PRIMAITB 2024
Pameran Riset, Inovasi, dan Pengabdian kepada Masyarakat

Reconfiguring Innovation through Ambidextrous and Green Leadership: A Dynamic Capabilities Perspective

Program Riset Internasional ITB
Case study of Indonesian firms

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Abstract

Manufacturing firms in emerging economies face **volatility**, **stagnation** and rising **green market demand**, forcing leaders to balance exploring new innovation with exploiting existing efficiency. This study examines how **ambidextrous leadership** and **green leadership** reconfigure innovation through a **dynamic capabilities** lens (sensing, seizing and reconfiguring), using a case study of Indonesian firms.

Using a **qualitative, multi-level approach**, the research draws on in-depth interviews with **15 executive-level participants**, analysed across the individual, team and organizational levels. Findings show that leadership is evidenced almost everywhere but **almost nowhere as generative**, that exploitation dominates, and that green innovation acts as a bridge between innovation and efficiency.

By linking leadership, dynamic capabilities and innovation outcomes, the study offers an **integrated framework** and implications for **AI enablement** and **SDG 8** in emerging-economy firms.

Keywords: Ambidextrous Leadership; Green Leadership; Dynamic Capabilities; AI Enablement

Introduction

Firms in emerging economies are pushed by **three forces**. **Volatility** creates an ambidexterity tension: leaders must keep exploring new ideas while sustaining operational efficiency. **Stagnation** in emerging-economy manufacturing demands renewal of products and processes. **Green market demand** increasingly rewards firms that create business value while reducing environmental impact.

However, existing studies seldom examine **ambidextrous and green leadership** together with **dynamic capabilities** and **innovation outcomes** across the organizational, team and individual levels.

Therefore, this study develops an **integrated framework** (Figure 1): both leadership styles converge on dynamic capabilities, which convert into exploratory, exploitative and green innovation. The path is conditioned by **ESG vision** (outside-in) and by the **external environment**, including regulation and institutional setting (inside-out).

Four research questions guide the study: **RQ1** multi-level innovation, **RQ2** capability and AI-enablement paths, **RQ3** the innovation–efficiency paradox, and **RQ4** insights for SDG 8.

This findings has been presented on research day Nanyang Business School by Dr. N. Nurlaela Arief, MBA

Research Method

This study adopts a **qualitative, multi-level design** to examine executive leadership practices in Indonesian manufacturing. Data come from **in-depth interviews with 15 executive-level participants**. The analysis covers the individual, team and organizational levels, with a focus on exploration, exploitation and environmental priorities, including the role of technology and AI.

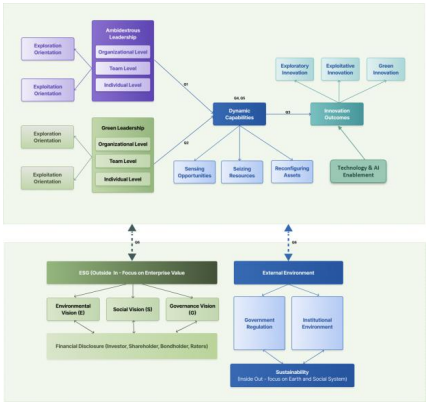


Figure 1. Integrating framework

1 Open coding
Label leadership practices

2 Axial coding
Link into categories

3 Thematic summary
Themes mapped to RQ1–RQ4

15 executive interviews

7 case firms (PT A–G)

3 levels: individual, team, org

Figure 2. Research scope at a glance

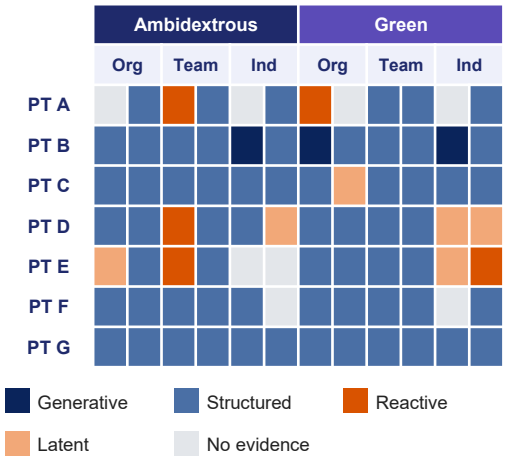
Cases were then compared on a **maturity scale**: **generative** (self-initiated and systemic), **structured** (embedded in routines), **reactive** (acts only when triggered), **latent** (intent stated, not enacted) or **no evidence**. This shows how deeply each leadership practice is embedded in each firm.





Discussion & Result

7 Indonesian firms (PT A–G): ambidextrous vs green leadership



On dynamic capabilities, **output type sets where the chain binds**: service cases stall at sensing or seizing because no reduction can be measured, whereas product cases reach further and bind at reconfiguring.

Thematic analysis answers the research questions. **RQ1:** design translates into teams, but individual incentives push exploitation, and exploration often starts from exploitation. **RQ2:** firms sense, seize, then adopt AI, from external trigger to digital platform, digital skills and leader-enforced adoption. **RQ3:** exploitation dominates, and green innovation draws on both modes. **RQ4:** local hiring and technical and digital upskilling facilitate green innovation.

Conclusion

Innovation is **led by design**: structures, incentives and KPIs matter more than an individual leader's style. Firms **separate and integrate at once**, and green innovation is the most promising bridge between innovation and efficiency.

Technology's role is **AI enablement**, but data, skills and change capacity are being built unevenly. The **individual level**, covering green behaviour and digital adoption, is where multi-level innovation breaks down.

Advancing **SDG 8** needs SOE governance that tolerates experimentation and rewards long-term capability.

Future research should test ownership (SOE, family, MNC, SME) as a moderator, test AI-enablement dimensions as predictors of AI adoption, model leadership, team systems and individual behaviour with multi-level data (HLM/SEM), and add employee and community voices.

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Background

FORCE 1
Volatility & the ambidexterity tension

FORCE 2
Stagnation in emerging-economy manufacturing

FORCE 3
Green market demand

Integrated Framework

LEADERSHIP
- Ambidextrous
- Green

↓

DYNAMIC CAPABILITIES
- Sensing
- Seizing
- Reconfiguring

↓

INNOVATION OUTCOMES
- Exploratory
- Exploitative
- Green

Context: ESG vision · regulation · institutions

Keywords: Ambidextrous Leadership · Green Leadership · Dynamic Capabilities · AI Enablement

Research Method

15 executive-level participants
In-depth interviews · Indonesian manufacturing

Multi-level analysis

- Individual
- Team
- Organizational

Three-step analysis

1. **Open coding** — Label leadership practices
2. **Axial coding** — Link into categories
3. **Thematic summary** — Themes mapped to RQ1–RQ4

Key Findings

RQ1 · Multi-level innovation
Design drives teams; incentives push individuals toward exploitation

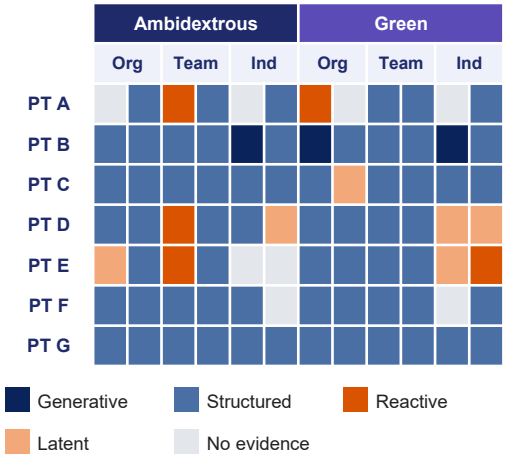
RQ2 · AI enablement
Sense, seize, then adopt AI: trigger → platform → skills → leader-enforced

RQ3 · Innovation–efficiency
Exploitation dominates; green innovation bridges both modes

RQ4 · SDG 8
Local hiring and digital upskilling; skill-based hiring enables green innovation

Leadership Maturity

7 Indonesian firms (PT A–G): ambidextrous vs green leadership



KEY TAKEAWAY
Leadership is evidenced almost everywhere, but almost nowhere generative

Conclusion

- **Innovation is led by design: structures, incentives, KPIs**
- **Firms separate and integrate; green innovation is the bridge**
- **AI enablement: data, skills, change capacity built unevenly**
- **Individual level is where multi-level innovation breaks down**
- **SDG 8 needs SOE governance that rewards long-term capability**

FUTURE RESEARCH
Ownership as moderator · AI-enablement predictors · Multi-level HLM/SEM · Employee and community voices

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Abstract

Question: How do **ambidextrous** and **green leadership** drive innovation?

Lens: dynamic capabilities (sensing, seizing, reconfiguring).

Data: 15 executives in Indonesian manufacturing, 7 firms.

Core finding: leadership is present almost everywhere, but **rarely generative**.

Keywords: Ambidextrous Leadership; Green Leadership; Dynamic Capabilities; AI Enablement

Research Method

Design: qualitative, **multi-level** (individual, team, organization).

Sample: 15 executives, 7 firms (PT A–G).

Analysis in 3 steps:

1. Open coding: label practices

2. Axial coding: link into categories

3. Thematic summary: map to **RQ1–RQ4**

Discussion & Result

RQ1 · Multi-level: design drives teams; **incentives push individuals toward exploitation**. Green innovation is a **third mode** between explore and exploit.

RQ2 · AI: sense → seize → adopt. Path: **trigger → platform → skills → leader-enforced adoption**.

RQ3 · Paradox: exploitation dominates; green innovation uses both modes.

RQ4 · SDG 8: local hiring and **digital upskilling** enable green innovation.

Introduction

Three forces push firms to rethink innovation:

1. Volatility and the explore-exploit tension

2. Stagnation in emerging-economy manufacturing

3. Green market demand

Gap: few studies link both leadership styles to capabilities and outcomes across **3 levels**.

Our framework: Leadership → Dynamic Capabilities → Innovation (exploratory, exploitative, green).

Leadership Maturity

Leadership is evidenced almost everywhere, but almost nowhere generative.

Exploitation is steady at every level.

Exploration and green leadership at the individual level is where weak cells cluster.

Only **PT B** reaches generative; **no case** reaches generative exploration.

Conclusion

Innovation is led by design: structures, incentives and KPIs matter more than a leader's style.

Green innovation is the best bridge between innovation and efficiency.

AI enablement is uneven: data, skills, change capacity.

Individual level is where multi-level innovation breaks.

SDG 8 needs SOE governance that rewards long-term capability.

Next: test ownership as moderator; model multi-level behaviour.

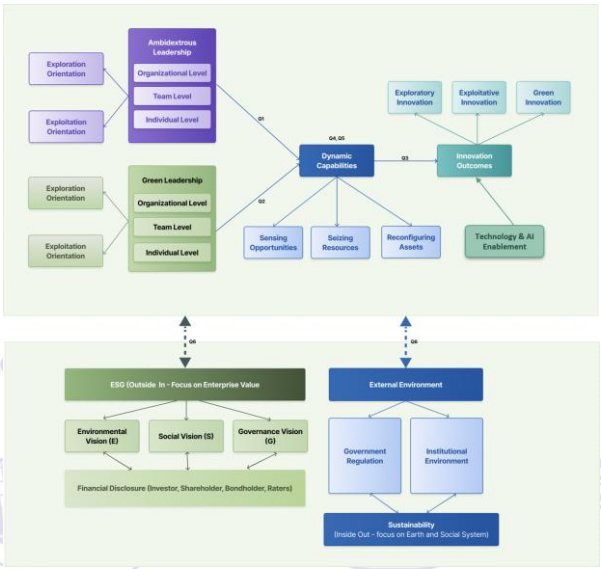


Figure 1. Integrating framework