Towards An Appropriate Construction Industry Resource Levelling Model for Kenya

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ABSTRACT

The under-performance of Construction firms in Kenya has generated a lot of concern to the clients in the industry. Delivery of constructed facility within the predetermined duration, budgeted cost and stipulated quality specifications has remained a mirage to many construction firms. These concerns have exerted formidable pressure to construction firms to be more effective in terms of better utilization of resources. The purpose of the study is to evaluate the impacts of resource levelling practices by construction firms in Kenya and propose a predictive management model which would lead to improved resource utilization. In the study, key performance indicators that are; time, cost, quality, productivity rates coupled with effective resource management on construction sites were identified through intensive literature search and interviews.

The research design used in the study was of the mixed approach. The study targeted 143 participants from NCA registered contractors in categories NCA 3 to NCA 6 who answered the questionnaire and responded to the interviews about resource leveling practices. Stratified sampling technique was used in data collection. The data analysis procedure adopted was: the descriptive statistics, correlation analysis, multiple regression analysis and SPSS programme.

The study revealed three significant management tools that contribute towards the enhancement of performance for construction firms namely; construction planning, financial control and resource control. It was found that the three tools are associated with a number of key project characteristics, in particular; cost, time and quality.

The study established a mathematical assessment model for resource levelling that reduces undesirable resource fluctuation and enhances overall construction projects performance.

The study therefore recommends that construction firms should employ competent supervisors and provide them with continuous training opportunities in the fields of work scheduling, budgeting and optimization of resources so as to enhance performance.

Key words: Construction firms, resources, resource levelling, performance, fluctuations.