RANKING THE BUILDING CONSTRUCTION ESTIMATING COST FACTORS USING TERRELL’S TRANSFORMATION TECHNIQUE

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ABSTRACT

Determination of estimating cost factors and examination of their degree of influence are important in developing reliable cost models while enhancing the competitiveness of contracting organizations during tendering. The objective of this study was to identify the factors influencing building contractors’ cost estimating practice. This was achieved through a comparative study of one hundred and twenty-three Malaysian building contractors classified into three categories, specifically, small, medium and large contractors. Seventy-nine factors influencing project cost estimating practice were identified through literature and interviews. These factors were grouped into seven categories based on Akintoye’s (2000) study on factors influencing project cost estimating practice in the United Kingdom which included of project complexity; technological requirements; project information; project team requirement; contract requirements; project duration; and market requirement. Priority ranking of cost-influencing factors was conducted using survey questionnaire distributed to quantity surveyors, estimators and contractors based in Klang Valley, Malaysia. Terrell’s transformation index computation, coefficient of variation (CV), and Kendall’s coefficient of concordance (W) were employed to analyze the data. Findings from Terrell’s transformation index revealed that 35 of 79 factors were regarded by the research participants working for the small, medium and large contracting firms in Klang Valley, Malaysia as highly relevant for building projects cost estimating practice. However, Kendall’s concordance test showed low level of concordance among contractors in ranking estimating cost-influencing factors.

KEYWORDS

Cost factors, cost estimating, building contractors, Terrell’s transformation, Malaysia.

INTRODUCTION

Cost estimation is part science and part art (NASA 2002). However, business managers believe that