

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 1.1 CSFs

No	Categories	Critical Success Factors (CSFs)
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
4	Decision Making	Determine the stakeholder Knowledge.
		Transparent evaluation of the alternative solution based on stakeholder concern.
		Ensuring effective communication between the project and its stakeholder
5	Action And Evaluation	Formulate appreciate strategy to deal with stakeholder
		Implementing the strategy based on schedule plans
		Flexibility in the implementing strategy to deal with stakeholder' reaction
6	Continuous Support	Evaluation the stakeholder satisfaction in terms of achievement of the stakeholder pre - project expectation
		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:

$$\text{Relative Importance Index} = \sum W / AN$$

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 (α) value between 0.0 and + 1.0, and the higher values reflects a higher degree of internal consistency.

$$\alpha = Kr / (1 + (K-1)r)$$

The closer the Alpha (α) is to 1, the greater the internal consistency of items in the instrument being assumed. 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.

A. Relative Importance Index (RII)

Table 1.2: RII's for CSFs groups affecting the stakeholder management process

NO	CSFs	RII	RANK
1	Decision Making	0.816	1
2	Information Input	0.802	2
3	Management Support	0.759	3
4	Continuous Support	0.66	4
5	Action And Evaluation	0.658	5
6	Stakeholder Assessment	0.594	6

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

NO	Management Support	RII	RANK
1	Managing stakeholder with corporate social responsibilities	0.796	1
2	Flexible project organization	0.777	2
3	Project manager competences	0.704	3

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

NO	Information Input	RII	RANK
1	Setting common goal and objective of the project	0.877	1
2	Exploring the stakeholder need and expectation	0.788	2
3	Identifying stakeholders	0.742	3

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.

Table 1.5: RII's for Stakeholder Assessment

NO	Stakeholder Assessment	RII	RANK
1	Understanding area of stakeholders' interests	0.680	1
2	Assessing stakeholders' attitude	0.626	2
3	Evaluate the stakeholder power	0.623	3
4	Evaluating the stakeholder legitimacy	0.592	4
5	Predicting the influence of stakeholders	0.588	5
6	Determine the stakeholder Knowledge.	0.576	6
7	Analysing conflicts and coalitions among stakeholders	0.573	7
8	Understand the stakeholder urgency.	0.55	8
9	Determine the stakeholder proximity.	0.546	9

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 next position by the respondent.

Table 1.6: RII's for Decision Making

NO	Decision Making	RII	RANK
1	Transparent evaluation of the alternative solution based on stakeholder concern.	0.842	1
2	Formulate appreciate strategy to deal with stakeholder.	0.815	2
3	Ensuring effective communication between the project and its stakeholder.	0.792	3

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.

Table 1.7: RII's for Action and Evaluation

NO	Action And Evaluation	RII	RANK
1	Implementing the strategy based on schedule plans.	0.746	1
2	Evaluation the stakeholder satisfaction in terms of achievement of the stakeholder pre - project expectation.	0.638	2
3	Flexibility in the implementing strategy to deal with stakeholder' reaction.	0.592	3

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.

Table 1.8: RII's for Continuous Support

NO	Continuous Support	RII	RANK
1	Stakeholder involvement in decision-making.	0.826	1
2	Communication with the engaging stakeholder properly and frequently.	0.812	2
3	Obtain support assistant from higher authorities.	0.65	3
4	Keeping and promoting an on-going relationship with stakeholder.	0.630	4
5	Access to resource and knowledge	0.630	5
6	Reduce the uncertainty	0.623	6
7	Analysing the change of multiple stakeholder engagement and the relation.	0.60	7
8	Mutual trust and respect amongst the stakeholder	0.60	8
9	Maintain alignment between or among the stakeholder	0.592	9

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, Analyzing the change of multiple stakeholder engagement and the relation, Mutual trust and respect amongst the stakeholder and Maintain alignment between or among the stakeholder 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.

Table 1.9 Cronbach's Alpha for CSFs Groups

No	CSFs	Cronbach's Alpha
1	Management Support	0.257
2	Information Input	0.244
3	Stakeholder Assessment	0.745
4	Decision Making	0.437
5	Action And Evaluation	0.561
6	Continuous Support	0.738

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.

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