## Case Study Approach Using Scenario Analysis to Analyze Unabsorbed Head Office Overheads

Authors : K. C. Iyer, T. Gupta, Y. M. Bindal

**Abstract**: Head office overhead (HOOH) is an indirect cost and is recovered through individual project billings by the contractor. Delay in a project impacts the absorption of HOOH cost allocated to that particular project and thus diminishes the expected profit of the contractor. This unabsorbed HOOH cost is later claimed by contractors as damages. The subjective nature of the available formulae to compute unabsorbed HOOH is the difficulty that contractors and owners face and thus dispute it. The paper attempts to bring together the rationale of various HOOH formulae by gathering contractor's HOOH cost data on all of its project, using case study approach and comparing variations in values of HOOH using scenario analysis. The case study approach uses project data collected from four construction projects of a contractor in India to calculate unabsorbed HOOH costs from various available formulae. Scenario analysis provides further variations in HOOH values after considering two independent situations mainly scope changes and new projects during the delay period. Interestingly, one of the findings in this study reveals that, in spite of HOOH getting absorbed by additional works available during the period of delay, a few formulae depict an increase in the value of unabsorbed HOOH, neglecting any absorption by the increase in scope. This indicates that these formulae are inappropriate for use in case of a change to the scope of work. Results of this study can help both parties in deciding on an appropriate formula more objectively, considering the events on a project causing the delay and contractor's position in respect of obtaining new projects.

**Keywords :** absorbed and unabsorbed overheads, head office overheads, scenario analysis, scope variation **Conference Title :** ICSDEC 2018 : International Conference on Sustainable Design, Engineering and Construction **Conference Location :** Paris, France

Conference Dates : November 08-09, 2018

1