

# A Bid Mark-up Multi-Factor Evaluation Process Bidding Strategy in Egypt

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## Abstract

Abstract A Construction contracting is the ability to bid-successfully. Winning tender and making profit is a sustainable target for any contractor to survive in construction sector. While there are different methods for bid pricing in estimating direct and indirect costs, there are fewer tools for estimating proper mark-ups percentage. Therefore, the decision of proper bid mark-ups percentage is vital in winning the tender. Meanwhile, the contractor can cover contingency and keeping its bid at a competitive level with the possibility of achieving maximum profit. Bid markup decision in construction projects is a complex adaptive process. Therefore, it requires significant experience and market knowledge. The problem is getting worth in case of the economic reform in developing countries such as Egypt. This economic reform initiative lately undertaken by the Egyptian government coupled with the ambitious development programs of infrastructure and the development of several new cities which means additional variables that increase the complexity. These variables include high inflation, currency exchange changes, economic instability, removal of subsidies and compressed construction deadlines. The objective of this paper is to develop a decision support system (DSS) to generate the optimum bid markup. Many factors which may impact the decision process either quantitative or qualitative are identified and evaluated using Delphi technique for reality seeking. Then Analyze the retrieved factors with step wise regression statistical technique to generate highly impact factors. The DSS consists of three modules, first the Financial forecast module then using the Analytic Network Process (ANP)-Relative Module and the Rating Module. Finally, generate the optimum bid markup among Alternatives. The main finding in this paper is the minimum alternative, summation of the cost of finance and inflation finance percent, the Priorities of significant factors, which include need to work, project complexity, markup inflation, the risk involving owing contract, economic and competition- market environment. The result of this study improves and assess contractor's ability to enhance their documentation system and estimating process to deal with various bidding evaluation conditions. Keywords: bid Markup, Decision support system, inflation, Delphi, Competitive tender, ANP.

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