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Determining Root Cause of Construction Waste Generation: A Global Context

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Abstract

Construction sector is one of the main sectors in contributing Gross Domestic Product (GDP) growth rate in every developing country. The rapid growth of this sector directly produces a huge amount of construction waste. Hence, to find out the main root causes of the generation, this paper aimed to determine root causes of the construction waste generation in the construction sector. The research is carried out through triangulation technique (questionnaire survey and practitioner's validation). This technique is adopted to facilitate cross validation by analysing 38 articles and then the final results have been validated by construction practitioners. A total of 80 root causes were identified from 38 articles and the 5 main root causes determined have scored more than 50% out of the total number of articles. Finally, the result was validated and found out that 87.5% of construction practitioners agree with the findings. The agreed root causes are 'Constant design changes', 'Incorrect storage of materials', 'Poor handling of materials', 'Effect of weather' and 'Mistakes while ordering from suppliers'. Therefore, these initial findings will be able to aid the construction practitioner (contractors, consultants and developers) to be aware of the root causes that is mostly causing construction waste generation.

Keywords: Construction Waste; Root Causes; Construction Practitioners; Triangulation Technique; Malaysia.

1. Introduction

Construction is a colossal, dynamic, and composite industry that plays a vital part on the global [1]. Construction work incorporates remodeling of structures, renovations, or maintenance and repair of buildings or other projects such as highways or infrastructures [2]. Asia-Pacific will keep on accounting for the biggest offer of the worldwide construction industry, given that it incorporates the expansive markets of China, Japan and India and Global Construction 2030 is the authoritative review of a standout amongst the most imperative areas of the worldwide economy [3]. The construction industry represents a core economic activity of a developing country. It is linked to basic development of infrastructure exchange of technology and improved access to information channels [4]. The construction industry has become in the course of the most recent decades and brought about upgrades in organization benefits, financial accessibility and expanded commodities in every nations [5]. The huge growth of construction industry incidentally produces huge sum of construction waste. Construction waste was produced all through the development procedure, for example, amid site clearance, material damages, material utilize, material non-utilize, overabundance acquirement and human blunder. Construction waste generated contributes to serious environmental effect. Thus, it is crucial to determine the root causes of construction waste generation in the construction industry in order to reduce the construction waste and the environmental effects.

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