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SYNERGIES OF URBAN SOLID WASTE, LEAN PRACTICES, AND SUSTAINABILITY: A FRAMEWORK TOWARDS WASTE PICKER COOPERATIVES

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Abstract

One of the most outstanding environmental issues of modern society is the generation of Urban Solid Waste (USW). To make procedures efficient and decrease waste, the Lean philosophy is an essential tool for organizations and the urban solid waste management process. Thus, through a literature review, this article aims to relate sustainability concepts and urban solid waste management by mapping the main tools of Lean philosophy applicable to the sustainability environment in the management of USW. The database for the literature review was the Scopus, considering the period from 2015 to 2022 and having as thematic axes sustainability, urban solid waste, and Lean. The results made it possible to identify the challenges faced in solid waste management and its impacts on environmental organizations such as waste picker cooperatives. Furthermore, the literature has indicated that Lean practices are essential for reducing waste and promoting organizational sustainability. Thus, a conceptual framework was proposed to relate the three thematic axes addressed in this study, which addresses the scarcity of studies in the literature with such an aim and contributes to the academic discussion about Lean practices applied to solid waste in the light of sustainability and its theoretical bases.

Key words: challenges, lean, literature review, sustainability, urban solid waste

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