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Role of sustainable development goals in advancing the circular economy: A state-of-the-art review on past, present and future directions

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Abstract

The purpose of this study is to review the relationship between the highly anticipated concept of circular economy (CE) and sustainable development goals (SDGs). These two sustainability principles have transformed organizations and countries in their quest to achieve sustainable development. Despite their importance to the business and corporate realm, the discussion of these two concepts has been developed in silos, arbitrarily connected. Through a bibliometric approach, this study reviewed 226 journal publications and 16,008 cited references from the Web of Science (WoS) to understand the past, present and future trends of the two concepts and their impact on the sustainability development. The bibliometric approach of citation, co-citation and co-word analysis uncovers the relevant and significant themes and research streams. Theoretical and practical implications were discussed within the broader business and governance perspective to develop a substantial triple bottom line in creating a sustainable future for civil society.

Keywords

Sustainable development, circular economy, SDGs, bibliometric analysis, web of science

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Introduction

The escalating global environmental issues related to climate change, waste disposal, land and water pollution and greenhouse gas emissions have proliferated the emergence of the circular economy (CE). CE aims to increase resource use efficiency by adopting closed-loop production patterns within urban and industrial waste (Ghisellini et al., 2016). The concept was introduced to create balance and harmony within the macroscopic view of the economy, environment, and society. CE is defined as an economic model to use resources efficiently by waste minimization, long-term value retention, primary resources reduction and closed loops of products, product parts and materials to achieve environmental protection and socioeconomic advantage (Morseletto, 2020). It has been accepted as one of the critical concepts that can facilitate sustainability (Bertassini et al., 2021). Compared to the traditional linear economy, which primarily focuses on a take–-make–dispose production pattern, CE was introduced to overcome such issues by maintaining the value of products, resources and materials in the economic cycle for as long as possible (Merli et al., 2018).

Together with CE, the United Nation's 17 sustainable development goals (SDGs) that came to the global picture have made the sustainability vision more structured and achievable. Both CE and SDGs contribute to sustainable business development (Ghisellini et al., 2016). Despite the anticipation and potential of CE and SDGs, they usually function in silos rather than intersect objectively. The relationship between CE and the SDGs is not explicit (Geissdoerfer et al., 2017; Panchal et al., 2021). The interrelation between the two must be further explored to derive the main themes and ideas that could provide a nexus for solving the triple bottom line of sustainability.

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