Factors Affecting the Stakeholder Management Process in Construction Project

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Abstract—The construction industries involved a diverse range of stakeholders. The stakeholders are a major source of uncertainty in construction project. The successful construction project management can be carried out only when the responsible managers take into account the potential influence of the project's stakeholders. This study used to identify and evaluate Critical Success Factors affecting stakeholder management in construction projects, using a questionnaire survey among construction professionals for validate 30 Critical Success Factors identified from the literature reviewed and Relative Importance Index and SPSS for analysis. Six groups were also confirmed. Decision making, Information input, Management support was highly ranked groups. Managing of all the factors will helps successful delivery of project.

Keywords— Critical Success Factors, Stakeholder, Stakeholder management, Relative Importance Index, SPSS

I. INTRODUCTION

Today almost every project takes place in a context where stakeholders play a major role in the accomplishment of the tasks. Different stakeholders have different levels and types of investments and interests in projects in which they are involved. Often the project is sensitive to actions and decisions taken by the stakeholder. To ensure a successful project, the project team must identify the stakeholders, determine their requirements and expectations, manage their influence in relation to the requirements and identify the various factors affecting the stakeholder management.

This study aims at identifying and evaluating CSFs for effective stakeholder management, 30 factors affecting stakeholder management are identified and they can be categorized in to six groups. The main factors affecting the stakeholder management process are, setting common goal and objective of the project, transparent evaluation of the alternative solution, Stakeholder involvement in decision-making, Formulate appreciate strategy to deal with stakeholder and Communication with the engaging stakeholder properly and frequently. The client and donor are the main key stakeholders, who have the most influence in the construction project. These factors that influences the outcome of successful stakeholder management process.

<table>
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<tr>
<th>No</th>
<th>Categories</th>
<th>Critical Success Factors (CSFs)</th>
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</table>
| 1  | Management Support | Managing stakeholder with corporate social responsibilities  
Flexible project organization  
Project manager competences |
| 2  | Information Input | Setting common goal and objective of the project  
Identifying stakeholders  
Exploring the stakeholder need and expectation |
| 3  | Stakeholder Assessment | Assessing stakeholders’ attitude  
Understanding area of stakeholders’ interests  
Predicting the influence of stakeholders  
Analyzing conflicts and coalitions among stakeholders  
Evaluate the stakeholder power  
Evaluating the stakeholder legitimacy  
Understand the stakeholder urgency.  
Determine the stakeholder proximity  
Determine the stakeholder Knowledge. |
| 4  | Decision Making | Transparent evaluation of the alternative solution based on stakeholder concern.  
Ensuring effective communication between the project and its stakeholder  
Formulate appreciate strategy to deal with stakeholder |
| 5  | Action And Evaluation | Implementing the strategy based on schedule plans  
Flexibility in the implementing strategy to deal with stakeholder reaction  
Evaluation the stakeholder satisfaction in terms of achievement of the stakeholder pre-project expectation |
| 6  | Continuous Support | Communication with the engaging stakeholder properly and frequently  
Stakeholder involvement in decision-making  
Keeping and promoting an on-going relationship with stakeholder  
Analyzing the change of multiple stakeholder engagement and the relation  
Obtain support assistant from higher authorities  
Mutual trust and respect amongst the stakeholder  
Reduce the uncertainty  
Maintain alignment between or among the stakeholder  
Access to resource and knowledge |
A. Objectives Of The Study
To identify and rank the most common factors that affecting the stakeholder management process in construction project.

B. Benefit Of The Study
• By doing this study it is hoped that the delivery of the projects will be improved.
• To know how to manage stakeholder properly and identified their problem in various stages in order to fulfill their needs and expectations.

II. METHODOLOGY
The adopted methodology that is used to accomplish this study is the following techniques: review of literatures related to stakeholder management, questionnaire for gathering data, and interview with professionals from the construction industry and data analysis by Relative Importance Index and SPSS.

A. Relative Importance Index (RII)
Likert scaling was used for ranking questions that have an agreed level. The respondents were required to rate the importance of each factor on a 5-point Likert scale using 1 for strongly disagree, 2 for disagree, 3 for neutral, 4 for agree and 5 for strongly agree. Then, the Relative Importance Index was computed using the following equation:

Relative Importance Index = \( \frac{\sum w}{AN} \)

Where W is the weighting given to each factor by the respondent, ranging from 1 to 5, “A” is the highest weight and N is the total number of samples. The relative importance index ranges from 0 to 1

B. Cronbach’s Alpha
This method is used to measure the reliability of the questionnaire between each field and the mean of the whole fields of the questionnaire. The normal range of Cronbach’s coefficient alpha (\( \alpha \)) value between 0.0 and + 1.0, and the higher values reflects a higher degree of internal consistency.

\[ \alpha = \frac{Kr}{1+ (K-1)r} \]

The closer the Alpha (\( \alpha \)) is to 1, the greater the internal consistency of items in the instrument being assessed. The formula that determines alpha is fairly simple and makes use of the items (variables), k, in the scale and the average of the inter-item correlations, r.

III. RESULTS AND DISCUSSION
This part consists of results and discussion of factors that influence the stakeholder management process. These factors were grouped into six. The groups are management support, information input, stakeholder assessment, decision making, action and evolution and continuous support.

From Table 1.2, it is shown that the “Decision making” was ranked in the first position by the respondents with Relative Importance Index equals (0.816), Information input was ranked in second position and Management Support, Continuous Support, Action And Evaluation, Stakeholder Assessment was ranked in next position by the respondent.

Table 1.3: RII’s for management support

From Table 1.3, it is shown that the “Managing stakeholder with corporate social responsibilities” was ranked in the first position by the respondents under this group as a critical factor influencing the management support in the stakeholder management process with Relative Importance Index equals (0.796), Flexible project organization was ranked in second position and Project manager competences was ranked in third position by the respondent.

Table 1.4: RII’s for Information Input
From Table 1.4, it is shown that the “Setting common goal and objective of the project” was ranked in the first position by the respondents under this group as a critical factor influencing the information input in the stakeholder management process with Relative Importance Index equals (0.877). Exploring the stakeholder need and expectation was ranked in second position and Identifying stakeholders was ranked in third position by the respondent.

From Table 1.5, it is shown that the “Understanding area of stakeholders’ interests” was ranked in the first position by the respondents under this group as a critical factor influencing the Stakeholder Assessment in the stakeholder management process with Relative Importance Index equals (0.680). Assessing stakeholders’ attitude, Evaluate the stakeholder power, Evaluating the stakeholder legitimacy, Predicting the influence of stakeholders, Determine the stakeholder Knowledge, Analysing conflicts and coalitions among stakeholders, Understand the stakeholder urgency, Determine the stakeholder proximity was ranked in second position and Flexibility in the implementing strategy to deal with stakeholder’ reaction was ranked in third position by the respondent.

From Table 1.6, it is shown that the “Transparent evaluation of the alternative solution based on stakeholder concern.” was ranked in the first position by the respondents under this group as a critical factor influencing the Decision Making in the stakeholder management process with Relative Importance Index equals (0.842), Formulate appreciate strategy to deal with stakeholder was ranked in second position and Ensuring effective communication between the project and its stakeholder was ranked in third position by the respondent.

From Table 1.7, it is shown that the “Implementing the strategy based on schedule plans.” was ranked in the first position by the respondents under this group as a critical factor influencing the Action And Evaluation in the stakeholder management process with Relative Importance Index equals (0.746), Evaluation the stakeholder satisfaction in terms of achievement of the stakeholder pre - project expectation was ranked in second position and Flexibility in the implementing strategy to deal with stakeholder’ reaction was ranked in third position by the respondent.

From Table 1.8, it is shown that the “Stakeholder involvement in decision-making” was ranked in the first position by the respondents under this group as a critical factor influencing the Continuous Support in the stakeholder management process with Relative Importance Index equals (0.826), Communication with the engaging stakeholder properly and frequently, Obtain support assistant from higher authorities, Keeping and promoting an on-going relationship with stakeholder, Access to resource and knowledge, Reduce the uncertainty, Analysing the change of multiple stakeholder engagement and the relation, Mutual trust and respect amongst the stakeholder, Maintain alignment between or among the stakeholder was ranked in second position and Promoting an on-going relationship with the relation was ranked in third position by the respondent.

B. Cronbach’s Coefficient Alpha
The values of Cronbach's Alpha for CSFs equal 0.834 which indicates an excellent reliability of the entire CSFs.
From Table 1.9, it is shown that Cronbach's Alpha for each groups of CSFs. Continuous support group have higher reliability.

**CONCLUSIONS**

Stakeholder’s management has developed into an essential task of the project management process over the recent decades. Critical success factors for stakeholder management in construction projects will help in achieving the desired results and their by project success can be attained. This paper presented a part results of a questionnaire survey, and aims to identify CSFs associated with stakeholder management. A total of 30 factors affecting the stakeholder management process were identified and setting common goal and objective of the project is the first ranked by the respondent, it consider has an most important critical success factors. Cronbach’s Alpha for CSFs equal 0.834 which indicates an excellent reliability of the entire CSFs.

**REFERENCES**


