## Construction waste recycling: Enhancement strategies and organization size

Mazen M. Omer<sup>a</sup>, Rahimi A. Rahman<sup>a</sup>, Saud Almutairi<sup>b</sup> <sup>a</sup> Faculty of Civil Engineering Technology, Universiti Malaysia Pahang, Malaysia <sup>b</sup> Unaizah College of Engineering, Qassim University, Saudi Arabia

## ABSTRACT

The continuous increment of construction projects worldwide is raising the amount of construction waste (CW). A significant amount of CW in landfills can critically impact the economy and environment if not addressed properly. Construction waste recycling (CWR) is one solution for reducing CW in landfills. Organizations are implementing various strategies for enhancing CWR implementation in practice. However, small-medium enterprises (SMEs) and large enterprises (LEs) might face different challenges in implementing those strategies due to their different organizational characteristics. Therefore, this study compares the cost and easiness of implementing CWR enhancement strategies between SMEs and LEs. To achieve that objective, this study analyzes survey data from 108 construction industry practitioners using descriptive statistics, normalization, Kruskal-Wallis, and overlap analysis techniques. The major findings include 'raise project team awareness on CWR' and 'organize temporary bins in each construction zone' are simple and low-cost enhancement strategies for all organization sizes. Also, there are additional simple and low-cost strategies for LEs: 'identify construction activities that produce recyclable materials,' 'use information technology to facilitate CWR processes,' and 'enhance company policies related to CWR.' These findings contribute to a better knowledge of the optimal CWR enhancement strategies for different organization sizes.

## **KEYWORDS**

Construction industry; Sustainable development; Sustainable construction; Construction waste recycling; Small and medium enterprise

## ACKNOWLEDGMENT

This work was supported by the Ministry of Higher Education, Malaysia, through the Fundamental Research Grant Scheme (FRGS/1/2019/TK06/UMP/02/1). The authors are also thankful to the industry practitioners that participated in this work and grateful to the editors and the anonymous reviewers for their insightful comments, which helped improve this paper's quality.