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Influence of Stakeholders on Project Time Overrun

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Abstract- *The relationship between stakeholders governs the overall performance of a construction project. Under the company "Kochi Metro Rail Limited" a case study has been conducted. The main aim was to perform External Stakeholder Analysis, and to find out the key stakeholders who will have influence on the successful outcome of the project and also to find out the stakeholders who can be a menace to the company on the basis of their power and influence level and find the various factors that cause delay has been done using pareto analysis. The proposed analysis was able to indicate the factors that causes 80 percentage of the delay and also to find out the stakeholder groups that influence the project schedule.*

Key Words: Stakeholders Prioritizations, Power Interest Method, Key Stakeholders, Pareto Analysis.

1. INTRODUCTION

Individuals or groups that benefit from an organization may be called as stakeholders. A case study at Kochi Metro under the company —KMRL was done. The stake holders associated with the company are analysed individually and key stake holders have been indicated on the basis of Probability Impact method. The factors that lead to delay in this project are studied using Pareto Analysis.

The study has examined factors leading to project success, and project participants‟ satisfaction on project performance.

2. CASE STUDY: KOCHI METRO

Considering the influence of external stakeholders on Kochi Metro Project a case study has been conducted at Kochi, under the company "KMRL".

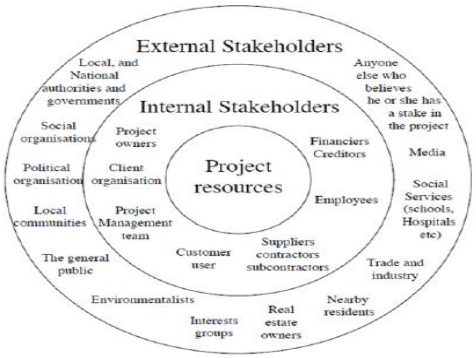

Fig.1 Representation of Stakeholders

For the conducting the analysis the factors were identified and the external stakeholders were also identified and were grouped into four different groups. Concerns of stakeholders are generally different and requirements of different stakeholders are as a rule always diverse. Hence first various stakeholders with common need were categorized into four different groups: Land Owners and Local Residents, Regulatory Agencies (Special Tahasildar Office & Choornikara Panchayat), Political Parties & Environmentalists Public Works Department Ernakulam & Contractors. Separate questionnaires were prepared for each group of stakeholders and each of them were analysed separately to get more clarity of the factors that actually effect the project time. Stakeholders views about the project was evaluated on a five point Likert scale (1 = Very slight impact and 5 = Very high impact).

Fig.2 Newspaper clippings on Kochi Metro (Courtesy: The Hindu)

3. ANALYSIS

A Pareto Chart is a widely used to obtain frequency or impact of problems .These charts are based on the Pareto Principle which states that 20% of the causes may lead to 80% of the problems. A scale from 1 to 5 was used to obtain the parameters vested interest level and influence of impact level. Level of impact of each group is identified by finding the average of impact ratings of each group and probability of impact is the ratio number of stakeholders who have rated high level of impact for the factors listed to the total number of stakeholders.

By identifying external stakeholders in the power/interest matrix, it is possible to understand how the influence of external stakeholders has developed in the course of project implementation. Despite this being a useful model there are

certain problems connected with it. Instead of assessing power and interest it can be more relevant to assess the level of the potential impact that external stakeholders have and the probability that impact of a given level will occur. Thus, the power/interest matrix could be translated into the impact/probability matrix. The parameters „vested interest levels" (probability of impact) and influence impact levels" (level of impact) are assessed on a scale from 1 to 5. Level of impact of each group is obtained by finding the average of impact ratings of each group and probability of impact is the ratio number of stakeholders who have rated high level of impact for the factors listed to the total number of stakeholders.

Table 1: Stakeholder Analysis

Stakeholder group	Level of impact	Prob. of impact
Reg. Agency	2	0.16
Land Owner	4	0.68
PWD/Contractor	3	0.66
Political Party	3	0.65

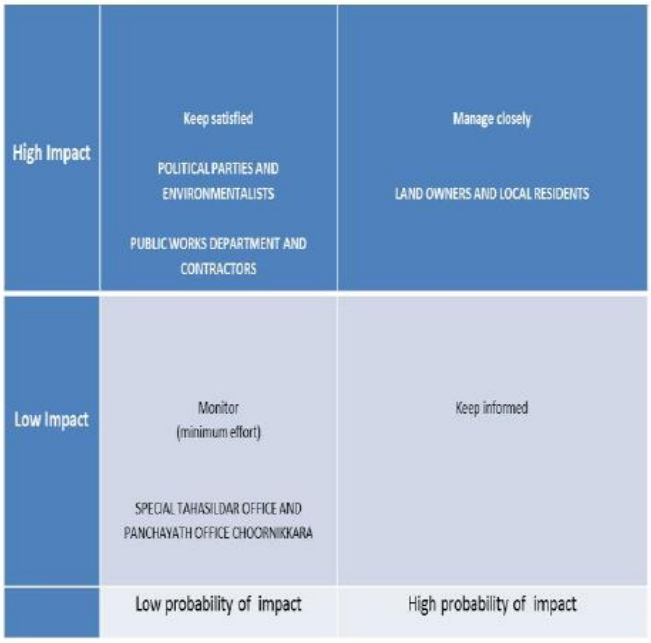

Fig.3 Impact/Probability Matrix

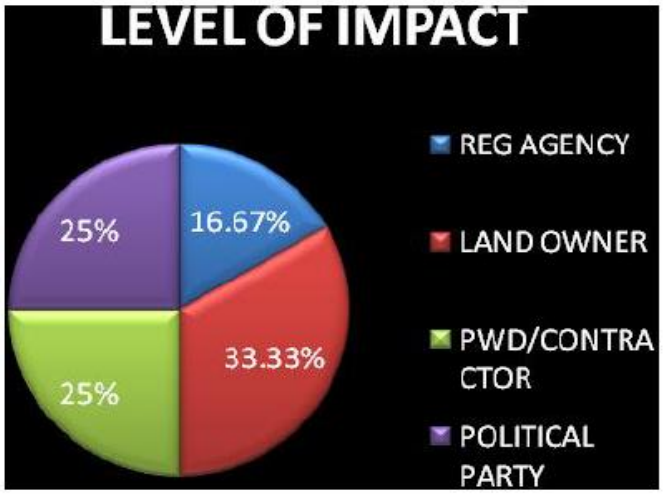

Fig.4 Level of Impact

4. CONCLUSION

The main findings from this research study shows that clashes between external stakeholders and the developer of a facility is mostly depend on their views of each other. If the developer is not able to understand the problems of external stakeholders, it results in an environment of distrust between the two parties. An effective external stakeholder analysis should identify the possible trade-offs that can be made without adjusting the aspirations of the project. An external stakeholder analysis should be seen as an important component of the decision-making process required in any construction project and as a key input to the external stakeholder management procedure.

Table 2: Critical Factors Affecting the Project

Stakeholder group	Impact on project	Factors
Land owner and local residents	High impact	• improper rates for land • delay in settling money • loss of business/livelihood
Special Tahasildar Office And Choornikara Panchayath	Low impact	• delay in handing over site • delay due to conflicting interpretations by parties • delay in finalsing rates for extra land • delay due to lack of motivation

Political parties and environmentalists	Medium impact	• delays in land acquisition • delay due to labour problems • delay in road widening and other works
PWD and Contractors	Medium impact	• extreme weather conditions • slow decision from owner • financial stage constraints of contractors

REFERENCES

1. Aapaoja and Harri Haapasalo (2014) A Framework for Stakeholder Identification and Classification in Construction Projects, Open Journal of Business and Management, 02, 43-55.
2. Andrea Caputo (2013) Systemic Stakeholders' Management for Real Estate Development Projects, Global Business and Management Research: An International Journal, 05, 66-82.
3. Ashwini Arun Salunkhe and Rahul S. Patil (2014) Effect of construction delays on project time overrun: Indian scenario, International Journal of Research in Engineering and Technology, 03, 543-547.
4. Chan, D.W. and M.M. Kumaraswamy (1997) A comparative study of causes of time overruns in Hong Kong construction projects, International Journal of Project Management, 15, 55–63.
5. Doloi, H. (2008) Analysing the novated design and construct contract from the client's, design teams and contractors perspectives, Construction Management and Economics, 26, 1181–1196.
6. Doloi, H. (2009) Analysis of pre-qualification criteria in contractor selection and their impacts on project success, Construction Management and Economics, 27, 1245–1263.
7. Hemanta Doloi (2012) Cost overruns and failure in project management – understanding the roles of key stakeholders in construction projects, Journal of Construction Engineering and Management, 28, 1-44.
8. Hemanta Doloi, Anil Sawhney, K.C. Iyer and Sameer Rentala (2012) Analysing factors affecting delays in Indian construction projects, International Journal of Project Management, 30, 481-489.
9. Iyer, K.C. and K.N. Jha (2005) Factors affecting cost performance: evidence from Indian construction projects, International Journal of Project Management, 23, 283-295.
10. Iyer, K.C. and K.N. Jha (2006) Critical Factors Affecting Schedule Performance: Evidence from Indian Construction Projects, Journal of Construction Engineering and Management, 08, 871-881.
11. Jing Yang (2009) Exploring critical success factors for stake holders management in construction project, Journal of Civil Engineering and Management, 04, 337-348.