INTERNATIONAL JOURNAL OF CIVIL ENGINEERING AND TECHNOLOGY (IJCIET)

ISSN 0976 – 6308 (Print)
ISSN 0976 – 6316(Online)
Volume 4, Issue 4, July-August (2013), pp. 284-288

Journal Impact Factor (2013): 5.3277 (Calculated by GISI)
www.jifactor.com

CONCEPTUAL COST ESTIMATES FOR BUILDINGS IN QATAR

Mohammed S. Al-Ansari

Civil Engineering Department, Qatar University, P.O. Box 2713, Doha Qatar

ABSTRACT

This paper presents an analytical model to estimate the cost of reinforced concrete buildings in Qatar. A conceptual estimate is defined in this paper as the estimate based on parameter cost $\boldsymbol{\sigma}$ that relates building cost to building area and cost capacity factor **X** is an exponential model that used to estimate the cost of new building with desired area base on a known different building cost and area. Parameter cost $\boldsymbol{\sigma}$ and cost capacity factor **X** values are derived based on buildings historical data. A set of values of parameter cost value $\boldsymbol{\sigma}$ and the cost capacity factor **X** for the state of Qatar is developed as a result of this research paper to be used to predict and estimate the projects costs and the required resources. Numerical results are presented to illustrate the model capability of estimating the building cost.

Keywords: Estimation, Parameter cost, Cost capacity factor, Cost Estimate, Building, historical Data.

INTRODUCTION

Qatar is an Arab state with Doha as its capital; it is the capital of natural gas in the world. Qatar successful bid to host the FIFA World Cup in 2022 created a land of opportunity for construction. Qatar is planning to invest more than 200 billion USD$ in construction projects before the starting of the World Cup. These big projects are outside the scope of this paper; this paper will cover the analysis of small to medium budget projects. Too many companies are trying to get a share of the booming construction but they have to make the correct building cost estimation. Estimating is the process of predicting project cost and the required resources. A conceptual estimate is defined in this paper as the estimate based on parameter cost $\boldsymbol{\sigma}$ that relates building cost to building area and cost capacity factor X is an exponential model that used to estimate the cost of new building with desired area base on a known different building cost and area. Developing a set of values of parameter cost $\boldsymbol{\sigma}$ and cost capacity factor X to be used in the state of Qatar to predict and estimate the projects costs and the required resources is the objective of this paper. The methodology of developing parameter cost $\boldsymbol{\sigma}$ and cost capacity factor X consist of collecting historical data of actual buildings from consultants offices, contracting companies and government agencies, selected