

## **Towards Sustainable Construction: An Exploratory Study of the Factors Affecting the Investment on Construction and Demolition Waste in Saudi Arabia (KSA)**

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**Abstract :** Based on the sustainability concept, this paper explores the current situation of construction and demolition waste (C&D) in the Kingdom of Saudi Arabia (KSA) from the source of production to final destinations. The issues that hindered the investment of recycling C&D in the context will be studied in order to identify the challenges and opportunities to improve this sector and put forward a strategic framework to reduce, reuse, recycle and minimize the disposal of this type of waste. The research, which is exploratory in nature, identified four types of organizations that were appropriate case studies. These organizations were drawn from the municipalities, city council, recyclers and manufacturers. Secondary data collection, direct observation, and elite interviewing methods were used in the case studies to facilitate comparisons with existing literature to explore opportunities to improve sustainability practices in the buildings sector. Implementation of C&D waste management and recycling in KSA is in the early stages. Resistance of virgin building material manufacturers, free usage of landfill, culture, surpluses of natural raw material, availability of land and the cost of recycling this material compared with virgin material hinders the adoption of recycled buildings material. Although the metal material is collected and recycled but it has the lowest percentage of C&D waste in Saudi. The findings indicate that government and industry need to collaborate more closely in order to successfully implement best practices. Economic and environmental benefits can be achieved, particularly through improvements to infrastructure and legislation. Feasible solution framework and recommendations for managing C&D waste under current situation are provided. The findings can be used to extend this framework and to enable it to be applicable in other context with emerging economies similar to that found in KSA. No study of this type has been previously carried out in KSA. The findings should prove useful in creating a future research agenda for C&D waste in KSA and, possibly, other emerging countries within a similar context.

**Keywords :** construction and demolition waste, recycling, reuse, sustainability

**Conference Title :** ICMEIE 2015 : International Conference on Management, Economics and Industrial Engineering

**Conference Location :** London, United Kingdom

**Conference Dates :** December 10-11, 2015