Modeling and Managing Stakeholder's Power and Influence for Quality Improvement in Construction Projects - A Case Study at "Jaipur Metro"

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ABSTRACT : *Interest in stakeholders has grown considerably since Freeman's (1984) seminal work "Strategic Management: A Stakeholder Approach" was published. The interactions and interrelationships between stakeholders largely determine the overall performance of a construction project, and have the crucial responsibility for delivering a project to successful completion. An important component of stakeholder management is stakeholder analysis. A case study has been conducted at Jaipur, Rajasthan under the company "ITD CEMENTATION LIMITED", undertaking the work of Jaipur Metro. The company is involved in the construction of underground station of Jaipur Metro at Chand pole. The main objective is to carry out stakeholder analysis, and to identify the key stakeholders who will be responsible for the successful outcome of the project and also to identify the stakeholders who can be threats to the company on the basis of their* ***power*** *and* ***influence*** *level. There are about 326 stakeholders involved in the project. All these stakeholders are analyzed and are managed and data's regarding these stakeholders are stored using* ***Project Stakeholders Organize Deluxe Software 3.7****.* ***Project Stakeholder Organize Deluxe 3.7*** *is simple database management software that helps us to enter, organize, and manage our project stakeholders. These findings may mainly reflect the stake holder management environment in the respective regions of project implementation.*

Keywords - *Stakeholders Prioritizations, Synergy/ Antagonists Analysis, Key Stakeholders*.

I. INTRODUCTION

Management of an organization is always aimed at achievement of the organizational goals. Success of management is determined by the extent to which these goals are achieved.

Stakeholder management is the process of managing the expectation of anyone that has an interest in a project or will be effected by its deliverables or outputs. A stake is an interest or a share in an undertaking while a stakeholder is an individual with a stake. Stakeholders are individuals or groups that benefit from an organization.

This project has been carried out as a case study at Jaipur Metro under the company "ITD CEMENTATION LIMITED". The company is involved in the construction of underground station at Chand pole. The stake holders involved in the company are analyzed individually and key stake holders have been identified on the basis of the Power, Influence, Attitude level [1] based on the power / interest grid.

The identified key stake holders are entered, organized and managed using stakeholder organize deluxe software, considering the data's collected from the project execution team. [2] The simplest database management software that helps us to enter, and manage our project stakeholders is Project Stakeholder Organize Deluxe 3.7.

II. REVIEW OF STAKE HOLDERS MANAGEMENT

Stakeholder Management is a process and control that must be planned and guided by Stake holder identification, stake holder analysis, and stake holder matrix. [3] The different parameters of stake holders management are as follows:

Stake holder identification: Interested parties either internal or external to organization/project. A stakeholder map is helpful for identifying the stakeholders.

Stake holder analysis: It refers to the reorganization and acknowledgement of stakeholder's needs, concerns, wants, authority, common relationships, and interfaces and align this information within the Stakeholder Matrix.

Stakeholder Matrix: It refers to the fact that stakeholders can be positioned according to the

level of influence, impact or enhancement they may provide to the business or its projects.

The theory that an organization can enhance the interests of its stockholders without damaging the interests of its wider **stakeholders**. Stakeholder management involves managing relationships in order to motivate stakeholders to behave in ways that support the objectives of a firm in the management of a business or other organization. [4] Stakeholder management involves managing relationships in order to motivate stakeholders to behave in ways that support the objectives of a firm. A major purpose of stakeholder theory is to help corporate managers understand their stakeholder environments and manage them more effectively. In essence, stakeholder theory concerns relationships between corporations and their stakeholders.

A stakeholder is **one [or any group]** who can positively or negatively affect the output of the project. The goal is not to win all stakeholders over, but to discover someone or something that may have previously been overlooked to help the project.

III. LITERATURE REVIEWS

General

Interest in stakeholders has grown considerably since Freeman's (1984) seminal work Strategic Management: A Stakeholder Approach was published. Over 100 papers concerning what has become termed 'stakeholder theory' were published by 1995 alone (Donaldson and Preston, 1995), with many more published since. Increasingly, stakeholders have been referred to in mainstream media and government communications, not just in academic texts. As interest in the concept of stakeholders has grown, so too has the proliferation of perspectives on the subject (Friedman and Miles, 2002). Attempts at harmonization or classification have been made (Stoney and Winstanley, 2001), with Jones' (1995) précis the most widely accepted.

Construction project management, as a discipline, has focused on the process of planning, and managing the complex array of activities required delivering a construction project, such as a road or building (Morris, 1994). Managing stakeholders is thus a critical skill for construction project teams (Vinton, 2000). Successful completion of construction projects is dependent on meeting the expectation of stakeholders throughout the project life cycle (Cleland, 1995), including clients, project managers, subcontractors, funding bodies, users, designers, owners, suppliers, employees and local communities. The failure of project management teams to address the concerns of construction project stakeholders has resulted in countless project failures primarily because construction stakeholders have the resources and capability to stop construction projects (Lim et al., 2005

Historical Reviews

Fraser and Zhu examine the effectiveness of construction project managers by identifying the specific working performance elements and testing different degrees of their importance from the aspect of stakeholders' perceptions. By utilizing a 360-degree method as the main tool of analysis, this paper is to emphasize on the fact that: (1) stakeholders who are internals appear to have similar perception. (2) high performing managers were found to have views that were similar to those of their superiors and distinctly different from those of underperforming managers. Theoretical and empirical improvement in managerial performance could be realized from applying the results of this research and a better relationship among stakeholders might also be achieved.

Chinyio and Akintoye use interviews with different organizations to discuss approaches that can be used while engaging with stakeholders. The paper is written from the perspective of an organization that wants to interact with its many stakeholders and satisfy them optimally even when their influences and expectations are in conflict. It is about using different combinations of tactics to engage with different stakeholders. [5] This is a complex issue because the influences of stakeholders depend on their power and interest, and these are ever-changing. It is thus necessary for an organization always to understand the outlook of its stakeholders at each point in the project life cycle and be able to respond in the most appropriate way.

Research Methods

Review of past studies on project evaluation (Ashley etal. 1987; Naoum 1994; Ndekugri and Turner 1994) indicates that the main research foci are on (1) the functional aspects of project performance, such as cost, time, and quality performance; (2) project participants' satisfaction on construction project performance; (3) the effect of the procurement method on project performance. It is argued that functional project performance represents one of the project evaluation criteria. The human aspect of project performance—project participants' job satisfaction— should also be addressed if we are to obtain a balanced judgment of the overall project performance.

[6] A case study has been conducted and Contractors and clients who have participated in D/B building projects were the main target respondents. Since most D/B projects completed in Hong Kong were public works, only public-sector data were gathered. A list of completed D/B projects was developed based on information obtained from the Hong Kong government's tender records, trade magazines, and other relevant

sources. Senior staff of construction firms and client organizations was contacted, and through them some key project participants of each D/B project were indentified. Self-administered questionnaires were distributed to individual project participants and those who agreed to dispatch questionnaires to their project team members. In total, 120 questionnaires were delivered, and each respondent was given two weeks to complete the questionnaire. Reminders were sent to those who did not respond within the time period, and two more weeks were given to them to return the questionnaires. Finally, 53 questionnaires (44%) were received, and the respondents came from 19 different D/B projects, which were undertaken during 1994–99. Twenty (38%) respondents, including a project director/manager, contract/design coordinator, site manager, quantity surveyor, and engineering manager, were from D/B contractors. Twenty-five (47%) respondents, including a project manager, architect, quantity surveyor, structural engineer, and building services engineer, were from client organizations. Seven (13%) respondents were clients' and D/B contractors' consultants, and were architects, quantity surveyors, and design managers [5] Respondents were requested to rate all variables of interorganizational teamwork, project participants' job satisfaction, and personal views on the D/B procurement method according to a five-point Likert scale (1 = strongly disagree and 5 = strongly agree). The overall project performance (PER) was also rated on a five-point Likert scale (1 = very unsuccessful, 3 = average, and 5 = very successful).

Outcome of the reviews

Many empirical studies have examined factors leading to project success, and project participants' satisfaction on project performance. However, few of them reported how the participants felt about their jobs in the projects. [4] This study aimed to explore the relationships among overall project performance, interorganization teamwork, project participants' job satisfaction, and their personal views. The outcomes that can be concluded from the various stakeholders analysis are (1) successful project performance could result; (2) project participants would develop a positive view (3) their job satisfaction would be higher (4) Identifying conflicts/potential conflicts, gaps, contradictions or incompatibilities between stakeholder requirements, so that a reconciliation strategy can be planned.[7]

IV. METHODOLOGY

The methodology adopted in this paper mainly reflects the stakeholder's analysis in a construction company(ITD Cementation Ltd.) undertaking the construction of underground station of Jaipur Metro at Chand pole. The study includes the analysis of 334 stakeholders involved in the company. These stakeholders are listed out and have been prioritized. The key stakeholders are then identified and are then managed accordingly. The methodology has been adopted on the basis of the number of stakeholders. The stakeholders are analyzed by various approaches such as Personal Interviews, Questionnaires' prepared, contacting through Telephones, emails etc. The Clients, Contractors and the labors are analyzed and on the basis of these analysis the company's overall performance can be checked.

The main procedures involved in this study are:

a. Identifying the stakeholders.
b. Prioritize the stakeholders.
c. Understand the Key stakeholders.
d. Managing the stakeholders.

a) **Identifying the stakeholders**

Identifying the stakeholders involves a good deal of research. The study was carried out for two months and the most linked up stakeholders with the project are identified and listed. The study included:

a) Assembling of group of subject matter experts, especially those with good networks.
b) The experts then brainstorm a list of all the people and groups.

The stakeholders are identified on the basis of various factors and are as shown in the Fig. 1 below:

b) Prioritizing the stakeholders

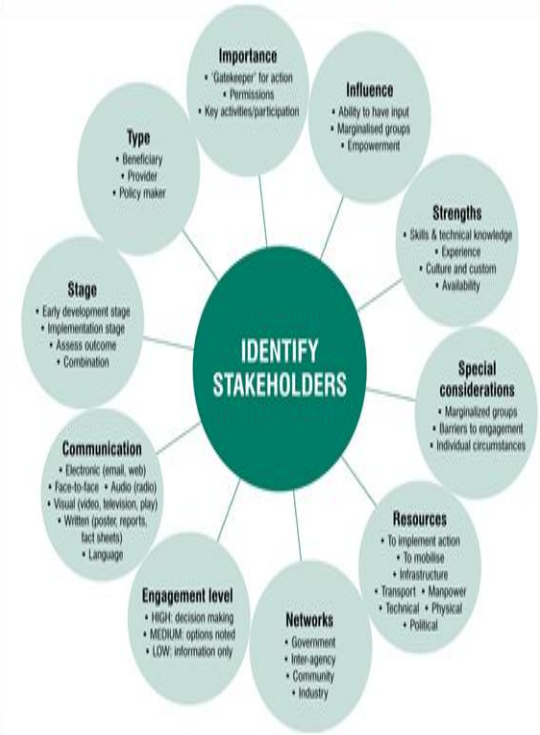
During this process, once the list of names generated & analyzed the list in terms of power, influence and the extent to which they are affected by the project. Each name is inserted into a four sector table of Power/ Interest Grid. After identifying the stakeholders, prioritization is done to find out, who is for and who is against the project. It also helps in defining any influencing activities that might be needed throughout the project.

c) Understand the Key stakeholders: The most important process in stakeholder analysis is to understand the key stakeholders. Key stakeholders are the stakeholders who can influence the project positively as well as negatively. After identifying the key stakeholders, these stakeholders can be summarized on the stakeholders map. The best way adopted to summarize these names is by color coding. Supporters of the project are indicated in green, while blockers and critics are indicated in red, while the stakeholders who stay neutral are indicated in orange.

d) Managing the stakeholders: The final procedure is to manage these stakeholders. It can

be done by examining their degree of synergy against their level of antagonism. Stakeholders can have different level of synergy and different level of antagonism. Thus synergy/antagonism analysis is performed. People with low synergy and moderate antagonism are treated as the opponents of the project, while people with high synergy and low antagonism are put under the category of unthinking supporters.

After performing the stakeholder analysis, the data's collected are stored using **stakeholders organize deluxe software 3.7. Stakeholders organize deluxe software 3.7** is a simple database management software that helps us to enter, organize and manage our project stakeholders. The software features includes fast and easy data entry, categorize/group stakeholders by power, interest, attitude, print stakeholder grouped reports, contact lists, search, filter data by any field and create stakeholder database for each project.



V. RESULTS AND ANALYSIS

The stakeholders analysis has to be carried out for 334 stakeholders. Among which the entire analysis of 241 stakeholders got carried out. [9] Among that the 122 most important key stakeholders are identified and the analysis results has been shown..

Analysis

The 241 stakeholders are analyzed on the basis of the questionnaire prepared and through interviews. These stakeholders are then prioritized with respect to their power and influence and names has been inserted into the four sector table as shown in Table

High power	**Satisfy** Opinion formers. Keep them satisfied with what is happening and review your analysis of their position regularly.	**Manage** Key stakeholders who should be fully engaged through full communication and consultation.
Low power	**Monitor** This group may be ignored if time and resources are stretched.	**Inform** Patients often fall into this category. It may be helpful to take steps to increase their influence by organizing them into groups or taking active consultative work.
	Low impact	High impact

1 **Table 1: Power/Interest Grid**

Prioritization chart

The stakeholders are placed under each category and on the basis of the analysis (Table 1), the stakeholders who are infavour, oppose, and remains neutral throughout the project are found out. A prioritization chart is prepared. An example of 5 stakeholders has been shown in Table 2.

Table 2: Prioritization chart

List Of Stakeholders	In-favor	Neutral	Opposed
Mr. Vivek Kharya			
Mr. Manoj Nair			
Mr. Rajesh Udaseen			
Mr. Satendra Shukla		Movement needed	

Understanding the Key stakeholders

After prioritization, these stakeholders can be summarized on the stakeholders map. The best way adopted to summarize these names is by colour coding. The project supporters are indicated in green, blockers and critics in red, & the stakeholders who stay neutral are indicated in orange.[10] The above example has been plotted on a stakeholders map as shown in figure

2.

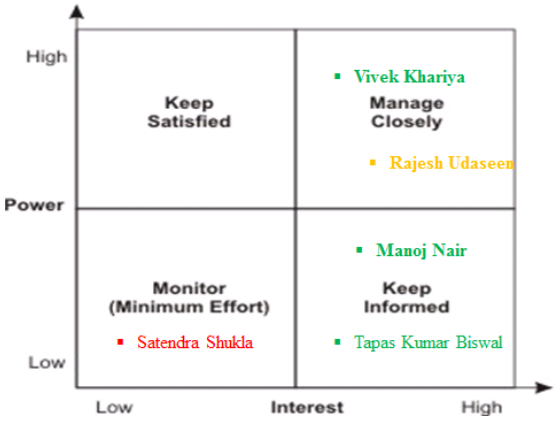


FIGURE 2 : STAKEHOLDERS MAP

Managing the stakeholders

After identifying all the Key stakeholders, the threads and the one who is in favor of the project has to be managed using Synergy/ Antagonism analysis.

Results

The Key stakeholders out of 241 are found to be 122 , whose prioritization chart and stakeholder map has been prepared. The synergy/antagonism analysis has yet to be done. The rest 93 stakeholders has to be analyzed.

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REFERENCES

Journal Papers:

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[1] Freeman, R.E. (1984) Strategic Management: A Stakeholder Approach, Pitman Publishing Inc., Boston

[2] Freeman, R.E. (1999) Divergent stakeholder theory. Academy of Management Review.

[3] Olander, S. (2006) External stakeholder analysis in construction project management, Doctoral thesis, Department of Construction Management, Lund University, Lund.

[4] Vinten, G.(2000) The stakeholder manager. Management Decision, 28(6), 377-83.

[5] Gibson, K (2000) The moral basis of stakeholder theory. Journal of Business Ethics, 26(3), 245-257.

[6] Friedman, A.L. and Miles, S. (2006) Stakeholders: Theory and Practice, Oxford University Press, Oxford.

[7] Newcombe, R.(2003) From client to project stakeholders: a stakeholder mapping approach. Construction Management and Economics, 21, 841-8.

[8] Cleland, D.J. (1995) Project Management Strategic Design and Implementation, McGraw-Hill, Singapore.

[9] Morris, P.W.G. (1994) The Management of Projects: A New Model, Thomas Telford, London.

[10]Trevino, L.K. and Weaver, G.R. (1999a) The stakeholder research tradition: converging theorists—not convergent theory. Academy of Management Review, 24(2), 222–7.

[11] Stoney, C. and Winstanley, D. (2001) Stakeholding: confusion or utopia? Mapping the conceptual terrain. Journal of Management Studies, 38(5), 603–26.

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