

# ASSESSING THE IMPACT OF KEY STAKEHOLDERS' SATISFACTION ON THE SUCCESS OF CONSTRUCTION PROJECTS IN YEMEN

**Fouad Abdulmajid Al-akhali**

<sup>1</sup>Faculty of Finance and Administrative Science, Al Madinah International University,  
Taman Desa Petaling, 57100 Kuala Lumpur, Malaysia  
fouad288@gmail.com

**Barjoyai Bardai**

<sup>2</sup>Faculty of Finance and Administrative Science, Al Madinah International University,  
Taman Desa Petaling, 57100 Kuala Lumpur, Malaysia  
barjoyai.bardai@mediu.edu.my

**Maged Mustafa Al-Dubai**

<sup>3</sup>Faculty of Finance and Administrative Science, Al Madinah International University,  
Taman Desa Petaling, 57100 Kuala Lumpur, Malaysia  
maged.mahyoub@mediu.edu.my

**Abdulrahman Aljounaidi**

<sup>4</sup>Faculty of Finance and Administrative Science, Al Madinah International University,  
Taman Desa Petaling, 57100 Kuala Lumpur, Malaysia  
abdulrahman.ramez@mediu.edu.my

**Al-Harath Abdulaziz Ateik**

<sup>5</sup>Faculty of Finance and Administrative Science, Al Madinah International University,  
Taman Desa Petaling, 57100 Kuala Lumpur, Malaysia  
alharath.ateik@mediu.edu.my

## Abstract

The purpose of this study was to identify the highly influential predictors that determine the construction projects' success and stakeholders' satisfaction in Yemen as well as it was to investigate the mediating effects of Stakeholders' Satisfaction on the relationships between top management support, project managers' competencies, organizational culture, project governance and project management office with the projects' success. In line with the decision to use the entire population, the researcher distributed questionnaires using a quantitative method. All constructs were confirmed and internally consistent from reliability and validity point of view. The results indicate that construction projects' performance will be enhanced and value increased by the positive impact of stakeholders' satisfaction that mediates the mentioned independent variables and projects' success. The study has revealed the knowledge which how, when, and the best approach the meditation of stakeholders' satisfaction achieved in order to deliver projects' success. This will help draw the map to guide all the relevant professionals in order to effectively contribute to the successful healthy projects at the construction industry.

**KEYWORDS:** *Construction Industry, Projects' Success, Stakeholders' Satisfaction*

## 1. Introduction

Yemen has a history of public-sector projects that have already experienced and encountered problems as well as challenges. The majority of construction projects in Yemen fail to meet the project's specific requirements. The public along with the private sector lose millions of dollars and the quality and the specific requirements of these projects have not achieved. If projects' stakeholders are fully satisfied with the decision making process, they often consider themselves as participants in it (Msomphora, 2015). Stakeholders in Yemen usually have equipped with a great deal of power in terms of authority, finances, and strong relationships with high-ranking government officials and local authorities, etc. Many research and studies have shown that incompetent management and corruption are the primary reasons why many projects fail to meet their objectives. Gamil et al. (2017) tested the causes of big projects in Yemen's construction industry in terms of failure and found that the most common causes of failure were a lack of professional planning, insufficient coordination and communication, and a lack of advanced technology. To conclude, the majority of projects in Yemen fail to meet the project's specified objectives, cost more than expected, or are not completed on time. There are a large number of project manager professionals working in construction projects. The problem is not their knowledge and experience. These professionals are well educated and realize most of the negative issues which affect and impact projects' success. The author chose the most important and relevant variables and build a specific conceptual model for the study in order to attain the desire outcomes of the research.

## 2. Problem Statement

Although the Yemeni construction industry invests millions of dollars on projects, they still fail to achieve their required objectives regardless of the excellent design of those projects, great planning, and the high extensive experience of the project managers and their team members. In Yemen, stakeholders have normally equipped with a great deal of power in terms of authority, finances, and strong relationships with high-ranking government officials and local authorities, etc. Many studies and research have shown that corruption and incompetent management are the primary reasons why many projects fail to meet their objectives. Many projects, in reality, have failed as a result of stakeholder involvement and some projects even failed at the beginning of early stage without any technical or financial reasonable reasons. Lack of management skills, ongoing work interruption, poor construction management, an insufficient of raw materials, low income of engineers and construction workers, and financial obstacles were all cited by Gamil and Abdul Rahman (2020). Gamil et al. (2017) tested the causes of big projects in Yemen's construction industry in terms of

failure and found that the most common causes of failure were a lack of professional planning, insufficient coordination and communication, and a lack of advanced technology.

## 3. Research Question

- What are the highly influential predictors that determine key stakeholders' satisfaction and the construction projects' success in Yemen?
- Does and How key stakeholders' satisfaction mediate the relationships between top management support, project managers' competencies, organizational culture, project governance and project management office with the construction projects' success?

## 4. Research Objectives

- To identify the highly influential predictors that determine key stakeholders' satisfaction and the construction projects' success in Yemen.
- To investigate the mediating effects of key stakeholders' satisfaction on the relationships between top management support, project managers' competencies, organizational culture, project governance and project management office with the construction projects' success.

## 5. Literature Review

Individuals, groups, authorities, and/or anybody who has a direct or indirect impact on the project's performance and outcome are considered stakeholders in construction projects.

Stakeholders are defined as individuals, group or institution who will be affected by a project outcome in a negative or positive way. They are defined in different way as any individual, group or institution that has an interest or stake in the project. The identification of the key stakeholders and their interests are very important in all project stages and even at the project feasibility analysis stage. The project managers and the project team members have to assess the power and the influence of the stakeholders in relation to the project. Therefore, they need to determine the reasonable and required response to each stakeholder depending on their levels of power and interest in order to get their advantages in favour of the project and to mitigate or eliminate the risk of the impact for those stakeholders who will be affected by the project's outcome. Stakeholder's management and project engagement plan help project professionals manage and lead effectively stakeholders during a project management strategy.

The involvement of stakeholders become a key organizational component when achieving good project outcomes, according to various studies conducted in the construction sector. Understanding about the stakeholders and stakeholder management has been an increasing in recent years that stakeholder management and become a critical component of construction project success (Yang et al., 2011). Lots of project based organizations in the public and private sectors are attempting to integrate new project management techniques and concepts to enhance project execution in today's business market (Kutsch et al., 2015). At once, achieving stakeholders' expectations and building a bridge of confidence during the projects' execution has become increasingly essential. As the individual project is often but one part of larger systemic development, the interconnection between the project and the full strategic plan of a business ecosystem development needs to be emphasized (Engwall, 2003; Eriksson et al., 2017).

**6. Conceptual Model**

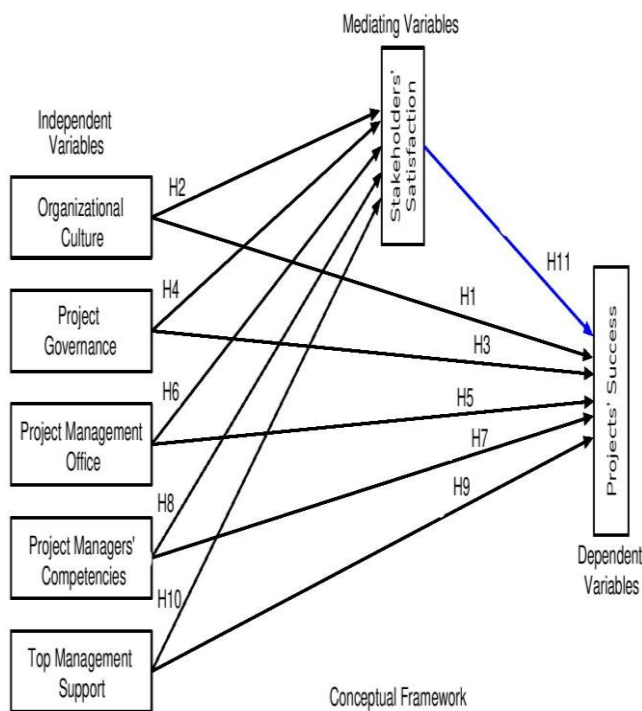


Figure 1. 1 Conceptual Framework

**7. Methodology**

For this study, data were collected from individuals who affect negatively or positively projects' success and have impact on the Yemeni construction projects. The unit of analysis is individuals who work directly or indirectly for the two big ministries, Ministry of Electricity and Energy and Ministry of Public Works and Roads. Those individuals are specific relevant construction projects' stakeholders. The target population, project managers, project team members, project contractors, project consultants, and engineers from whom data need to be collected and analyzed to serve the research questions and on which the conclusion has to be made. So, the sample

size is 380 out of 7198 which represents the total population.

In consideration of the above-mentioned discussion, survey method was selected to support the hypothesis in this study. The distributed questionnaires were identified unit of analysis by Google link disturbed via emails send to the HR and other relevant professionals in the two above mentioned ministries and HR then forward the link for the targeted staff only. The online questionnaire sent and was accompanied with a cover letter from the researcher outlining the objectives of the study and the importance of the research.

| Position             | %               | Population           | Allocated Sample |
|----------------------|-----------------|----------------------|------------------|
| Project Managers     | 70.00 %         | (575 + 313)          | 266              |
| Project Team Members | 18.00 %         | (3647 + 1583)        | 68               |
| Project Contractors  | 6.00 %          | (560 + 252)          | 23               |
| project Consultants  | 6.00 %          | (185 + 83)           | 23               |
| <b>Total</b>         | <b>100.00 %</b> | <b>(4967 + 2231)</b> | <b>380</b>       |

**Table 7. 1** The Sample Distribution and Calculation

Primary data is described as data that is solely acquired for the purpose of a particular research study and has the significant advantage of being tailored to this study (Zikmund et al., 2003). The survey method was chosen for this study due to the multiple advantages it offers. The survey approach has the advantage of being able to swiftly and efficiently assemble vast amounts of data samples (Hair et al., 2010). Other advantages stated by Malhotra and Birks (2018) include simple coding of replies and ease of questionnaire control.

The research provided questionnaires and distributed to 598 respondents in accordance with the decision using the total population. Only 412 of the 598 questionnaires distributed were returned. Moreover, according to Hair et al. (2010), it is desirable for researchers to exclude any case of respondents from the collected questionnaires if the missing data is bigger than 50%. According to their recommendation, 32 of the returned questionnaires were deleted since more than half of them were missing information. As a result, 380 complete of usable responses for further analysis, resulting in a 63.55 percent overall response rate.

### 8. Results and Discussion

The findings were in relation with the problem statement and in line with the research objectives and the research questions.

The use of the bootstrapping method in the assessment of path coefficients entails the smallest bootstrap sample of 500 and the cases in terms of number should be identical to the amount of observations within the initial sample (Lorenzo-Romero & Carlota, 2014; Monecke & Leisch, 2012; Rubel & Mohammad, 2014). Furthermore, the essential t-values for a two-tailed test appear to be 1.65 (at 10% significance), 1.96 (at 5% significance), and 2.58 (at 5% significance) (at 1 percent degree of significance). In this manner, the researcher developed 500 re-samplings with a replacement number equal to the original number of samples chosen from the bootstrap cases (380). Therefore, Standard errors and t-statistics will be gained as a result. Furthermore, the essential t-values for a two-tailed test appear to be 1.65 (at 10% significance), 1.96 (at 5% significance), and 2.58 (at 5% significance) (at 1 percent degree of significance). In this manner, the researcher developed 500 re-samplings with a replacement number equal to the original number of samples chosen from the bootstrap cases (380). Figure 8.1 contain the outcomes of bootstrapping, where the hypothesized relationships below were tested:

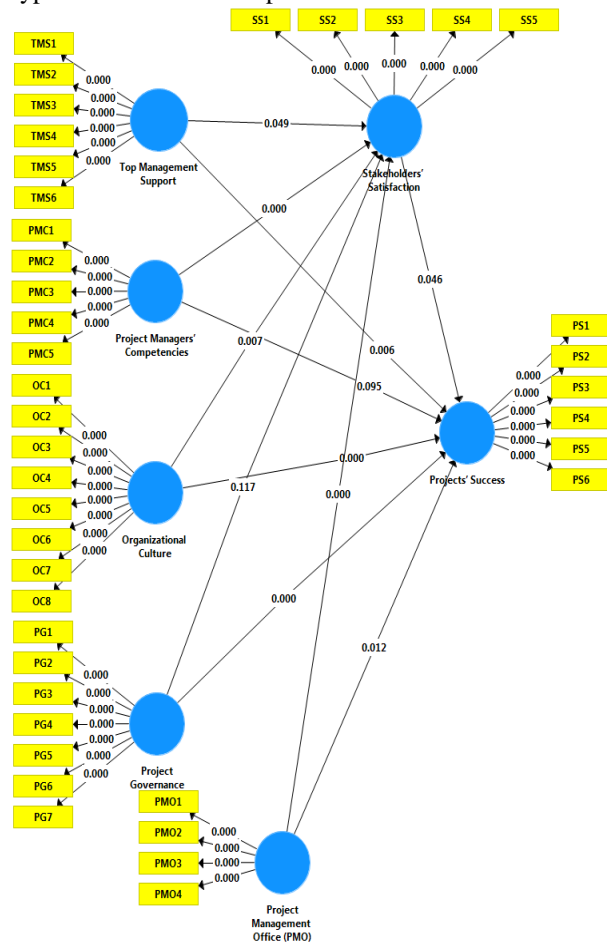


Figure 2.1 PLS Bootstrapping (p-values) for the Study Model

**H1:** Organizational Culture has a positive relationship on projects' success. The result revealed that the proposed association between Organizational Culture and projects' success shows association ( $t = 3.765$ ;  $p\text{-value} = 0.000$ ), and hence, the hypothesis was supported.

**H2:** Organizational Culture has a positive relationship on Stakeholders' Satisfaction. The result revealed that the proposed association between Organizational Culture and Stakeholders' Satisfaction shows association ( $t = 2.71$ ;  $p\text{-value} = 0.007$ ), and hence, the hypothesis was supported.

**H3:** The result revealed that the proposed association between Project Governance and projects' success shows association ( $t = 5.336$ ;  $p\text{-value} = 0.000$ ), and hence, the hypothesis was supported.

**H4:** The result revealed that the proposed association between Project Governance and Stakeholders' Satisfaction shows association ( $t = 1.569$ ;  $p\text{-value} = 0.117$ ), and hence, the hypothesis was rejected.

**H5:** The result revealed that the proposed association between Project Management Office and projects' success shows association ( $t = 2.526$ ;  $p\text{-value} = 0.012$ ), and hence, the hypothesis was supported.

**H6:** The result revealed that the proposed association between Project Management Office and Stakeholders' Satisfaction shows association ( $t = 3.615$ ;  $p\text{-value} = 0.000$ ), and hence, the hypothesis was supported.

**H7:** The result revealed that the proposed association between Project Managers' Competencies and projects' success shows association ( $t = 1.67$ ;  $p\text{-value} = 0.095$ ), and hence, the hypothesis was rejected.

**H8:** The result revealed that the proposed association between Project Managers' Competencies and Stakeholders' Satisfaction shows association ( $t = 6.007$ ;  $p\text{-value} = 0.000$ ), and hence, the hypothesis was supported.

**H9:** The result revealed that the proposed association between Top Management Support and projects' success shows association ( $t = 2.779$ ;  $p\text{-value} = 0.006$ ), and hence, the hypothesis was supported.

**H10:** The result revealed that the proposed association between Top Management Support and Stakeholders' Satisfaction shows association ( $t = 1.97$ ;  $p\text{-value} = 0.049$ ), and hence, the hypothesis was supported.

**H11:** The result revealed that the proposed association between Stakeholders' Satisfaction and projects' success shows association ( $t = 2.004$ ;  $p\text{-value} = 0.046$ ), and hence, the hypothesis was supported.

This study attempted to assess the construct of Stakeholders' Satisfaction as a mediator to the relationships between the variables, which may impact on the project success. In this regard, the relationship between Stakeholders' Satisfaction with the five variables (top management support, project managers' competencies, organizational culture, project governance and Project Management Office) and project success from the perspective of project manager, project coordinators Contractor, Consultant and others was investigated. The summarized results of Mediator Hypothesis are highlighted below:



**H12:** Stakeholders' Satisfaction positively mediates the relationship between Organizational Culture and projects' success. The results show associations with (T-value = 2.562; p-value = 0.009). As such, the hypothesis was supported.

**H13:** Stakeholders' Satisfaction positively mediates the relationship between Project Governance and projects' success. The results show associations with (T-value = 2.168; p-value = 0.043). As such, the hypothesis was supported.

**H14:** Stakeholders' Satisfaction positively mediates the relationship between Project Management Office and projects' success. The results show associations with (T-value = 3.858; p-value = 0.004). As such, the hypothesis was supported.

**H15:** Stakeholders' Satisfaction positively mediates the relationship between Project Managers' Competencies and projects' success. The results show associations with (T-value = 1.794; p-value = 0.123). As such, the hypothesis was Not Supported.

**H16:** Stakeholders' Satisfaction positively mediates the relationship between Top Management Support and projects' success. The results show associations with (T-value = 2.33; p-value = 0.014). As such, the hypothesis was supported.

To summarize from Figures 8.1, the results showed the significant influence of the independent variables on the mediator, stakeholders' satisfaction, and the dependent variable, projects' success. These values explained which independent variable has more influence on the projects' success. In terms of the standard significance level, P value, where making decisions either the relationship significant or not, all the results were significant except the relationship between the project governance and the stakeholders' satisfaction as well as the relationship between the project managers competencies and the projects' success. Although the relationship between project governance and stakeholders' satisfaction is not significant because the mediating factor can't be directly affected by the project governance but this mediator, stakeholders' satisfaction, can play the role as a mediator and can mediate the relationship significantly between the project governance and projects' success.

The mediating factor, stakeholders' satisfaction, significantly mediate most of the relationship between the independent variables and the projects' success. Thus, it answers the main research question. Project governance (PG) has a big direct effect on projects' success (DV) and the relationship is significant. Furthermore, Project governance (PG) has indirect significant impact on the projects' success when stakeholders' satisfaction (SS) mediates this relationship. However, in terms of direct relationship, the mediator, stakeholders' satisfaction (SS) can't be directly affected and the relationship is not significant; so the relationship is rejected. It happened due to the nature of some of the respondents and how they handled the questionnaire. What is important here is that those respondents were still believe about the importance of the mediator. Even though they don't feel satisfied from the direct relationship with procedures and policies

raised from project and corporate governance, construction projects still achieve success and meet the specific requirements because of the stakeholders' satisfaction (SS) significantly mediates this relationship depending on their interest. It is essential to find and highlight the importance of the existing mediator among this relationship. Regarding the project manager's competencies, it has a direct significant effect on the mediating factor, stakeholders' satisfaction, but this relationship is rejected when it comes directly or indirectly to projects' success. This is interesting to highlight and focus on this issue in the future. Anyway, it is a consequent of assessing those collected data by the respondents. The author strongly recommends any future studies to focus on this approach.

### 9.1 Recommended for Future Research

This study was limited to some variables. New researchers can expand the research by adding other variables or trying to conduct the study by using the stakeholders' satisfaction as a moderator instead of a mediating factor.

The scope of this research was limited to two big public organizations in Yemen. Thus, future studies can approach different sectors such as a private sector. Researchers can also conduct their studies in different countries specially the ones that share the same business environment and have a lot in common in terms of organizational culture.

This study has been conducted a quantitative technique analysis and used a questionnaire survey in order to gather the primary data and analyse them. Future studies could use different methodology selection by accommodating different techniques such as interviews, observations, etc. It is also concluded and recommended that board of directors and senior management should focus on installing a good cooperate governance to ensure projects' success rather than relying on competencies of the project managers.

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