

The Role of Technological Innovations in Enabling Circular Supply Chains: A Review

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Abstract

In traditional linear supply chains, productions and consumptions follow the “take, make, use, dispose” approach. In this model, the growth is subject to the continuous consumption of resources that are assumed to be readily available. In such a linear economy, value creation is supported by making and selling products to the greatest extent possible. Conversely, in a closed-loop circular supply chain, products do not simply become waste but are rather transformed into valuable resources presenting sustainable business opportunities. The 4th Industrial Revolution supported technologies are the primary enablers of circular strategies and business models in supply chains. This study aims to provide a comprehensive review of these innovative technologies to appraise their roles in facilitating such a transition into circular supply chains.

Keywords

Supply chain, Digitalization, Industry 4.0, Circular economy, Circular business models, Sustainability.

Biographies

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