

Materiality and sustainable performance, a dynamic relationship: exploring the drivers of greenwashing

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Introduction: The ESRS and IFRS Sustainability Standards are key outcomes of efforts to standardize sustainability reporting, differing primarily in materiality definition. While IFRS focuses on financial materiality, ESRS adopts a double materiality approach. This raises questions about the consequences of materiality frameworks on corporate sustainability performance and whether managerial integration matters more than definition. Additionally, greenwashing concerns underscore the need for a systemic analysis of sustainability reporting dynamics.

Approach: This study employs System Dynamics modeling to simulate the long-term effects of different materiality approaches and greenwashing tendencies on stakeholder satisfaction and sustainability performance. The model captures feedback-driven interactions between materiality assessments, managerial decisions, stakeholder skepticism, and financial outcomes. Various simulation scenarios explore the strategic implications of materiality integration versus greenwashing-driven responses.

Results: Simulation results indicate that the effectiveness of sustainability strategies depends more on the integration of materiality into decision-making than on the specific type of materiality approach adopted. Additionally, firms engaging in greenwashing may achieve short-term gains but risk long-term stakeholder skepticism and reputational damage.

Discussion: Findings suggest that companies should focus on strategic materiality assessment rather than debating materiality definitions. Proactive investment in sustainability assets and competencies is critical for achieving long-term sustainability performance. Moreover, transparency and avoidance of greenwashing are essential for maintaining stakeholder trust. These insights contribute to the academic and policy debate on sustainability reporting and provide practical guidance for managers navigating materiality assessments.

Keywords: double materiality; sustainability accounting; greenwashing; simulation.