

# National University of Science and Technology

## Faculty of the Built Environment

### Department of Quantity Surveying

*An analysis of the resource management strategies and their effectiveness on construction projects during the implementation phase. A case of Harare*

By

| LIBRARY<br>NATIONAL UNIVERSITY OF SCIENCE<br>AND TECHNOLOGY<br>P.O. BOX 346 BULAWAYO<br>ZIMBABWE |               |           |
|--|---------------|-----------|
| DATE   | ACCESSION     | CLASS No. |
| 30/03/17   | SC<br>17/1913 |           |

Jacob Mhlanga

N01415763W

Supervisor:

Dr. M. Nyathi

A research submitted in partial fulfilment of the requirements of Master of Science degree in  
Construction Project Management



August 2016

## ABSTRACT

Resource management is the epicenter of viable project management during the implementation phase of any project. Lately, various scholars have argued that project completion is not a measure of project success if resource efficiency and effectiveness is disregarded. The purpose of the study was to analyze the effectiveness of the resource management strategies used by contractors during project implementation phase. Therefore, the study was of paramount importance as it provided a clear perspective of the current state of affairs in contractors' resource management strategies in a resource constrained economy. The data was collected from contractors, professionals and clients. Both qualitative and quantitative methods were used in the study. There was 76% response rate from the targeted sample. The study noted diverse resource management strategies used by contractors during project execution. By and large a majority of these contractors are stuck in the use of traditional resource management methods, such as project based recruitment, paper-based information systems, bulk purchasing, disposal of worn out machinery amongst others. However, this is at odds with the global trends which have seen an influx of computer aided systems such as e-sharing, synchronized estimating and procurement softwares. The general adoption of these systems and softwares in Zimbabwe has been low constituting only 22% of the industry as Candy and Buildsmart are deemed expensive to license and run by contractors. However, the use of Microsoft Excel and Microsoft Projects dominates the industry. On the other hand, the critical path method and resource levelling techniques have yielded favorable results in developed countries, whilst in the Zimbabwean industry these are not effective. Accordingly, the CPM has been viewed as a planning technique which is not religiously followed during project implementation for use in tandem with resource levelling. Furthermore, the study concludes that contractors' failure to apply effective resource management strategies culminated to poor performance trends as evidenced by late completion of projects, clientele dissatisfaction, cost overruns, project failure, and contractors' loss of the market share. Therefore, various practical suggestions on the adoption and application of resources management strategies were made in this study.