

Model of Stakeholder Influence on Project Success: Finding from Construction Project in East Java

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Abstract: A great deal of literature has pointed to the important of stakeholders' role on project success. Likewise, stakeholders such as owners, construction management consultants, design consultants, contractors, and subcontractors/ suppliers have influence on project success. This paper reports on the results of an empirical study that developed and tested the model to predict how well the role of stakeholders on project success. The role of stakeholders on project success was defined of three latent variables including stakeholder impact, stakeholder engagement, and stakeholder psychological empowerment. Meanwhile, project success can be measured by cost performance, time performance, quality performance, profitability, and customer satisfaction. The data obtained from a questionnaire survey to 204 respondents were analyzed by using structural equation modeling (SEM). The result of the study verified the model, and according to the SEM analysis results, path coefficient values were, 0.416 for stakeholder impact, 0.233 for stakeholder engagement, and 0.492 for stakeholder psychological empowerment correlated to project success.

Keywords: stakeholder impact, stakeholder engagement, stakeholder psychological empowerment, and project success.

1. Introduction

A project is a temporary endeavor undertaken to create a unique product, service or result. Stakeholders tend to make a major source of uncertainty in project. Stakeholder-related uncertainty encompasses what the role of stakeholders are, how they can influence a project success at different stages of the project life cycle and the implications of influencing between stakeholders and project success. Therefore, project manager must consider stakeholder's need and expectation to ensure project success [1]. There is a need to better understand the nature of stakeholders' project related claims and the strategies through which stakeholders advance their interests, expectations, and affect project success. Stakeholders are persons or organizations (e.g., owners, sponsors, the performing organization, or the public), who are actively involved in the project or whose interests may be positively or negatively affected by the performance or completion of the project. The project manager such as the owners' representation must manage the influence of the various stakeholder in the relation to the project requirements to ensure a successful outcome. Project stakeholders generally can be divided into two groups, the first is direct project stakeholders that directly involved in the execution of the project, The second is indirect project stakeholders, that not directly involved in the execution of the project, but can have an influence on project execution [2].

The impact of stakeholder is one of the important thing that must be known by project manager to achieve project success. According Mitchell et al. in [3], stakeholder classification is determined by their power, legitimacy, and urgency of their claims and propose that this attributes can be used to define salience of stakeholders claims to determine, how much and which type of attention stakeholders receive from management. The legitimacy of stakeholder claims must be evaluated differently in diverse project environments and project manager must be aware of diverse stakeholders role that are relevant for the successful project. Nguyen et al.[4] proposed that an overview of key stakeholders' factors in influencing project performance including legitimacy, urgency, proximity, vested interest, stakeholder attitude, stakeholder knowledge, and stakeholder impact analysis. Olander in [4] argued that stakeholder analysis based on the stakeholder impact index can be adopted as a tool for planning ,execution and evaluation of project. Stakeholder analysis can help to obtain feedback on how alternative options to proceed will affect the positive or negative impact of stakeholder to make decision in project management.

The influences of each stakeholder on construction project would vary, hence the need to respond to different stakeholders in different ways. One of the different ways is how to understand the principle which stakeholders that can use to engage each other in construction. Engagement is about development and sustaining relationships between stakeholders (Lerbinger in [5]). Organizations that engage with their stakeholders actively are more likely to succeed with the potential benefits Approaches for engaging

stakeholders can be reached by overarching approaches and operational approaches.[5]. Koppenjan and Klijn in [6] argued that there are three conditions must be considered when deciding on a strategy for stakeholder engagements. The first is a sufficient sense of urgency to be prepared to commit energy and resources to the process. The second is the relationships between stakeholders offer favourable prospects for the future. And the last is managing stakeholder involvement in which sufficient resources and available skills [6]. Hill and Jones in Ayuso et al.[7] argued that managers should act as agents for stakeholders. Based on their research, in order to obtain accurate information concerning the expectations of stakeholders, companies have to develop strategies for engaging with stakeholders and understanding their needs and concerns. There are many ways to make stakeholder engagement, including engagement customer, engagement employees, engagement scope, and engagement process [7]. Finally, it was posited that a focus on stakeholder engagement and management is instrumental in aligning participants and their perspective on project success [8].

Empowerment can be considered to reach successful relationship management process which negotiates the need of stakeholders into tangible outcome and foster power in construction project [8]. Psychological empowerment is a constellation of experienced cognitions manifested as sense of meaning, competence, impact, and self determination (Conger and Kanungo, Spreitzer, Thomas and Velthouse in [9]). Psychological empowerment can be explained by intrinsic motivation, opportunity to perform, ability to perform, task behaviors, and contextual behaviors [9]. Intrinsic motivation are internal rewards that a person feels when performing a job, so there is a direct and often immediate connection between work and rewards [10]. Also, opportunity to perform will partially mediate the positive relations between psychological empowerment and both task and contextual performance behaviors. This factor is measured by the availabilities of job-related information, tools, equipment, materials, budgetary support, time, adequate training, and statutory regulations [9]. While, ability to perform is operationalized with item by ability, experience, training, and knowledge (Podsakoff et al. in [9]), and generally accepted that the product of knowledge and one's skill in applying it constitute the human trait [10]. Furthermore, task behaviors are measured by cognitive ability, job knowledge, task proficiency, and experience [11]; formal job performance, responsibility of job description [9]. Moreover, contextual behaviors are identified as job dedication, and interpersonal facilities [11].

Kerzner suggested that the definition of project success was modified to include completion within the allocated time period, within the budgeted cost, at the proper performance or specification level accepted by customer, with minimum or mutually agreed upon scope of changes, without disturbing the main work flow of the organization, and without changing the corporate culture [12]. Pinto and Slevin in [13] found the following 10 factors affecting the success of a project: project mission and goals, top management support, project planning, client consultation, personnel issues, technical issues, client acceptance, project control, communication, and troubleshooting. The traditional concept to measure a project success was indicated by punctual time completion, budget precision, and qualifications which meet stakeholders' expectations [14, 15]. Other researchers suggested that in addition to the measurement of time, budget, quality, customer satisfaction (Pinto and Slevin in [13]), the overall stakeholders' satisfaction (Bryde and Brown in [14] should be considered. Ling et al. [16] believed that project operational performance to reach project success could be found by project related factors, project procedures, human related factors, and external environment. Furthermore, they explained that project related factors covered schedule performance, while project procedures involved budget performance. Meanwhile, human related factors and external environment compressed profitability and owner satisfaction and public satisfaction. Considering these implications of research on project success, this study attempt to assess the project success based on cost performance, time performance, quality performance, profitability performance, and customer satisfaction performance.

2.Method of Research

In order to achieve the research objective state above, an empirical investigation was carried out among stakeholder construction in East Java. The questionnaire was conducted in different ways :via e-mail, hand delivered, and face to face interviews to 204 respondents involved mostly in construction project. The target population of the survey in this study was owners, construction management consultants, designer consultants, contractors, sub contractors or suppliers. Among the 204 respondents, 45 were owners, 13 were construction management consultants, 30 were designer consultants, 97 were contractors, and 19 were subcontractors or suppliers. Meanwhile, out of 204 respondents, 38,73% were mostly medium management, 33,82% top management, and 27,45% lower management. A questionnaire survey was designed for respondents to assess the performance of a project they had participated in and to evaluate the influence of stakeholder on project success. A five- point scale (described as 1= incompetent, 2= weak, 3= fair, 4=good,

5=out-standing) was used where respondents were presented with some questions on relevant indicators of stakeholder influencing the project success.

Selection of the indicators was highly significant in the context of a true measurement of the representative practices across the latent variables of stakeholder impact, stakeholder engagement, psychological empowerment and project success being used in structural equation modeling (SEM). The questionnaire was then developed consisting of questions that inquired the variables that measure the latent variables. The first part of questionnaire was designed to assess stakeholder impact, stakeholder engagement, and psychological empowerment level by evaluating the 12 variables. While the second part of questionnaire assessed project success that was influenced by stakeholder impact, stakeholder engagement, and stakeholder psychological empowerment and there were 5 variabel indicators including cost performance, time performance, quality performance, profitability, and customer satisfaction. The data collected from the respondents were analyzed by using a software package called AMOS 16, a structural equation modeling (SEM) tool.

Based on a substantial amount of theory, the researcher proposed the following relationship and hypothetical model of stakeholder influence on project success as Figure 1:

H1: Stakeholder impact influenced on project succes

H3: Stakeholder engagement influenced on project success

H3: Stakeholder psychological empowerment influenced on project success.

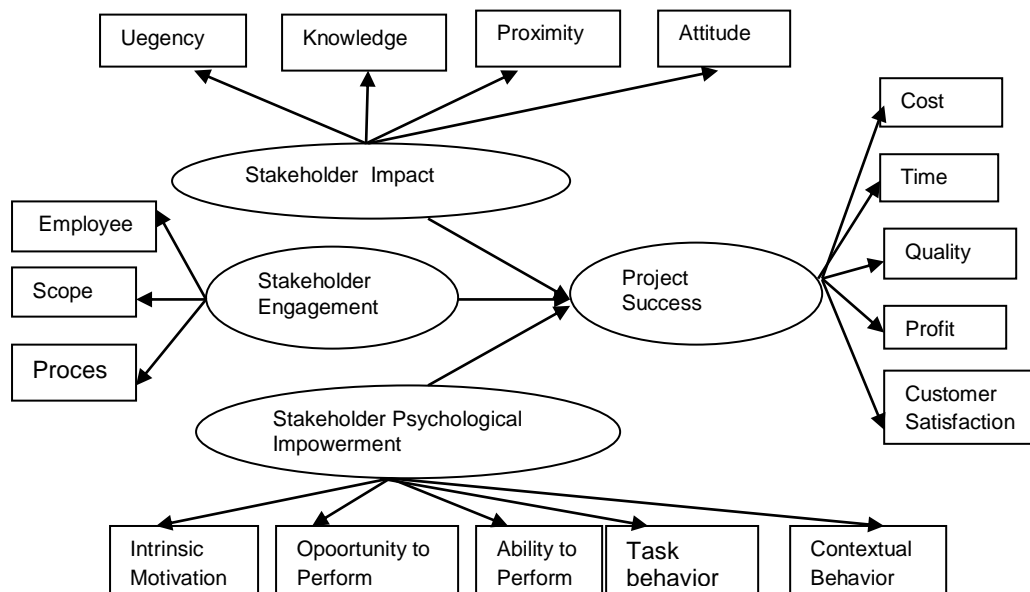


Figure 1. Stakeholder Influence on Project Success

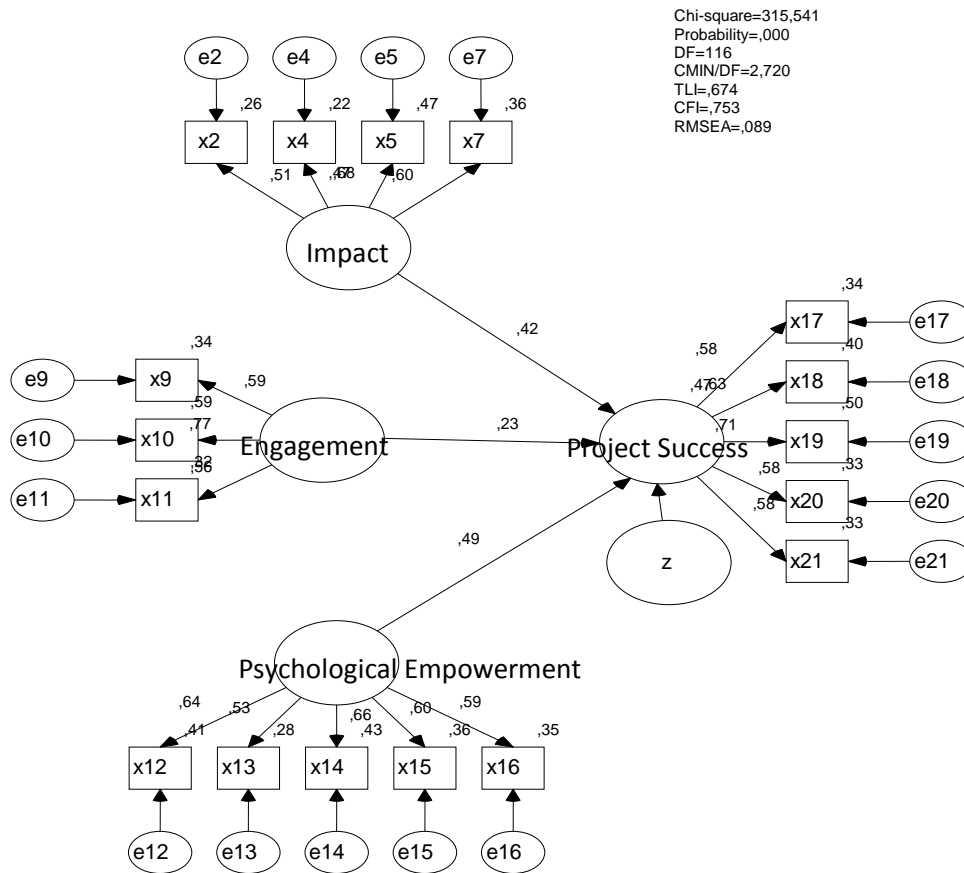
3.Result and Discussion

The model was assessed and all factor loadings were found to be significant at $\alpha = 0,05$, the Cronbach's Alpha of all the model was found to be greater than 0.60 and the result can be seen at Table1. The attributes measuring all four latent variables in the final SEM produced a high degree of reliability above the cut-off value.

Tabel 1. The Result of Reliability Test

Latent variable	Number of variable	Cronbach's Alpha
Stakeholder Impact	4	0.614
Stakeholder Engagement	3	0.636
Stakeholder Psycological Empowerment	5	0.741
Project Success	5	0.796

Figure 2 shows the final SEM with standardized solutions and the error terms. As seen that all of the path coefficients are positive and significance at $p < 0,05$, and thus the model has a good performance.



To examine the potential relationships, paths representing the relationship among the variables were tested using the AMOS 16/SPSS 17 statistical package. The results indicate there is strong support for the model. Goodness of fit statistics CMIN/DF = 2.720 (between 2.00-5.00), TLI = 0.674 (0 is no fit, 1 is perfect fit), CFI = 0.753 (0 is no fit, 1 is perfect fit), and RMSEA = 0.089 (cut off value < 0.08). The results from regression weight indicated that all p value of stakeholder impact (p value = 0.02), stakeholder engagement (p value = 0.043), and stakeholder psychological empowerment (p value = ***) were less than 0.05. It means that all hypothesis set at the beginning of the study were verified by statistically significant ($\alpha = 0.05$).

The finding confirmed the hypothesis that stakeholder psychological empowerment is an essential factor in the delivery of project success with the return of a standardized coefficient of 0.492. This finding is in line with previous finding that empowerment can be considered to reach successful relationship management process which negotiates the need of stakeholders into tangible outcome and fooster power in construction project [8]. Meanwhile, stakeholder impact is the second largest variable with path coefficients of 0.416 that also in line with previous findings by Mitchell et al in [3] and Nguyen et al.[4]. They argued that to achieve project success, it is therefore critical to understand both interests of stakeholders and the means through which stakeholders attempt to achieve their interests and objectives. Nguyen et al [4] recommended that the overall stakeholder impact, power and other criteria could be influence by factors including the type of project, the procurement method, and the size of project [4].

In contrast, the latent variable stakeholder engagement, owing to a return of a small positive standardized coefficient of 0.233. This finding slightly contradicts the previous finding by Ayuso et al.[7]. The result of this research shows that the latent variable stakeholder engagement (indicated by indicator variables employee, scope, and process) did not contribute as significance as the other latent variable on project success. Ayuso et al. [7] argued that engagement with primary stakeholders (customers and employees) will have a positive effect on firm financial performance.

Finally, the implementation of this empirical model was tried on case study of five companies involved in construction project, and the results of case study supported this model. The findings from case study

showed that all indicator variables of stakeholder influence on project success can be summarized into six key indicator variables including ability to perform, intrinsic motivation, task behaviors, stakeholder proximity, stakeholder attitude, and engagement scope.

4. Conclusion

This research attempt to understand and analyse stakeholder influence on project success by showing the model of stakeholder influence on project success. The results of the structural equation modeling suggested that all hypothesis set at the beginning study were verified by statistically ($\alpha = 0.05$). Consequently, stakeholder impact, stakeholder engagement, and stakeholder psychological empowerment have significance influence on project success. The model showed that stakeholder psychological empowerment with the return of a standardized coefficient of 0.492 was the largest latent variable of stakeholder that influenced on project success. Stakeholder impact, with a standardized coefficient of 0.416, and stakeholder engagement with standardized coefficient of 0.233 completed this model to achieve project success. The application of this model on case study of five companies summarized six key indicator variables including ability to perform, intrinsic motivation, task behaviors, stakeholder proximity, stakeholder attitude, and engagement scope.

Limitation are unavoidable although extensive efforts were taken into this study which is focus in stakeholder engagement to find out the influence on project success. Given the strong model in project success, the hypothesis set for the future research in this study appears to have held.

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