

ASSESSMENT OF EFFECTIVE FACTORS ON TIME, COST AND QUALITY OF MASS HOUSE BUILDING PROJECTS USING ANALYTIC HIERARCHY PROCESS- A CASE STUDY IN TEHRAN

M.Khanzadi

Assistant professor, Department of Civil
Engineering, Iran University of Science and
Technology
Email: khanzadi@iust.ac.ir

S.Dabirian

Ph.D. Candidate in Construction Engineering and
Management, Iran University of Science and
Technology
Email: dabirian@iust.ac.ir

H.Youneszadeh

M.Sc student of Construction Engineering and
Management, Iran University of Science and
Technology
Email: hyouneszadeh@gmail.com

ABSTRACT

Increasing demand for house building in Iran resulting from various factors such as increase in the young population of the country and capital-oriented approaches to the house building issue has led to propose different methods to remove this major demand. The best current solution can be characterized as mass house building which is in fact industrialization of construction procedures. Similar to any other civil and infrastructure projects, several factors affect obtaining project objectives, namely time, cost and quality in the mass house building projects (MHBPs). In this research, effective factors have been identified and classified into three main groups including factors due to the project organization (POR), project specifications (PSP) and project environment (PEN). Then, the effective factors have been evaluated using Analytical Hierarchy Process (AHP) according to the three criteria, i.e., time, cost and quality. Finally, due to the variable nature of criteria, sensitivity analysis has been conducted. The obtained results clearly revealed that the most important factors in three groups of POR, PSP and PEN are financial capability; project design and project finance; and market condition, respectively.

Keywords: Project Management, Mass House Building Projects, Analytical Hierarchy Process (AHP), Sensitivity Analysis