

## **The Leader, The Led & The Mission: Their Impact on Project Leadership Performance**

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### **Abstract**

The study recognizes the importance of the project manager's leadership role in delivering successful projects. A review of literature shows that several studies have been conducted concerning the factors that impact on project performance and that leadership factors have been cited by many as important for project success. This paper focuses on the impact of various leadership factors on leadership performance in construction project management. It therefore contributes to the understanding of the influence of leadership issues in construction project management. Findings from a questionnaire survey, concerning the relationship between various leadership influences and project leadership performance, are presented. Project leadership was measured under three categories the leader, the led and the nature of the mission, while project leadership performance was measured qualitatively by the satisfaction of the project manager with project outcomes. Data used to explore the relationship was extracted from a project management study that explored the impact of project management process quality variables on project performance. The findings suggest that there is generally a small to medium correlation between the leadership factors and project manager satisfaction with performance. However, of the three variables [the leader, the led and the mission] the project mission was found to have more influence on leadership performance than the other two variables.

### **Keywords**

Leadership, Leadership styles, Project management, Performance, Satisfaction

### **1. Introduction**

The importance of leadership in delivering successful projects has been a subject of research for sometime. Many studies on critical success factors, for example have included leadership factors such as style of leadership, management support, project managers competence, etc as important for delivering successful projects. The project manager's position is therefore critical in delivering successful projects. This paper discusses the impact of project leadership factors on leadership performance. The paper uses a leadership model found in Winch (2002) where appropriate leadership is depicted as composed on factors under three categories, the leader, the led and the project mission. The paper starts by providing a brief review of literature on leadership in general and also in project management. It then presents a discussion on the variables used in the research instrument and then presents the findings.

### **2. Leadership and Performance**

There have been several studies that have examined factors that impact on project management performance. Many project management leadership factors including leadership styles, leadership skills, competence and management support, have been identified as having an influence in delivering successful projects. Hyvari (2006) suggests that to be effective project managers need to combine their technical competence with their ability to effectively lead the project team. Leadership can be defined as the process of social interaction where the leaders ability to influence the behaviour of their

followers can strongly influence outcomes (Humphrey 2002 as cited in Kerr et al. 2006). The definition suggests that the project manager as a leader has the ability to influence the performance of projects.

The influence of project management on project performance has been studied from various perspectives. Many studies have investigated factors that are critical to the success of projects. For example Pinto and Slevin (1990) designed a project implementation profile to categorise factors that influence project performance and found that there are certain factors that would influence the success of the project. Many other studies on critical success factors have been undertaken. Larson and Gobelli (1989), Alarcon and Ashley (1998), Pocock and Kim (1997), Kliem and Anderson (1996) all studies factors impacting on project performance. Many of the studies on critical success factors have also identified several human resource management factors including leadership issues as impacting on project performance. For example Chan *et al* (2001) identified project team commitment as one of the issues critical to performance in design and build projects. Kog *et al* (1999) also identified 27 project management factors that would influence schedule performance and grouped them into four categories including, project manager factors, project team factors, planning related factors and project controls factors. Belout and Gauvreau (2004) were concerned with the impact of human resources management on project performance. Pheng and Chuan (2006) identified several environmental factors that affect project managers' performance and found out that team-relationships were ranked as the most important variable affecting project performance.

The impact of project managers' leadership styles and leadership skills on performance has also been studied. For example Muller and Turner (2007) examined the interaction between the project manager's leadership style with project time and their combined impact on project success. They concluded that project manager's leadership style influences project success and that different leadership styles are appropriate for different types of projects. Skipper and Bell (2006a) in studying leadership in the construction industry noted that there is recognition for the need to improve leadership skills in the construction industry. Skipper and Bell (2006b) also suggested that leadership behaviour has attracted less attention in research concerning performance of construction projects. Hyvari (2006) examined leadership behaviour in fourteen managerial practices and found that planning, organising networking and information were the most significant managerial practices in the leadership behaviour of project managers.

The evaluation of the impact of leadership on performance and generally factors impacting on leadership effectiveness has been a subject for research. Chen and Lee (2007) addressed the issue of project manager's performance arguing that there is less concern in literature for factors related to the project manager. They used various leadership behaviours to evaluate the performance of project managers. Many other studies have focused on the influence of the leader on their followers. Sy *et al* (2005), for example, examined the effects of the leader's mood on three factors including the mood of the team, the effective tone of the group and other group processes. They found that there were positive relationships between the leader's mood and the three factors. Mathieu *et al* (2008) reviewed literature on team effectiveness. Their review suggests that there are various ways to measure team outcomes.

This paper presents outcomes of a research contributing to the understanding of leadership issues in project management. It uses a three way model found in Winch (2002) to understand the influence of leadership on performance. The model in Winch (2002) depicts appropriate leadership factors falling into three categories. These are the leaders, the led and the project mission.

### **3. Methodology**

#### **3.1 Leadership Variables**

The leadership factors as discussed above are categorised into three groups. These include the leader, the led and project characteristics. The 'Leader' variables are concerned with those factors that are related to the leader and in this case the project manager. Several factors are identified in literature as

being critical to project management leadership. For example Project leader's qualifications, project leadership style are seen as important influences on the leader's performance (Odusami et al. 2003). Turner and Müller (2003) argue that the owner should appoint a project manager who is qualified with appropriate professional credentials. They also argued that the project manager needs appropriate levels of authority entrusted by the client. Project managers are concerned with the conceptualisation and designation of the projects organisation structure to align the people and the resources to facilitate the accomplishment of the vision (Cleland 1995). Winch (2002) also identified three aspects needing consideration in project leadership. These include the capability of the leader, the task facing the organisation and the expectations of those who are being led. It is seen in this that the capability of the project manager is thought to be an issue that would have an impact on project performance. The influence of top management support in quality management literature is considered to be an essential requirement for successful quality management initiatives (Cook-Davies and Arzymanow 2003, Kerzner 2001 and Munns and Bjeirmi 1996). In project management it is recognised as a factor that would affect project management performance. Cooke-Davies and Arzymanow (2003) identified organisational leadership including commitment of upper management as measures of project management maturity. They also identified degree of authorisation with respect to the level of empowerment necessary to deliver agreed project strategy and capability of project manager, which is reflected in the competency of project management staff, as possible measures of project management maturity. The experience of the project manager is also critical to project performance (Kog *et al* 1999; Cash and Fox 1992).

Several factors related to the 'Led' or the project team are also identified in literature as being critical to project performance. These include project team's skills and knowledge, cooperation among project team members, experience of project team members, project participants', understanding of the functional and technical performance requirements, project participants understanding of their roles and duties in the project, degree of trust between project team members, management of conflicts, project team members' commitment to project and project management process, motivation, capability of project management staff, personal friendship between project participants, teamwork and project team members' interdependent. The project team construct largely represents the human resource function in project management. There has been debate about the influence of the human resource function in project management. Belout and Gauvreau (2004) for example found out that the personnel factor had only a marginal effect on project success.

Winch (2002) suggests that the nature of the mission will require different management strategies. For example projects under great uncertainty will require a different management approach to those that are running smoothly. In this respect various factors identified as critical to project success would have an influence. This study recognised the contract sum, contract period, variations, defects and cost and time overruns as providing the context for managing the project mission. These depict the key issues the project manager has to deal with.

There are various ways in which the effectiveness and performance of leadership can be measured. However the most used measures of effectiveness is the extent to which the leader attains the set goals (Hyvari 2006; Andersen 2006). Several studies on performance on construction projects use the traditional criteria in judging project success based on time, cost and quality performance (Zulu 2007). There is recognition however for a multi-stakeholder approach in the definition of project success including the satisfaction of the client, project team and stakeholders. Muller and Turner (2007) for example used qualitative measures including project team's satisfaction as a measure of project success. Mathieu *et al* (2008) in reviewing team effectiveness also identified studies that used group member satisfaction as a performance measure. However they noted the criticism with this method due to its self-reporting nature. This research uses the satisfaction of the project manager as a measure of leadership performance and acknowledges its limitation as cited in Mathieu *et al* (2008).

### **3.2 Data Collection**

This paper is based on data collected for a research project which investigated the influence of project management processes on project performance. Data was collected using a questionnaire survey. The questionnaire included questions about the perception of respondents concerning various project

management factors. Data concerning project leadership factors was extracted from this study. In addition project managers were asked to rate their satisfaction on the project. The questionnaire was sent to 400 project management firms. A total of 67 completed questionnaires were received back representing a 17% response rate. This is within the expected response rate in questionnaire surveys (Burns 2000; Denscombe 2003). Of these, four questionnaires were rendered unusable because they were largely incomplete or the answers were deemed to be inconsistent with the perceived pattern of answering. The remaining 63 (16%) were used in the subsequent analysis.

**Table 1: Correlation Statistics**

| <b>Construct</b> | <b>Variable</b>                            | <b>Correlation with PM's Satisfaction</b> |
|------------------|--|---|
| Project mission  | Contract Sum                               | -.304*                                    |
|                  | Contract Period                            | -0.189                                    |
|                  | Time overrun                               | -.398**                                   |
|                  | Cost overrun                               | -0.122                                    |
|                  | Variations                                 | -.318*                                    |
|                  | Defects                                    | -.405**                                   |
| The leader       | Roles and responsibilities of PM           | 0.208                                     |
|                  | Definition of clear goals                  | .294*                                     |
|                  | Level of authority given to PM             | 0.213                                     |
|                  | Experience of PM                           | 0.208                                     |
|                  | Competence of PM                           | .394**                                    |
|                  | Suitability of organisation structure      | .310*                                     |
|                  | Qualification of PM                        | 0.099                                     |
|                  | Leadership style                           | 0.213                                     |
|                  | PM involvement in briefing                 | 0.062                                     |
| The led          | Awareness of project requirements          | 0.221                                     |
|                  | Roles and responsibilities of project team | 0.119                                     |
|                  | Team skills and knowledge                  | 0.016                                     |
|                  | Corporation between team members           | 0.094                                     |
|                  | Experience of team members                 | 0.237                                     |
|                  | Shared clear vision of goals               | .275*                                     |
|                  | Capability of team                         | 0.017                                     |
|                  | Level of trust in team                     | 0.111                                     |
|                  | Level of conflict                          | 0.191                                     |
|                  | Communication                              | .426**                                    |

\*\**. Correlation is significant at the 0.01 level (2-tailed).*

\**. Correlation is significant at the 0.05 level (2-tailed).*

#### **4. Results and Discussion**

The relationship between project leadership factors (categorised into the leader, the led and project mission) and leadership performance (measured by project manager satisfaction) was investigated using Pearson product moment correlation coefficient. The results are presented in Table 1. An examination of the data shows a variation in correlation between the three categories. The results show that all project mission variables have a negative small to medium correlation with project manager satisfaction. In addition all 'Leader's' variables had small to medium correlation with project

manager satisfaction with an exception of qualification of the project manager and the project manager's involvement in the project brief drafting. An examination of the 'Led' variables suggests that there is generally a small correlation between the 'Led' factors and satisfaction of the project manager.

The data presents interesting correlations between 'project mission' factors and project manager satisfaction. For example data shows that there is a higher correlation between the project contract sum and project manager satisfaction in comparison to the correlation between contract period and satisfaction. The findings in this respect suggest that the higher the contract sum, the less satisfied with project outcomes are project managers likely to be. A comparison between the correlation between project manager satisfaction and cost overrun and time overrun, however shows a different picture. The data shows that project managers' satisfaction is impacted more by time overruns than by cost overruns.

An examination of the 'Leader' factors suggests that project managers' competence, organisation structure and clarity of goals are the top three factors impacting on project manager satisfaction. A further examination of the 'Led' factors suggest that factors such as team skills and knowledge, degree of corporation between the project team, and capability of the team, had very little correlation with project manager satisfaction, while all other 'Led' factors had small correlation with project manager satisfaction.

## 5. Conclusion

The purpose of the paper was to contribute to the understanding of leadership issues in construction project management. In particular the paper set out to examine the relative impact of three leadership variables, the leader, the led and the project mission, on project leadership performance as measured by project manager satisfaction with project outcomes. The findings suggest that there is generally a moderate correlation between the factors in the three variables and project manager satisfaction. All variables in project mission construct were found to have a small to medium negative correlation with the satisfaction of the project manager. Many of the variables also in the 'Leader' construct were found to have small to medium correlation with the project manager satisfaction. However the findings suggest that many of the 'Led' factors had insignificant or small correlations with the project manager satisfaction. While the findings provide an insight into the impact of leadership variables on performance, the author acknowledges the limitation of the study, that the use of project manager satisfaction as a measure of leadership performance can be affected by the self-reporting nature of the factor.

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