



## Designing a Model of key Stakeholders' Expectations in the Subway Construction Projects: Studied in MUR Construction Project

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**ABSTRACT:** Urban infrastructure projects are considered the heart of the economy of countries and productivity of these projects is fundamental in development strategy of countries. One of the important determining factors in the success of major projects, especially subway lines construction projects is the managers' performance in interacting with involving project factors and considering their expectations and demands. In this study, first by offering a theoretical framework, the required processes to model the expectations of key stakeholders is expressed and according to the proposed pattern, project stakeholders are identified initially and by identifying the stakeholder expectations and determining the key stakeholders, the research enters the model designing phase. In the final stage which is modeling the expectations of key stakeholders, the expectations' model will be designed using the pattern extracted from the QFD approach. The stakeholders' expectations model shows the expectations of different stakeholder groups from the project. For designing this model, Mashhad Urban Railways (MUR) construction project is studied. The results showed that the definitive stakeholders have the highest expectations level. "Paying attention to the quality standards of project's implementation methods" and "paying attention to the project's reporting system" are the most significant expectations; since all the key stakeholders have such expectations. Results also showed that the three types of stakeholders consisting of "dormant, discretionary and demanding" are not among key stakeholders; therefore, in the expectations model of key stakeholders, they don't have any expectations.

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### 1- Introduction

Construction industry is one of the largest industries in the world which has an important role in development of countries [1]. At present, urban infrastructure projects have strategic importance. Stakeholder management of subway lines construction projects is a rather complex and yet necessary due to involvement of different stakeholders. Strategic and operational importance to this kinds of projects requires a strong and constructive management tool for the implementation of project with minimal time and cost and high quality which in addition to performance optimization, attracts satisfaction of stakeholders as well. In these projects, stakeholders can be included as the project team members, investors, residents of the project location, users and generally contributors to the project or affected by the project individuals [2]. Without understanding of the nature of the stakeholders and their expectations, the consent of them would not be possible. The objectives of this study will be examined through three main aspects. The first aspect, also very important in stakeholders' management, is trying to create a proper understanding of stakeholders and their importance in

subway lines building projects. Another aspect according to the stakeholders' expectations of subway construction project is through identifying the expectations and determining the importance of stakeholders' expectations to acquire their satisfaction by taking into account the expectations of stakeholders in the project management process, to facilitate achieving the project objectives. Last and the most important goal of this study is to design a model for the expectations of key stakeholders in the construction of subway lines projects to help determining the relationship between the stakeholders' expectations and types of stakeholders. In this study, theory, management and expectations of stakeholders have been discussed at first and then by offering a theoretical framework, the required processes have been presented to model the expectations of key stakeholders. In the final stage using the required matrices, expectations of key stakeholders will be provided. The stakeholders' expectations model suggests what to expect from different stakeholders and if the presented model can be a useful tool for the managers. In this article, Mashhad Urban Railway (MUR) construction project is studied.

### 2- Theoretical foundations and research background

In this section theoretical foundations and background

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of stakeholder theory, stakeholder management and stakeholders' expectations will be scrutinized.

### 2- 1- Stakeholder theory

Developmental projects are the country's economic heart, productivity of these projects is very important in the country's development strategy. Projects include activities that should be carried out by participation of different stakeholders for a specified time, costs and quality. One of the important factors determining the success of large projects is how the involved factors in projects such as contractors and construction companies' suppliers perform and cooperate [3]. One of the important aspects of project management, is the management team's proper understanding of the project stakeholders. In recent decades, "stakeholders" has been one of the managers and researchers' concerns in various fields. After the 1963 Stanford Research Institute introduced the concept of stakeholders for the first time, every researcher started to study the concept of stakeholders from their specific point of views. But then Freeman(1984) published a book for the first time, introduced the concept of "stakeholders" as a unique to identity and the process of "stakeholder management" in the form of a framework [4]. Then, by using the concept of stakeholders in organization theory, system theory, the field of corporate social responsibility and organizational planning, literature of stakeholders was expressed that later became classical stakeholders' literature. After that stakeholder theory was expanded from three aspects [5]: 1) descriptive aspect 2) software aspect 3) normative aspect.

### 2- 2- Stakeholder Management

In the current complicated and uncertain environmental conditions, stakeholder management prepares the beneficial involvement of project's stakeholders or organization's stakeholders by creating a balance between different yet sometimes conflicting interests [6]. After identifying the project stakeholders, the most important requirement for stakeholder management is analysis of stakeholders. So far, different methods and models have been provided for analysis and classification of stakeholders. Mitchell et al. (1997) suggested a model to analyze stakeholders in which stakeholders' classification criteria is the parameter of power, legitimacy and urgency [7]. Eden and Ackerman (1998) by proposing power matrix classified and analyzed the stakeholders' interest on the basis of two criteria: stakeholders' power and stakeholders' interest [8].

### 2- 3- Stakeholders' expectations

The term project stakeholder refers to, "an individual, group, or organization, who may affect, be affected by, or perceive itself to be affected by a decision, activity or outcome of a project". Therefore, considering the interests of stakeholders will be essential for their participation in the project. On the other hand, the interests of stakeholders can be considered and their consent to continue their participation in the project can be attracted when there is enough attention to their expectations.

## 3- Methodology, results and discussion

In this study, in order to achieve the key stakeholders' expectations' model, a pattern was implemented in 8 consecutive steps.

### 3- 1- Identifying the stakeholders

The first step to design a model of the stakeholders' expectations is identifying the stakeholders. Identifying the project's stakeholders was conducted in 4 stages in this study. 1) open questionnaire 2) interviews with experts 3) benchmarking similar projects in the three action descriptions, comparisons and conclusions 4) approval by experts. Finally, 81 stakeholders were identified at the end of this step.

### 3- 2- Identifying the stakeholders' expectations

In this study, first the literature of project management and project's risk, especially subway lines building projects' management has been referred to and then interviewing with available stakeholders. After the stakeholders' expectations were recorded, an interview was conducted within the fields of expectations of last step to develop the initial responses, as well as evaluating the mentioned areas. In this research, due to the multiplicity of stakeholders and their different geographical locations making access to them very difficult, we used expert brainstorming.

### 3- 3- Identifying key stakeholders

Stakeholders' analysis has been done in two stages. In the first phase due to large expansion of the project's stakeholders with the aim of saving time and cost, key stakeholders' analysis is being noted. The power-interest matrix has been used in this study. In the second phase, in order to determine the level of power and interest of stakeholders, a questionnaire was used. Finally, 9 key stakeholders were recognized.

### 3- 4- Designing the key stakeholders' expectations model

The purpose of this research is to obtain the stakeholders' expectations model in which, key stakeholders are placed on one side and stakeholders' expectations on the other side. The presented pattern in this study is derived from the method of Quality Function Deployment (QFD) in which the key stakeholders' expectations model is offered by multiplying consecutive matrices.

### 4- Presenting the key stakeholders' expectations model

Key stakeholders' expectations model represents the relationship between stakeholders' expectations and stakeholders' type in the project.

## 5- Conclusions

Since large projects have various stakeholders, identifying them and their expectations sufficiently, will be one of the factors influencing the success of a project; because without the knowledge and accordingly proper response to their expectations, obtaining the stakeholders' satisfaction would be impossible. In this study, by designing the model of key stakeholders' expectations in Mashhad Urban Railway construction project, a suitable pattern was presented to include the stakeholders' expectations in this project. Key stakeholders' expectations model indicates that key stakeholders have what levels of expectations. According to the final model, definitive stakeholders have the highest level of expectations and dominant stakeholders have the lowest level of expectations. Noting the quality standards in project's implementation methods "and "noting the project reporting system" are the most significant expectations; since all key stakeholders have such expectations. Also final model shows

the three types of dormant, discretionary and demanding stakeholders are not among the project's key stakeholders under any circumstances.

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