Lingnan University 2025/2026 SDG Report
SDG 12 – RESPONSIBLE CONSUMPTION AND PRODUCTION



5th in Hong Kong
(THE Sustainability Impact Ratings 2026)

50
Undergraduate Courses

15%
Proportion of Waste Recycled

357
Research Outputs

Lingnan University advances **SDG 12: Responsible Consumption and Production** through research, education and community engagement that support resource efficiency, waste reduction and circular economy practices. By developing environmentally friendly materials, exploring green technologies and encouraging responsible consumption on campus and beyond, the University contributes to more sustainable production and consumption patterns. These initiatives connect innovation with everyday action to promote the responsible use of resources.

Synergies Among Responsible Artificial Intelligence (RAI), Environmental, Social and Governance (ESG), and Sustainable Development Goals (SDGs)

Research co-authored by Professor Xin Yao, Vice-President (Research and Innovation) at Lingnan University, and Changwu Huang explores how responsible artificial intelligence (RAI), environmental, social and governance (ESG), and the Sustainable Development Goals (SDGs) can reinforce one another. Their integration offers opportunities for organisations to enhance societal impact while increasing corporate value and fostering responsible innovation and sustainable business practices.

Through a systematic literature review, the study provides foundational knowledge of RAI, ESG and the SDGs, including their origins, core concepts and main implementation challenges. It then examines the connections and synergies among these frameworks, highlighting opportunities to align AI development, corporate responsibility and sustainable development.

Based on this analysis, the researchers propose an integrated framework that

synthesises the relationships among RAI, ESG and the SDGs. The framework demonstrates how these approaches can be mutually reinforcing when implemented cohesively, supporting organisations in incorporating sustainability and social responsibility into technological innovation and business decisions.

The paper also discusses implications for multiple stakeholders while acknowledging implementation challenges and tensions. It emphasises the importance of viewing RAI, ESG and the SDGs as interconnected frameworks rather than separate goals. Through this integrated perspective, organisations can align them collectively within strategic planning and operational practices, promoting more effective and sustainable outcomes while addressing complex societal challenges in the AI era.

The research contributes both theoretical understanding and practical guidance for holistic approaches that harness the transformative potential of AI while ensuring that its development and deployment serve broader sustainability and social responsibility objectives. It supports SDG 9 through responsible technological innovation, with additional relevance to SDG 12 through responsible corporate practices, SDG 16 through accountable governance, and SDG 17 through policy coherence and multi-stakeholder alignment.

C. Huang and X. Yao, "Synergies Among Responsible Artificial Intelligence (RAI), Environmental, Social and Governance (ESG), and Sustainable Development Goals (SDGs)," in *IEEE Computational Intelligence Magazine*, vol. 20, no. 4, pp. 20-41, Nov. 2025, doi: 10.1109/MCI.2025.3593452.

Multinationality and Strategic Dynamic Capabilities During Sustainable Development Goals Adoption: Evidence From a Natural Experiment

Led by Professor Liane W.Y. Lee, Associate Professor of Teaching in the Department of Management, this research examines how multinational enterprises (MNEs) implement initiatives to adopt the Sustainable Development Goals (SDGs). The study is relevant to SDG 9: Industry, Innovation and Infrastructure, with additional connections to SDG 8: Decent Work and Economic Growth and SDG 12: Responsible Consumption and Production, through its focus on innovation, strategic adaptability and sustainable corporate practices.

The research investigates how two types of multinationality—degree of internationalisation and international diversification—affect MNEs' application of strategic dynamic capabilities. It enhances dynamic capabilities theory by incorporating institutional change, examining the contextual impact of the global SDG initiative on corporate strategies.

Using a difference-in-differences approach, the study compares two groups across the three years before and after the launch of the SDGs in 2015. This natural experiment provides a basis for analysing institutional changes associated with SDG implementation.

The findings reveal that MNEs' degree of internationalisation is positively associated with three key strategic capabilities: ambidexterity, innovation and reconfiguration. However, international diversification has the opposite effect, highlighting the distinct implications of these two dimensions of multinationality.

The study suggests that adopting the SDGs can benefit MNEs by enabling them to leverage non-location-bound firm-specific advantages across geographies. However, diverse local challenges in emerging markets may increase transaction costs and impede the internal integration of dynamic capabilities.

These findings contribute to SDG 9 by deepening understanding of organisational innovation and adaptability. They also offer insights relevant to SDG 8, particularly the strategic capabilities that may support innovation-driven productivity and sustainable business development. The connection to SDG 12 lies in examining how multinational enterprises respond to the SDGs and integrate sustainability priorities into corporate initiatives. Together, these perspectives strengthen understanding of how enterprises navigate institutional change while aligning business strategies with sustainable development.