

Carbon accounting and integrated reporting for net-zero business models towards sustainable development: A systematic literature review

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Abstract

This study highlights the main concerns regarding firms' carbon accounting and decarbonization practices. Under institutional, legitimacy and stakeholder theories, this study analyses the linkages between carbon accounting outputs and integrated reporting (IR), as well as between disclosure assurance systems in the transition towards net-zero business models (n-ZBMs). This study emphasizes the awareness of accounting tools to be considered environmental and social measures due to decarbonization practices. This study developed a systematic literature review (SLR) of 433 English articles published in Scopus database and Google Scholar between the years 1990 and 2024. It is a consolidated methodological approach in the 'sustainability accounting' research field to fill the existing gaps that justify this study. The results of this study highlight that IR and carbon accounting awareness enhance firms' performance and have positive social and environmental impacts with the adoption of decarbonization practices towards n-ZBMs through an improved understanding of stakeholders and regulatory pressures. This study is the first to explore the relationship between carbon accounting awareness and IR about the decarbonization practices, as well as the role of assurance in the transition for n-ZBMs. This study tries to move from the concept of legitimacy of the decarbonization practices that firms aim to achieve through sustainable disclosure to the legitimacy of business models towards net-zero emissions.

KEYWORDS

assurance, carbon accounting, green technologies, integrated reporting, renewable energy, sustainability transitions

1 | INTRODUCTION

The United Nations (UN) Conference on Human Environment in Stockholm in 1972, regarding the significance of management, measurement and assessment of the environment, represented a key step

in the conceptualization of sustainable development (DuBose et al., 1995). In the next years of the 1972 UN Conference, different terminologies emerged and ended with 'eco-development', introduced in the UNEP review in 1978 (Mebratu, 1998). In 1987, the Brundtland Commission introduced the concept of sustainable

