



Analysis of Delay Causes in Mass-Housing Projects in Iran

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Abstract

Activities in a project confront with time extensions and delays which are also important and usual in the building construction which in result have some disadvantages in different aspects. Studies have been done to explore the most leading and effective causes of delay. The aim of this paper is to identify the delay causes on mass-housing projects completion. A questionnaire survey was performed to extract the delay causes by conducting 117 structured questionnaires on 60 mass-housing projects. This study identified 6 most important categories of delay causes from 16 subcategories and total 42 delay causes. The main categories are: (1) environment, (2) resource, (3) project procurement, (4) project participants, (5) management, and (6) failure. After data analysis the findings showed that labor productivity, on time and accurate design, client interference and financial condition are the most important delay causes on mass-housing projects.

Keywords: Delay causes, Construction projects, Relative importance index, Mass-housing, Iran.

1. INTRODUCTION

Time schedule is an important issue in projects. In the study of Assaf and Al-Hejji [1] construction delay was defined as “the time overrun either beyond completion date specified in a contract, or beyond the date that the parties agreed upon for delivery of a project.” Delay was also defined as an “act or event which extends required time to perform or complete work of the contract manifests itself as additional days of work” by Zack [2]. Inability in achieving desired time, cost and quality due to delays, concludes in different damages on the projects as they prolong and undergo extra cost. Therefore, it is necessary to find the main causes of delay to reduce and prevent the delay issues and their property loss. In projects, accurate planning and time managements have concluded in financial benefits and improvements in constructions. The aim of this paper is to identify the main causes of delay in mass-housing construction projects in Iran. Albeit there’s no precise definition for mass-housing but it points at allocation of high areas construction site which embraces lots of families. Then we introduce the most important factors by a 42 attributes questionnaire and finally we discuss the most effective categories concluded from the questionnaire.

2. LITERATURE REVIEW

Several studies have identified causes of delay in construction projects in various fields that it refers to the abundance of this problem in various places. As shown in the table, we mostly consider research focused on the construction fields.

Some causes in the studies were exceptional, because of the social and political situations as Shujaa Safdar Gardezia et al [3] identified that in Pakistan the terrorism was one of the 5 top cause of delay. But mostly, causes are connected to financial and management issues. Arditi et al. [4] has discussed in people utility projects and has identified these main causes respectively: shortage of resources, financial difficulties faced by public agencies and contractors, delays in design preparation. In big projects, because of the dimensions and huge volume of activities the causes would be different. Assaf et al [5] have specified 42 basic causes of delay in Saudi Arabia's large building construction projects and their relative importance. The most effective delay causes were: slow preparation and approval of shop drawings, delays in payments to contractors, changes in design/design error. Also Assaf and Al-Hejji [1] have found the most important factor as follow: the change in orders by the owner during construction, delay in progress payment and ineffective