Volume: 11 Issues: 67 Special Issue [August, 2026] pp. 196 - 207
International Journal of Accounting, Finance and Business (IJAFB)
eISSN: 0128-1844
Journal website: www.academicinspired.com/ijafb
DOI: 10.55573/IJAFB.116714

BALANCING EXPLOITATION AND EXPLORATION: AN AMBIDEXTROUS RESILIENCE FRAMEWORK FOR GREEN INNOVATION IN CARBON-INTENSIVE INDUSTRIES

Zhong Lichen[1, 2]
Raja Nazim Raja Abdullah[3]*
Liu He[4, 5]
Roszi Naszariah Nasni Naseri[6]

[1]Faculty of Management and Economics, Universiti Pendidikan Sultan Idris, Malaysia
Email: p20251004204@siswa.upsi.edu.my
[2]Shandong Huayu University of Technology, China
Email: ljubavljulju@163.com
[3]Faculty of Management and Economics, Universiti Pendidikan Sultan Idris, Malaysia
Email: rajanazim@fpe.upsi.edu.my
[4]Faculty of Management and Economics, Universiti Pendidikan Sultan Idris, Malaysia
Email: p20251003365@siswa.upsi.edu.my
[5]Guangxi Technological College of Machinery and Electricity, China
Email: xiaobawanghu@foxmail.com
[6]Faculty of Business and Management, University Technology MARA, Melaka Branch, Alor Gajah Campus, Malaysia
Email: roszinaseri@uitm.edu.my
*Corresponding Author

Article history
Received date : 19-6-2026
Revised date : 20-6-2026
Accepted date : 25-7-2026
Published date : 1-8-2026

To cite this document:
Lichen, Z., Raja Abdullah, R. N., He, L., & Naseri, R. N. N. (2026). Balancing exploitation and exploration: An ambidextrous resilience framework for green innovation in carbon-intensive industries. *International Journal of Accounting, Finance and Business (IJAFB),* 11 (67), 196 - 207.

Abstract: *Achieving net-zero emissions is a major challenge for carbon-intensive industries. When facing strict environmental regulations, these firms face a severe survival paradox. If they immediately abandon their traditional high-carbon equipment to pursue radical green technologies, they risk breaking their cash flow. However, if they rely on their old assets and ignore green innovation, they will lose future market competitiveness. Existing literature often overlooks this structural tension, broadly advising heavy manufacturers to transition quickly. To solve this paradox, this paper introduces the theory of organisational ambidexterity. We propose that carbon-intensive firms develop ambidextrous resilience by simultaneously balancing green exploitation and green exploration. Green exploitation allows firms to ensure short-term compliance and financial stability. Green exploration enables firms to test and adopt radical low-carbon technologies for long-term strategic renewal. By balancing these two conflicting forces, firms can safely cross the dangerous gap between their high-carbon history and a low-carbon future. Unlike prior conceptual studies that broadly prescribe green innovation, this paper provides a micro-foundational mechanism detailing how organizations structurally and financially transition, offering a novel extension to environmental ambidexterity literature.*

Volume: 11 Issues: 67 Special Issue [August, 2026] pp. 196 - 207
International Journal of Accounting, Finance and Business (IJAFB)
eISSN: 0128-1844
Journal website: www.academicinspired.com/ijafb
DOI: 10.55573/IJAFB.116714

Keywords: *Green Innovation; Carbon-Intensive Industries; Ambidexterity Theory; Exploitation and Exploration; Strategic Paradox*

Introduction

Carbon-intensive sectors notably cement, steel, and chemical manufacturing constitute the backbone of global infrastructure while simultaneously serving as the primary contributors to greenhouse gas emissions. Currently, coercive institutional pressures and the global net-zero imperative compel these industries to execute a profound socio-technical transition (Bataille et al., 2018). Unlike asset-light service sectors, heavy industrial firms are structurally constrained by capital-intensive infrastructure with extreme asset specificity and multidecadal lifecycles. This physical rigidity renders their environmental transition exceptionally complex.

In navigating this ecological transition, these firms confront a severe institutional-financial paradox. On one hand, securing future regulatory legitimacy mandates the adoption of radical, frontier technologies, necessitating high-risk strategic exploration (Trencher et al., 2024). On the other hand, piloting these exploratory technologies requires substantial and continuous capital expenditure. To finance such long-term ecological investments, firms need to relentlessly maintain the operational continuity of their existing, high-emission production lines to sustain liquidity. Consequently, executive management cannot afford to arbitrarily transition between operational paradigms; they are required to orchestrate a dual-track mechanism that simultaneously guarantees short-term financial survival and long-term ecological compliance.

Current research on green innovation often overlooks this severe paradox. Many studies simply suggest that firms should rapidly replace their high-emission assets with green technologies to meet government regulations. While this advice is theoretically sound, it completely ignores the operational reality of heavy manufacturing. A firm that halts its core production to pursue uncertain green technology risks immediate bankruptcy. Existing theories lack a specific mechanism to explain how carbon-intensive manufacturers can survive the current financial pressure while preparing for future ecological demands.

To address this theoretical gap, this paper introduces the framework of organisational ambidexterity into the context of green transition. Ambidexterity refers to a firm's ability to simultaneously execute two fundamentally different tasks. In this paper, we propose the concept of ambidextrous resilience, which consists of green exploitation and green exploration. Green exploitation focuses on incremental efficiency. It helps the firm squeeze the maximum value and minimum emissions out of its current assets to ensure immediate survival. In contrast, green exploration focuses on radical innovation. It provides the firm with the structural and financial safety net needed to test unproven green technologies.

Consequently, the primary objective of this conceptual paper is to construct a dual-track framework of ambidextrous resilience specific to carbon-intensive industries. By bridging the Dynamic Capability View (DCV) with ambidexterity theory, this study seeks to elucidate how heavy manufacturers can systematically balance operational exploitation for immediate survival with ecological exploration for long-term decarbonisation. The subsequent sections will detail this theoretical model, exploring how balancing exploitation and exploration serves

Volume: 11 Issues: 67 Special Issue [August, 2026] pp. 196 - 207
International Journal of Accounting, Finance and Business (IJAFB)
eISSN: 0128-1844
Journal website: www.academicinspired.com/ijafb
DOI: 10.55573/IJAFB.116714

as the ultimate micro-foundation for achieving substantive green innovation in continuous-process industries.

Background and the Survival Paradox in Carbon-Intensive Industries

Carbon-intensive sectors struggle to achieve green innovation not because their management lacks environmental awareness, but because they are structurally constrained by deep lock-in effects (Seto et al., 2016; Chen et al., 2023). Heavy manufacturing is fundamentally different from the digital or service sectors. To understand why carbon-intensive firms cannot easily transition, we need to examine the specific physical and organisational limits that create their survival paradox.

Financial Sunk Costs in Long-Lifespan Physical Assets

The core productivity of carbon-intensive industries relies on massive physical infrastructure, such as rotary kilns in cement plants or blast furnaces in steel mills. These machines require massive initial capital investment and are specifically designed to operate continuously for thirty to fifty years (Bataille et al., 2018). This creates a severe financial lock-in. Once a firm invests heavily in a high-carbon production line, it expects to keep this equipment running for its entire designed lifespan to recover the costs and make a profit (Erickson et al., 2015; Trencher et al., 2024). Forcing these firms to adopt entirely new low-carbon technologies in the short-term means dismantling core equipment early. This action turns historical investments into instant sunk costs (Unruh, 2000). Consequently, heavy industrial firms instinctively resist radical green technologies because replacing equipment destroys their past financial investments.

Cash Flow Interruptions from Immediate Green Overhauls

Beyond past sunk costs, carbon-intensive firms also face immediate survival pressures. Implementing radical green technologies, such as Carbon Capture, Utilisation, and Storage (CCUS) or hydrogen-based production, is not a simple software update. It requires physically rebuilding the core production infrastructure. Halting production to install these complex systems immediately stops the firm's primary revenue stream. Hahn et al. (2014) point out that corporate sustainability often involves severe tensions between short-term financial survival and long-term ecological goals. If a cement plant stops selling traditional cement today to build a completely green factory for tomorrow, it will likely go bankrupt before the transition is complete. Thus, firms face a harsh paradox: they are compelled to keep their traditional, high-emission production lines running simply to generate the cash flow needed to fund their future green research.

The Conflict Between Economies of Scale and Green Innovation

The daily management logic of carbon-intensive industries also directly contradicts the requirements of green innovation. For decades, the core competitive strategy in heavy manufacturing has been economies of scale. Management systems, performance metrics, and daily routines are all tightly designed to maximise continuous output and minimise unit costs. Over time, this intense focus on efficiency turns into 'core rigidities' that hinder new learning (Leonard-Barton, 1992). Green innovation, however, requires trial and error, testing alternative raw materials, and frequently adjusting production parameters (Bocken et al., 2014). This exploratory behaviour interrupts standard operating procedures and reduces immediate manufacturing efficiency. When managers are evaluated solely on steady production volume,

Volume: 11 Issues: 67 Special Issue [August, 2026] pp. 196 - 207
International Journal of Accounting, Finance and Business (IJAFB)
eISSN: 0128-1844
Journal website: www.academicinspired.com/ijafb
DOI: 10.55573/IJAFB.116714

they view green experiments as costly disruptions rather than strategic investments (Tripsas & Gavetti, 2000). This rigid organisational mindset makes it extremely difficult to introduce new environmental knowledge into the firm.

Theoretical Foundation: The Evolution Towards Green Ambidexterity

To solve the severe survival paradox identified in the previous section, firms require a dual-capability mechanism. This section traces the theoretical roots of organisational ambidexterity, critically evaluates competing perspectives, and proposes our core theoretical extension: nesting green innovation within the ambidextrous framework.

Critical Evaluation of Competing Perspectives and Dynamic Capabilities

In the existing literature, two competing perspectives dominate the sustainability discourse. The 'win-win' perspective argues that environmental regulation universally drives innovation and offsets compliance costs. However, this view often underestimates the severe operational trade-offs and capital constraints inherent in heavy manufacturing. Conversely, the traditional 'trade-off' perspective assumes that green investments inevitably destroy financial value and distract from core operations. We critically evaluate these competing views by adopting a paradox perspective (Hahn et al., 2014), proposing that these tensions are not mutually exclusive. Furthermore, by integrating the Dynamic Capability View (DCV), we conceptualise ambidextrous resilience not merely as a passive buffering mechanism, but as an active, dynamic capability to reconfigure core assets. Instead of choosing between financial survival and ecological compliance, firms can manage these competing demands concurrently.

The Origins of Organisational Ambidexterity: March's Dilemma

The theoretical foundation of this study traces back to the classic work of March (1991), who fundamentally divided organisational learning into two conflicting activities: exploitation and exploration. Exploitation focuses on refining existing knowledge, standardising processes, and maximising short-term efficiency. In contrast, exploration involves searching for new alternatives, taking risks, and pursuing long-term discoveries. March identified a core managerial dilemma: these two activities compete for the same scarce resources within a firm. 'Ambidexterity' emerged as the ultimate solution—the rare ability of a firm to survive by executing both exploitation and exploration simultaneously.

From General Learning to Ambidextrous Innovation

Over the past two decades, researchers have moved March’s original concept from general learning theories into the specific context of strategic innovation (O'Reilly & Tushman, 2013). Scholars found that successful firms do not just think ambidextrously; they structurally separate their innovation efforts. For example, a firm might use its mainstream manufacturing division to focus on incremental innovations, while creating an isolated research unit to pursue radical, disruptive innovations. This structural separation allows the firm to protect its exploratory units from the strict efficiency metrics of the core business.

Nesting Green Innovation in the Ambidextrous Framework

While general ambidextrous innovation explains how firms manage market disruptions, it is insufficient to address the unique ecological pressures facing carbon-intensive industries. Green innovation is not just driven by a desire for more market share; it is forced by coercive institutional pressures, such as government carbon taxes and strict environmental laws

Volume: 11 Issues: 67 Special Issue [August, 2026] pp. 196 - 207
International Journal of Accounting, Finance and Business (IJAFB)
eISSN: 0128-1844
Journal website: www.academicinspired.com/ijafb
DOI: 10.55573/IJAFB.116714

(Berrone et al., 2013; Martínez-Falcó et al., 2024). Therefore, the primary theoretical extension of this paper is to explicitly nest 'green innovation' within the ambidextrous framework, creating the concept of 'Green Ambidexterity'

By adding the green dimension, we suggest that the heavy industry paradox can only be resolved through a dual-track environmental strategy. 'Green Exploitation' involves incremental environmental compliance, such as adding better filters to old chimneys or slightly reducing coal usage. This ensures the firm survives regulatory inspections today and keeps its massive assets running. Simultaneously, 'Green Exploration' involves radical low-carbon disruption, such as investing heavily in green hydrogen or carbon capture infrastructure. By nesting green innovation into this framework, we elevate ambidexterity from a general management tool into a specific survival mechanism for the climate crisis. This specific nesting directly answers the cash flow and sunk cost dilemmas of heavy industries, proving that they can systematically fund their own ecological revolution without going bankrupt.

To rigorously demonstrate this theoretical pedigree, Table 1 provides a chronological synthesis of the key literature, tracing how the ambidexterity concept has evolved from a general learning theory into a strategic innovation tool, and finally into the green transition framework proposed herein.

Table 1: Key Literature Synthesis on the Theoretical Evolution of Organisational Ambidexterity

Evolutionary Phase	Key Authors & Classic Literature	Core Theoretical Focus & Contribution
Phase 1: Foundational Learning Theory	March (1991); Levinthal & March (1993)	Introduced the fundamental trade-off between 'exploitation' (refining old certainties) and 'exploration' (searching for new possibilities) in resource allocation.
Phase 2: Strategic Ambidexterity & Innovation	Gibson & Birkinshaw (2004); O'Reilly & Tushman (2013)	Applied the concept to firm survival, proving that structural and contextual separation allows firms to simultaneously pursue incremental and radical product innovation.
Phase 3: Environmental and ESG Ambidexterity	Berrone et al. (2013); Hahn et al. (2014); Martínez-Falcó et al. (2024)	Extended ambidexterity into environmental management, primarily focusing on balancing ESG compliance with corporate financial performance in general contexts.
Phase 4: Ambidextrous Resilience (This Study)	Building upon Phase 3 and integrating Chen et al. (2023) and Trencher et al. (2024)	Specifically contextualises green ambidexterity for carbon-intensive industries, framing it as a financial-ecological survival mechanism to overcome severe asset lock-in.

Source: Compiled by the Author

Volume: 11 Issues: 67 Special Issue [August, 2026] pp. 196 - 207
International Journal of Accounting, Finance and Business (IJAFB)
eISSN: 0128-1844
Journal website: www.academicinspired.com/ijafb
DOI: 10.55573/IJAFB.116714

To visually synthesise this theoretical progression, Figure 1 illustrates how the original concept of ambidexterity splits and evolves across different academic contexts. It demonstrates the trajectory from March's foundational learning theory, through its application in general product innovation, to the specific dual-track framework of green innovation proposed in this study.

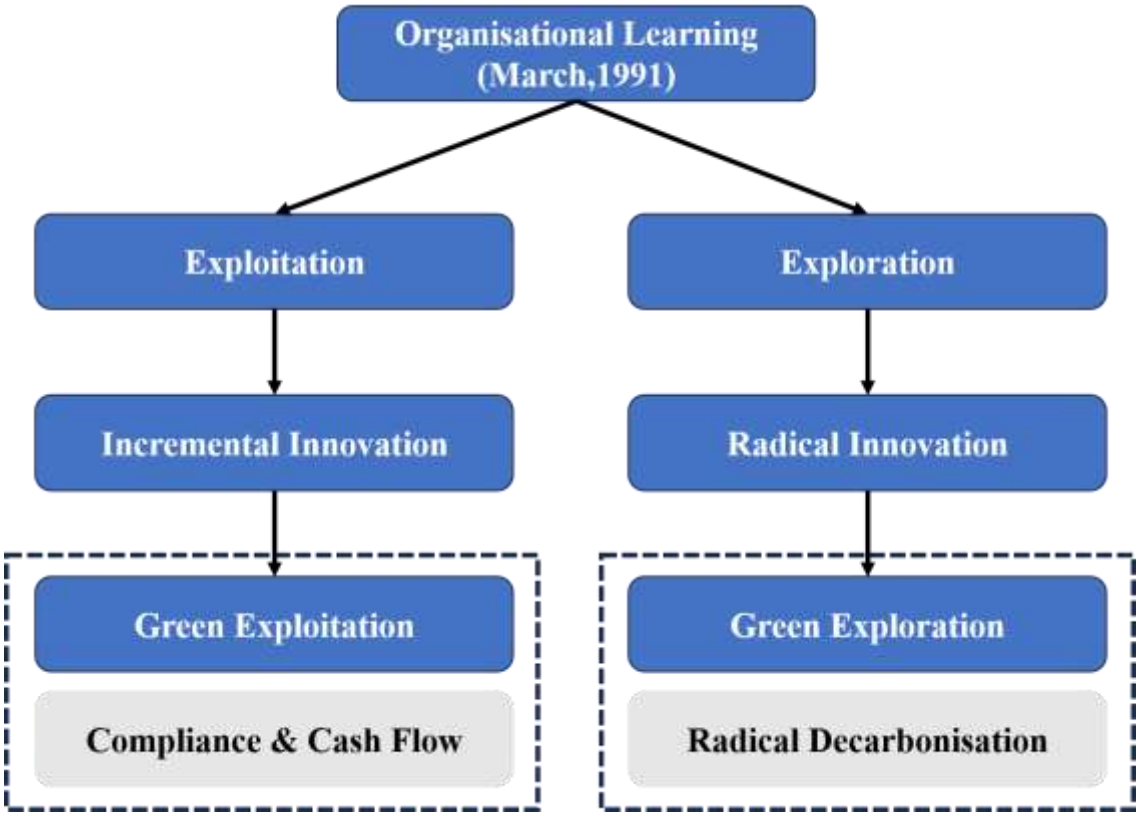

Figure 1: The Theoretical Evolution and Splitting of Organisational Ambidexterity
Source: Compiled by the Author

The Dual-Track Framework of Green Ambidexterity

Having established Green Ambidexterity as the theoretical solution, this section deconstructs how carbon-intensive firms actually execute this paradox. We propose a dual-track framework that physically and financially separates the firm's survival tactics from its evolutionary strategies.

Green Exploitation for Short-Term Compliance and Cash Flow

The first track is green exploitation, which focuses on incremental environmental improvements to existing physical assets. It is crucial to distinguish green exploitation from traditional operational exploitation. In classic ambidexterity theory (March, 1991), exploitation is purely driven by market logic: firms refine processes to reduce costs, increase output, and maximise profit margins. However, in heavy industries, green exploitation is primarily driven by institutional logic (Berrone et al., 2013). Upgrading emission filters or adjusting thermal parameters often *increases* operational costs and reduces profit margins. Yet, firms must perform these actions to secure immediate regulatory compliance and maintain their 'license to operate'. For a continuous-process industry, halting production due to environmental penalties is financially fatal. Therefore, the true strategic goal of green exploitation is not to maximise

Volume: 11 Issues: 67 Special Issue [August, 2026] pp. 196 - 207
International Journal of Accounting, Finance and Business (IJAFB)
eISSN: 0128-1844
Journal website: www.academicinspired.com/ijafb
DOI: 10.55573/IJAFB.116714

pure profit, but to guarantee the steady generation of cash flow by keeping the high-carbon assets running legally. This financial stability is the fundamental prerequisite for funding any future radical innovations.

Green Exploration for Radical Decarbonisation

The second track is green exploration, which aims for radical, disruptive decarbonisation. Green exploration in carbon-intensive sectors is not about expanding the business outward, but about replacing its foundational core inward. It involves investing in high-risk projects such as Carbon Capture, Utilisation, and Storage (CCUS) infrastructure (Bataille et al., 2018). These exploratory activities represent a fundamental departure from the firm's historical technological path. They are highly capital-intensive and carry high failure rates. However, green exploration ensures that when current high-carbon assets eventually become legally banned, the firm possesses the new technological blueprints required to survive.

Structural Separation and Strategic Integration

The critical managerial challenge is that green exploitation and green exploration naturally repel each other. Asking the same factory manager to maximise daily cement output while simultaneously experimenting with disruptive carbon capture chemistry creates impossible Key Performance Indicator (KPI) conflicts. To resolve this, carbon-intensive firms must adopt 'structural ambidexterity' (O'Reilly & Tushman, 2013). This involves physically and administratively separating the two tracks. The mainstream production facilities should be dedicated entirely to green exploitation, focusing on strict efficiency and compliance. Meanwhile, the firm must establish isolated 'green laboratories' or dedicated pilot plants to pursue green exploration, shielding these innovative units from the rigid financial metrics of the core business. Finally, the top executive team performs strategic integration: they act as the crucial bridge, systematically transferring the cash flow generated by the exploitative main plant to fund the exploratory green units.

Table 2: Strategic Comparison of Traditional and Green Ambidexterity

Dimension	Traditional Exploitation vs. Exploration	Green Exploitation vs. Green Exploration
Primary Driver	Market competitiveness and profit maximisation.	Institutional pressure and ecological survival.
Focus of Exploitation	Refining existing products to lower costs and increase margins.	Upgrading old equipment to meet compliance, even if costs rise.
Focus of Exploration	Discovering new customer segments and novel product categories.	Replacing the firm's foundational manufacturing technology.
Ultimate Strategic Goal	Sustained economic growth and market dominance.	Preventing asset stranding and achieving net-zero transition.

Source: Compiled by the Author

Conceptual Model: From Ambidextrous Resilience to Substantive Green Innovation

To integrate the discussions above, this section constructs a comprehensive conceptual model. This model visually and logically connects the initial survival paradox with the ultimate desired outcome of the firm: substantive green innovation.

Volume: 11 Issues: 67 Special Issue [August, 2026] pp. 196 - 207
International Journal of Accounting, Finance and Business (IJAFB)
eISSN: 0128-1844
Journal website: www.academicinspired.com/ijafb
DOI: 10.55573/IJAFB.116714

Overcoming the Greenwashing Trap

Institutional theory frequently warns that when firms face severe environmental pressure, they may engage in 'greenwashing' or 'decoupling' (Delmas & Burbano, 2011; Marquis et al., 2016). If a carbon-intensive firm solely relies on 'Green Exploitation' (making minor compliance adjustments), it remains trapped in a reactive state. Therefore, 'Substantive Green Innovation' can only be achieved when 'Green Exploration' is successfully integrated. Substantive green innovation requires a fundamental transformation of products and processes that demonstrably and irreversibly reduces greenhouse gas emissions.

Boundary Conditions and Organisational Barriers

The proposed ambidextrous framework is not without boundary conditions. Its successful implementation depends heavily on overcoming significant organisational barriers. For instance, rigid governance structures and short-term incentive systems can stifle green exploration. Furthermore, leadership challenges, particularly a lack of green transformational leadership, may prevent the effective allocation of resources between competing exploratory and exploitative demands. Contextual differences, such as varying levels of state subsidies or specific degrees of asset specificity, will also dictate the extent to which firms can successfully execute this dual-track strategy.

The Integrative Structural Model

As illustrated in Figure 2, the model begins on the top with the 'Survival Paradox', driven by the tension between institutional pressure and the financial reality of physical asset lock-ins. To resolve this input pressure, the firm activates 'Ambidextrous Resilience'. The left track (Green Exploitation) secures the immediate 'license to operate' and generates the vital cash flow needed to sustain the business. This cash flow is strategically transferred downward to fuel the right track (Green Exploration), where radical decarbonisation experiments occur. Ultimately, when these dual tracks are successfully harmonised, they produce the output on the bottom: Substantive Green Innovation.

Volume: 11 Issues: 67 Special Issue [August, 2026] pp. 196 - 207
International Journal of Accounting, Finance and Business (IJAFB)
eISSN: 0128-1844
Journal website: www.academicinspired.com/ijafb
DOI: 10.55573/IJAFB.116714

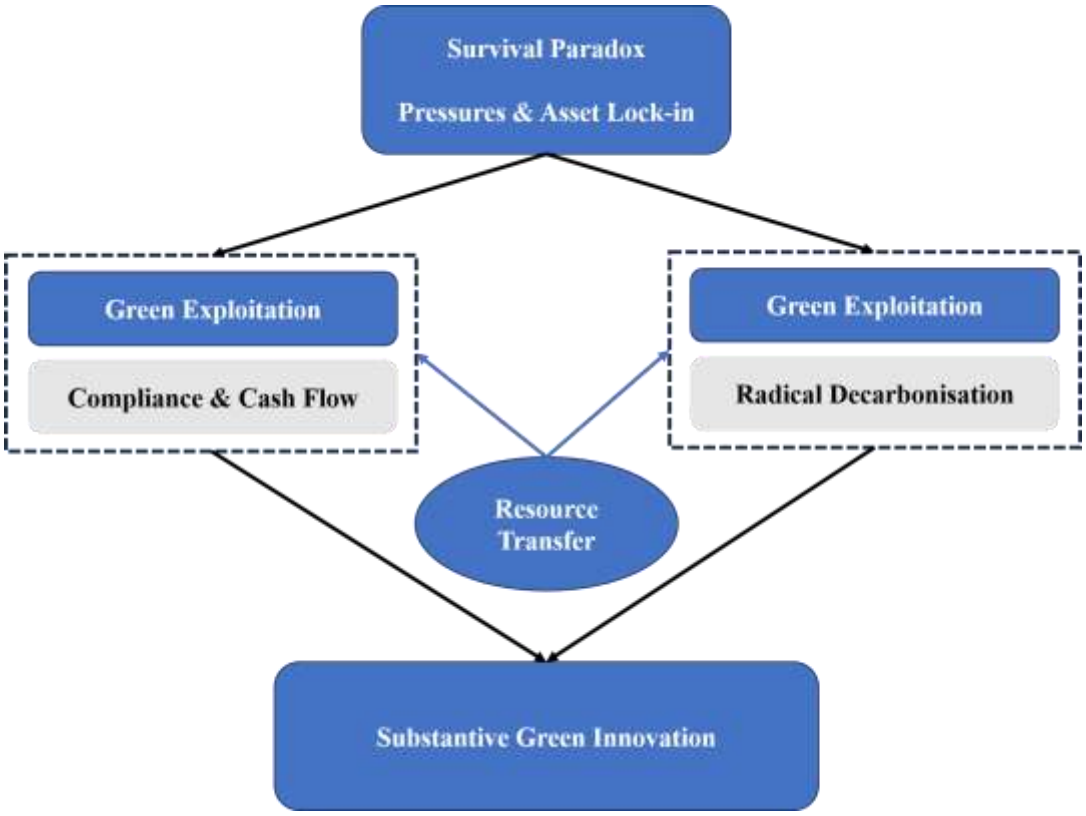

Figure 2: The Conceptual Model of Green Ambidextrous Resilience
Source: Compiled by the Author

Methodological Implications and Empirical Operationalisation
While this paper primarily serves to establish a conceptual framework, its true academic utility relies on its empirical testability. To bridge the gap between abstract theorisation and practical validation, this section outlines a rigorous methodological blueprint for future researchers to operationalise and empirically test the proposed Ambidextrous Resilience framework within carbon-intensive sectors.

Measurement of Green Ambidexterity Constructs
The primary methodological challenge is accurately capturing the dual tracks of green innovation. Future empirical studies should adapt validated Likert-scale instruments from mainstream ambidexterity literature (Gibson & Birkinshaw, 2004) and contextualise them for environmental management (Ishaq et al., 2024). 'Green Exploitation' can be measured by assessing budget allocation towards incremental upgrades, such as optimising existing kiln thermal efficiency. Conversely, 'Green Exploration' should be operationalised by measuring engagement in high-risk initiatives, such as CCUS pilot plants or dedicated R&D expenditure on long-term decarbonisation.

Proposed Sampling Strategy and Context
To effectively test the survival paradox, researchers must carefully select their empirical context. Heavy manufacturing industries, such as cement and steel production, provide the ideal setting due to their extreme asset specificity. However, accessing reliable data from top management in these traditional sectors poses a significant barrier. We recommend a multi-

Volume: 11 Issues: 67 Special Issue [August, 2026] pp. 196 - 207
International Journal of Accounting, Finance and Business (IJAFB)
eISSN: 0128-1844
Journal website: www.academicinspired.com/ijafb
DOI: 10.55573/IJAFB.116714

respondent survey design targeted at two distinct organisational levels. Chief Executive Officers (CEOs) or Chief Technology Officers (CTOs) should be surveyed regarding strategic resource transfer and 'Green Exploration' initiatives, while Plant Managers should report on operational efficiency and 'Green Exploitation'. Given the difficulty of accessing these high-level executives, researchers should deploy targeted 'snowball sampling' techniques, leveraging existing industry networks and association memberships to secure adequate response rates.

Mitigating Methodological Bias

Finally, empirical validation of this model must strictly control for Common Method Bias (CMB). If a single executive evaluates both the firm's green capabilities and its substantive innovation outcomes, the results may be artificially inflated due to social desirability—particularly given the sensitive nature of environmental compliance (Podsakoff et al., 2003). To ensure methodological rigour, future research designs must employ temporal or psychological separation (collecting independent variables and dependent variables in separate survey waves) and triangulate subjective survey responses with objective secondary data, such as verified corporate carbon emission reports or verified green patent counts. By adhering to these operational guidelines, future scholars can employ Structural Equation Modelling (SEM) to robustly test the internal pathways of the framework proposed in Figure 2.

Conclusion

Carbon-intensive industries are currently navigating the most difficult transition in their history. This conceptual paper addresses a critical gap by explicitly nesting green innovation within the theory of organisational ambidexterity. We conclude that successful green transition in heavy industries is achieved through the deliberate orchestration of a survival paradox. By constructing an ambidextrous resilience framework, firms can logically separate 'green exploitation' (to ensure short-term survival and cash generation) from 'green exploration' (to secure long-term, substantive decarbonisation).

Limitations and Future Research

This study is subject to several limitations. First, its conceptual nature implies that the proposed framework currently lacks empirical validation. The specific causal mechanisms between green ambidexterity and substantive innovation remain theoretical. Second, the assumptions regarding resource fluidity may differ across varying industrial contexts. Future empirical research should focus on validating this model using large-scale quantitative data from specific hard-to-abate sectors, particularly investigating the strategic integration tools that top management teams use to transfer resources between the exploitative and exploratory tracks.

Acknowledgements

The authors would like to acknowledge and extend special gratitude to Universiti Pendidikan Sultan Idris and all supporting institutions that facilitated this theoretical exploration.

Volume: 11 Issues: 67 Special Issue [August, 2026] pp. 196 - 207
International Journal of Accounting, Finance and Business (IJAFB)
eISSN: 0128-1844
Journal website: www.academicinspired.com/ijafb
DOI: 10.55573/IJAFB.116714

References

Bataille, C., Åhman, M., Neuhoff, K., Nilsson, L. J., Fischedick, M., Lechtenböhmer, S., Solano-Rodriguez, B., Denis-Ryan, A., Stiebert, S., Waisman, H., Sartor, O., & Rahbar, S. (2018). A review of technology and policy deep decarbonization pathway options for making energy-intensive industry production consistent with the Paris Agreement. *Journal of Cleaner Production*, 187, 960–973.

Berrone, P., Fosfuri, A., Gelabert, L., & Gomez-Mejia, L. R. (2013). Necessity as the mother of 'green' inventions: Institutional pressures and environmental innovations. *Strategic Management Journal*, 34(8), 891–909.

Bocken, N. M. P., Short, S. W., Rana, P., & Evans, S. (2014). A literature and practice review to develop sustainable business model archetypes. *Journal of Cleaner Production*, 65, 42–56.

Chen, L., Liu, Y., Ni, Z., & Chen, Y. (2023). Review of conceptual evolution and measurement approaches of carbon lock-in and its implications for decarbonization. *Sustainability*, 15(10), 8000.

Delmas, M. A., & Burbano, V. C. (2011). The drivers of greenwashing. *California Management Review*, 54(1), 64-87.

Erickson, P., Kartha, S., Lazarus, M., & Tempest, K. (2015). Assessing carbon lock-in. *Environmental Research Letters*, 10(8), 084023.

Gibson, C. B., & Birkinshaw, J. (2004). The antecedents, consequences, and mediating role of organizational ambidexterity. *Academy of Management Journal*, 47(2), 209-226.

Hahn, T., Preuss, L., Pinkse, J., & Figge, F. (2014). Cognitive frames in corporate sustainability: Managerial sensemaking with paradoxical and business case frames. *Academy of Management Review*, 39(4), 463–487.

Ishaq, M., et al. (2024). Leveraging green dynamic capabilities and institutional pressures for green innovation. *Journal of Environmental Management*, 355, 120545.

Leonard-Barton, D. (1992). Core capabilities and core rigidities: A paradox in managing new product development. *Strategic Management Journal*, 13(S1), 111–125.

Levinthal, D. A., & March, J. G. (1993). The myopia of learning. *Strategic Management Journal*, 14(S2), 95-112.

March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization Science*, 2(1), 71-87.

Marquis, C., Toffel, M. W., & Zhou, Y. (2016). Scrutiny, norms, and selective disclosure: A global study of greenwashing. *Organization Science*, 27(2), 483-504.

Martínez-Falcó, J., Sánchez-García, E., Marco-Lajara, B., & Zaragoza-Sáez, P. (2024). Green ambidexterity and environmental performance. *Journal of Cleaner Production*, 435, 140456.

O'Reilly, C. A., & Tushman, M. L. (2013). Organizational ambidexterity: Past, present, and future. *Academy of Management Perspectives*, 27(4), 324-338.

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879-903.

Seto, K. C., Davis, S. J., Mitchell, R. B., Stokes, E. C., Unruh, G., & Ürge-Vorsatz, D. (2016). Carbon lock-in: Types, causes, and policy implications. *Annual Review of Environment and Resources*, 41, 425–452.

Trencher, G., Vogl, V., & Åhman, M. (2024). Phase-in and phase-out policies in the global steel transition. *Climate Policy*, 24(1), 10-25.

Volume: 11 Issues: 67 Special Issue [August, 2026] pp. 196 - 207
International Journal of Accounting, Finance and Business (IJAFB)
eISSN: 0128-1844
Journal website: www.academicinspired.com/ijafb
DOI: 10.55573/IJAFB.116714

Tripsas, M., & Gavetti, G. (2000). Capabilities, cognition, and inertia: Evidence from digital imaging. *Strategic Management Journal*, 21(10-11), 1147–1161.

Unruh, G. C. (2000). Understanding carbon lock-in. *Energy Policy*, 28(12), 817–830.