a distinct environmental driving force, built on a distinct key resource, and each with a distinct source of competitive advantage. Removing pollutants from the production process, for example, can improve efficiency by reducing required inputs, simplifying processes, and lowering compliance and liability costs (Hart & Dowell, 2011; Suryaningrum, 2024).

Hart and Dowell (2011) argue that the NRBV perspective enables a more systematic examination of the relationship between environmental and financial performance by specifying the links between

resources, capabilities, and strategic outcomes. In particular, NRBV's emphasis on the contingent nature of resources and capabilities has helped researchers draw specific connections between environmental and financial performance: pollution-prevention strategy, natural resources, and firm capability together determine sustainable firm performance. NRBV also holds that organizational capability significantly explains the relationship between organizational resources — including CSR — and firm performance (Barney, 1991; Hart, 1995), and that this explanatory role extends specifically to the relationship between CSR and environmental performance (Menguc & Ozanne, 2005), a suggestion subsequently used as a reference point by Kraus et al. (2020), Rehman et al. (2022), and Suryaningrum (2024). NRBV is used in this review as the overarching theoretical lens linking CSR, environmental strategy, green capability, and environmental performance.

Corporate Social Responsibility (CSR)

Bowen and Johnson (1953) define CSR as the obligation of a company to pursue organizational strategies that meet the expectations of the wider community, to make decisions, and to follow courses of action that build value for society at large. Companies' social responsibility, more specifically, is their commitment to economic, social, and environmental issues in the pursuit of green profit and sustainable growth. CSR is a commitment to act ethically, to operate legally, and to contribute to improving the quality of life of employees and their families, the local community, and the wider community. The concept carries both a broad and a narrow sense: broadly, CSR concerns the pursuit of sustainable economic activity; narrowly, it concerns a company's accountability to society, the nation, and the international community. In Indonesian law, CSR is addressed under the heading of social and environmental responsibility, alongside related terms such as business social responsibility, corporate citizenship, corporate responsibility, and business citizenship, and involves an active, dynamic partnership among government, companies, and local communities.

In Indonesia, CSR is anchored in several regulatory instruments: Law No. 40 of 2007 concerning Limited Liability Companies, which requires companies whose activities relate to natural resources to carry out social and environmental responsibility (Pemerintah RI, 2007b); Law No. 25 of 2007 concerning Capital Investment, which similarly obliges every investor to implement corporate social responsibility (Pemerintah RI, 2007a); and Minister of State-Owned Enterprises Regulation No. PER-05/MBU/2007, under which state-owned enterprises are required to implement a Partnership and Community Development Program (Kementerian BUMN, 2007). CSR has, over recent decades, become a globally significant business practice, understood as a company's responsibility to meet society's economic, social, and environmental expectations, and thereby as a medium for achieving sustainable economic activity for society, the nation, and the international community. Within NRBV, CSR is treated as an organizational resource with the potential to shape environmental performance (Hart, 1995).

Environmental Strategy

Environmental strategy is a company strategy formulated in response to existing environmental issues, with the aim of achieving significant cost advantages generated by environmental improvements such as superior waste management, the use of cheaper recycled raw materials, and pollution prevention that limits the cost of complying with environmental regulations (Smith, 1991; Welford, 1992; Taylor & Welford, 1993). A higher degree of strategic focus of this kind can accordingly produce what the literature calls an ecologically sustainable lowest-cost strategy and an ecologically sustainable niche strategy for achieving competitive advantage (Shrivastava, 1995).

Strategic steps are implemented by linking environmental issues to quality and by connecting environmental objectives with the company's other objectives. At the operational level, environmental strategy typically focuses on limited measures aimed at reducing emissions and managing waste, while companies with a higher environmental-strategy focus tend to have a well-developed framework for addressing environmental problems (Judge & Douglas, 1998). Piwovar-Sulej (2022) distinguishes three types of environmental strategy: reactive, in which a company responds to environmental issues only after they arise or after being compelled by regulation; preventive, in which a company anticipates environmental problems and takes measures in advance to avoid them; and proactive, in which a company goes beyond compliance to actively seek opportunities for environmental improvement ahead of regulatory or stakeholder pressure. Prior literature reports that environmental strategy significantly determines environmental performance (Solovida & Latan, 2017; Kraus et al., 2020), and CSR itself is reported to have a significant positive effect on environmental strategy (Kraus et al., 2020).

Green Capability

Green capability is a deepening of the dynamic-capability concept. Dynamic capability is the capability that helps a unit extend, modify, and reconfigure its existing operational capabilities into new ones so as to better fit a changing environment (Winter, 2003; Teece, 2007). A continuously changing environment produces environmental turbulence: Sull (2009) and Van Den Bosch et al. (1999) argue that turbulent environments create opportunities by generating incentives to use dynamic capability to reconfigure existing operational capabilities in pursuit of new opportunities, because a turbulent environment widens the gap between current and ideal operational capability, making reconfiguration necessary to increase the value of a company's capabilities. Within RBV, dynamic capability emphasizes resource selection (choosing a combination of resources) and resource renewal (reconfiguring resources into new combinations of operational capability); Pavlou and El Sawy (2011) similarly argue that dynamic capability can generate higher returns by reconfiguring existing operational capabilities, making the concept broadly relevant to nearly every level of organizational decision-making, including decisions made by lower-level managers regarding business units within and between companies. Following dynamic-capability theory, green dynamic capability is the critical capability reflecting the environmental orientation of employee behavior, action, attitude, skill, experience, commitment, and knowledge (Huang et al., 2020).

The term green capability concentrates specifically on integrating, building, and reconfiguring internal and external resources related to environmental protection (Qiu, Jie, Wang, & Zhao, 2020). Qiu et al. (2020) divide green capability into three parts: resource-integration capability, the capacity to combine internal and external resources toward environmental goals; resource-reconfiguration capability, the capacity to modify and redeploy existing resources as environmental conditions change; and environmental-insight capability, the capacity to sense and interpret environmental risks and opportunities. Indrianto, Kusmantini, and Sugandini (2022) report that green capability affects firm performance in both its economic and environmental dimensions, and Rehman et al. (2022) similarly find that green capability has a significant effect on environmental performance. Green capability can, on this basis, be said to play an important role in achieving sustainable performance.

Environmental Performance

Environmental performance can be understood as an extraction of the externalities a company's operations generate. Mattmann, Logar, and Brouwer (2016) describe an externality as an effect experienced by one party as a result of another party's actions; in a corporate context, this refers to the impact felt by society or the environment as a result of a company's operational activities, for which the company is expected to bear what is termed an externality cost aimed at reducing or addressing that impact. These impacts can be felt by the community, the environment, and even the company itself in the future. Latan, Chiappetta Jabbour, Lopes de Sousa Jabbour, Wamba, and Shahbaz (2018) find that companies with very good environmental performance tend to disclose information that is robust, verifiable, and difficult to imitate.

Implementing strong environmental-performance practices carries potential benefits for society, the environment, and the company itself. When environmental performance is applied effectively, a company can improve its economic performance; Mattmann et al. (2016) report that environmental performance has a significant positive effect on economic performance, meaning that the higher a company's environmental performance, the higher its economic performance tends to be. Companies are expected to carry out environmental performance with integrity and to fulfil their social responsibilities in ways that build harmonious relationships with stakeholders and support the achievement of company goals; when this is accomplished, environmental performance can serve as a basis for evaluating company performance and assisting investor decision-making, since it reflects a company's commitment to environmental protection through both its actions and its external recognition.

In Indonesia, corporate environmental-performance assessment has been formally in place since 1995, when the Ministry of Environment introduced the Program Penilaian Peringkat Kinerja Perusahaan dalam Pengelolaan Lingkungan (PROPER) as a mechanism for monitoring the environmental performance carried out by companies. Under Minister of Environment and Forestry Regulation No. 5 of 2011, PROPER criteria are organized around two broad components (Kementerian Lingkungan Hidup dan Kehutanan, 2019): compliance with environmental regulations, and the extent to which a company has gone beyond compliance through environmental-management initiatives. Environmental performance can accordingly be defined as an assessment of how a company uses resources, manages waste, reduces emissions, and regulates water use, with the aim of generating positive benefits for society, the environment, and the

company itself, and, ultimately, of improving long-run economic performance. In Indonesia, this performance is measured through the PROPER program.

Previous Research

Table 1 summarizes six empirical studies most directly relevant to the relationships among CSR, environmental strategy, green capability, and environmental performance, and to the underlying thesis proposal this review is built on (Rahmawati, 2023).

Table 1. Summary of Reviewed Empirical Studies

No	Author(s) & Year	Focus / Key Variables	Method & Sample	Key Findings
1	Kraus, Rehman, & García (2020)	CSR, environmental strategy, green innovation → environmental performance	Partial Least Square Structural Equation Modeling (PLS-SEM)	CSR has no significant direct effect on environmental performance, but is positively correlated with environmental strategy and green innovation, which in turn significantly mediate the relationship between CSR and environmental performance.
2	Rehman, Bresciani, Yahiaoui, & Giacosa (2022)	Environmental sustainability orientation (ESO), CSR, green capability → environmental performance	PLS-SEM; small and medium enterprises	ESO and green capability are significantly related to environmental performance; CSR has no significant direct effect on environmental performance, but ESO and CSR significantly affect green capability, which mediates their relationship with environmental performance.
3	Qiu, Jie, Wang, & Zhao (2020)	Resource-integration, resource-reconfiguration, and environmental-insight capability → competitive advantage	Simple linear regression; Chinese manufacturing enterprises	All three green-capability components significantly affect competitive advantage, and mediate the relationship between green product innovation and competitive advantage.
4	Indrianto, Kusmantini, & Sugandini (2022)	Green supply chain management practices, green capability → farmers' business performance	Partial Least Square (PLS); women farmer group, Bantul Regency	Environmentally friendly policy has a positive effect on business performance, comprising both environmental and economic performance dimensions.
5	Zailani, Jeyaraman, Vengadasan, & Premkumar (2012)	Sustainable supply chain management practices among manufacturing companies	Survey; manufacturing companies in Malaysia	Manufacturing companies are found to create pollution and use resources and energy inefficiently, underscoring the need for sustainable supply chain practices.
6	Solovida & Latan (2017)	Environmental strategy → environmental performance	PLS-SEM; manufacturing companies	There is a significant positive relationship between environmental strategy and environmental performance, mediated by environmental management accounting.

Source: Authors' synthesis of reviewed literature, 2019.

METHOD

This article uses a qualitative literature review, also known as document analysis (Bowen, 2009), to synthesize existing theoretical and empirical work on CSR, environmental strategy, green capability, and environmental performance. Document analysis treats published texts — journal articles, regulations, and institutional publications — as data to be systematically read, compared, and interpreted, allowing patterns of agreement and disagreement across studies to be identified without collecting new primary data (Bowen, 2009).

This review is grounded in and motivated by an unpublished undergraduate thesis proposal by Rahmawati (2023), which set out to examine the effect of CSR on environmental performance, with environmental strategy and green capability as mediating variables, among manufacturing companies in Indonesia listed on the Indonesia Stock Exchange. Rather than presenting that proposal's seven untested hypotheses as if they were empirical findings, this article reframes its research question as a literature synthesis: the theoretical and empirical literature underlying each hypothesized relationship is reviewed, compared, and consolidated into research propositions (P1–P5, presented in the Discussion), which future empirical research — ideally using the same sector — can test directly.

Sources were located through institutional repositories, journal publisher platforms, and academic search engines using combinations of the keywords “corporate social responsibility,” “environmental strategy,” “green capability,” and “environmental performance,” restricted to sources published between 1953 — the year the classical CSR literature underlying this review begins — and 2022. Sources were included if they were peer-reviewed journal articles, government regulations, institutional publications, or foundational theory texts directly addressing one or more of the four constructs above, and if each carried a traceable DOI, publisher URL, or institutional-repository link so that every citation in this article remains independently verifiable; sources without such a link were excluded.

Sources meeting these criteria were retained for synthesis: foundational theory sources on the natural resource-based view and dynamic capability (Hart, 1995; Hart & Dowell, 2011; Barney, 1991; Winter, 2003; Teece, 2007; Van Den Bosch et al., 1999); a methodological reference (Bowen, 2009); three Indonesian regulatory instruments on CSR and environmental performance (Pemerintah RI, 2007a, 2007b; Kementerian BUMN, 2007; Kementerian Lingkungan Hidup dan Kehutanan, 2019); six peer-reviewed empirical studies on CSR, environmental strategy, green capability, or environmental performance (summarized in Table 1); and additional foundational or theoretical journal articles defining CSR, environmental strategy, green capability, and environmental performance (Bowen & Johnson, 1953; Galbreath & Shum, 2012; Surroca et al., 2010; Menguc & Ozanne, 2005; Judge & Douglas, 1998; Shrivastava, 1995; Mattmann et al., 2016; Latan et al., 2018; Qiu et al., 2020; Huang et al., 2020; Piwowar-Sulej, 2022; Sull, 2009; Pavlou & El Sawy, 2011), together with the unpublished undergraduate thesis proposal this review is built on (Rahmawati, 2023) and a national air-quality report used to motivate the study (IQAir, 2021). Each source was read in full, coded for the construct(s) it examined and the direction of the relationship it reported (where applicable), and compared across sources to identify points of convergence and divergence, reported next as a synthesis organized by variable pair.

DISCUSSION

CSR and Environmental Performance

The literature does not converge on a significant direct effect of CSR on environmental performance. Kraus et al. (2020) report that CSR has no significant direct effect on environmental performance, and Rehman et al. (2022) similarly find no significant direct effect, though both studies find that CSR is positively correlated with the mediating variables examined in each study — environmental strategy and green innovation in Kraus et al. (2020), and green capability in Rehman et al. (2022). This pattern is consistent with Galbreath and Shum's (2012) broader observation that the CSR–performance relationship is inconclusive when tested directly, and with their recommendation, echoed by Surroca et al. (2010), that a mediating or moderating mechanism is generally needed to detect a significant relationship. Based on this synthesis, the review advances:

P1: CSR is not directly associated with environmental performance among manufacturing companies in Indonesia; its effect operates primarily through mediating mechanisms such as environmental strategy and green capability.

CSR and Environmental Strategy

Kraus et al. (2020) report that CSR has a significant positive effect on environmental strategy, consistent with the view that a company's commitment to social and environmental responsibility naturally extends into the strategic planning process, encouraging the integration of environmental issues into company strategy (Judge & Douglas, 1998). Based on this synthesis, the review advances:

P2: CSR is positively associated with environmental strategy among manufacturing companies in Indonesia.

CSR and Green Capability

Rehman et al. (2022) find that CSR has a significant positive effect on green capability, consistent with NRBV's treatment of CSR as an organizational resource that companies can draw on to build the internal capabilities needed to integrate, build, and reconfigure resources toward environmental protection (Qiu et al., 2020). Based on this synthesis, the review advances:

P3: CSR is positively associated with green capability among manufacturing companies in Indonesia.

Environmental Strategy and Environmental Performance

Evidence on environmental strategy is more consistent than evidence on CSR's direct effect. Solovida and Latan (2017) find a significant positive relationship between environmental strategy and environmental performance, mediated by environmental management accounting, and Kraus et al. (2020) similarly report that environmental strategy significantly and positively affects environmental performance. Both findings are consistent with the theoretical expectation that a company's environmental-strategy focus — whether reactive, preventive, or proactive (Piwowar-Sulej, 2022) — translates directly into the environmental-performance indicators through which that strategy is observed (Hart & Dowell, 2011). Based on this synthesis, the review advances:

P4: Environmental strategy is positively associated with environmental performance among manufacturing companies in Indonesia.

Green Capability and Environmental Performance

Green capability shows a similarly consistent relationship with environmental performance. Rehman et al. (2022) find that green capability significantly affects environmental performance, and Indrianto et al. (2022) report that green capability affects firm performance in both its economic and environmental dimensions. NRBV situates this relationship theoretically: the theory highlights that capability can be a significant predictor of environmental performance because it is through capability — the ability to integrate, build, and reconfigure resources (Qiu et al., 2020) — that organizational resources are converted into observable environmental outcomes (Hart, 1995). Based on this synthesis, the review advances:

P5: Green capability is positively associated with environmental performance among manufacturing companies in Indonesia.

Mediating Roles of Environmental Strategy and Green Capability

Taken together, propositions P1–P5 suggest that environmental strategy and green capability each function as a mechanism connecting CSR to environmental performance, rather than as a byproduct of a direct CSR–environmental-performance relationship that the literature has not found. This reading is directly supported by Kraus et al. (2020), who report that environmental strategy significantly mediates the relationship between CSR and environmental performance, and by Rehman et al. (2022), who report that green capability significantly mediates the relationship between CSR (and environmental sustainability orientation) and environmental performance. NRBV provides the theoretical rationale for expecting both mediators to operate simultaneously: the theory holds that organizational capability significantly explains the relationship between organizational resources — including CSR — and firm performance (Barney, 1991; Hart, 1995), and that this explanatory role extends to environmental performance specifically (Menguc & Ozanne, 2005). Figure 1 synthesizes this reading into a conceptual framework.

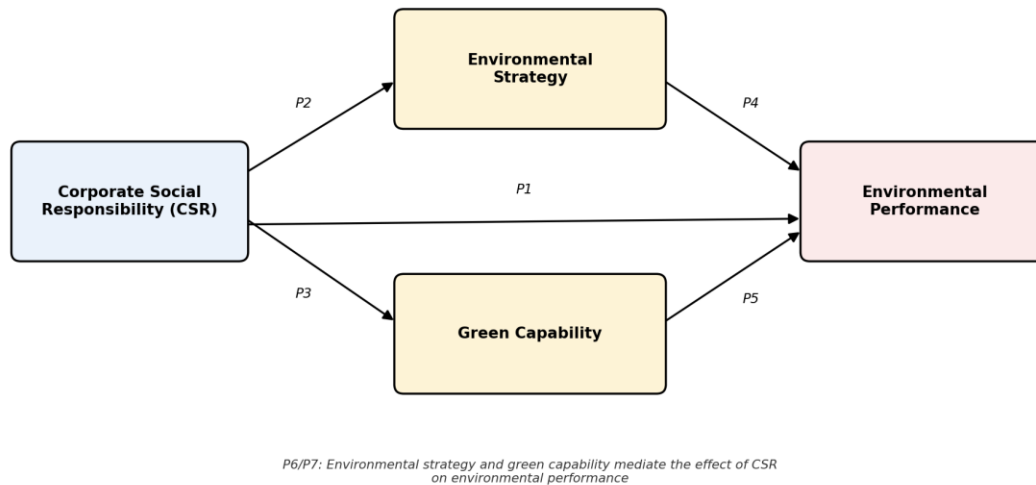


Figure 1. Conceptual Framework of CSR on Environmental Performance through Environmental Strategy and Green Capability

P6: Environmental strategy mediates the relationship between CSR and environmental performance among manufacturing companies in Indonesia.

P7: Green capability mediates the relationship between CSR and environmental performance among manufacturing companies in Indonesia.

CONCLUSION

This review synthesizes theoretical and empirical literature on CSR as a determinant of environmental performance, both directly and through the mediating mechanisms of environmental strategy and green capability. Framed by the natural resource-based view (Hart, 1995; Hart & Dowell, 2011) and motivated by Indonesia's poor air-quality standing (IQAir, 2021) and by an unpublished undergraduate thesis proposal on manufacturing companies listed on the Indonesia Stock Exchange (Rahmawati, 2023), the literature converges most clearly on the absence of a significant direct effect of CSR on environmental performance, and on the presence of significant positive relationships between CSR and each mediator (environmental strategy and green capability), and between each mediator and environmental performance. The overall picture that emerges is one in which CSR shapes environmental performance indirectly, through the environmental strategies companies adopt and the green capabilities they build, rather than through a direct, unmediated channel.

These findings carry practical implications for manufacturing companies in Indonesia, where PROPER-based environmental-performance assessment has been in place since 1995 (Kementerian Lingkungan Hidup dan Kehutanan, 2019): managers seeking to translate CSR commitments into measurable environmental outcomes should invest deliberately in environmental strategy formulation and in building green capability — resource-integration, resource-reconfiguration, and environmental-insight capability (Qiu et al., 2020) — rather than assuming that CSR expenditure alone will improve environmental performance. Regulators and industry associations may likewise find it useful to frame CSR-related compliance requirements (Pemerintah RI, 2007a, 2007b; Kementerian BUMN, 2007) as complementary to, rather than a substitute for, capability-building and strategic planning initiatives.

As a literature review, this article synthesizes existing findings rather than collecting new primary data; the propositions advanced here (P1–P7) are therefore conceptual and require empirical testing. Future research could test these propositions directly using the Indonesian manufacturing-company sample proposed by Rahmawati (2023), extend the analysis to other sectors exposed to significant environmental impact, or apply mediation-testing techniques such as PLS-SEM to formally assess the mediating roles of environmental strategy and green capability proposed in P6 and P7.

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