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# **AGREE OR DISAGREE? LEVEL OF ALIGNMENT BETWEEN PROJECT MANAGERS AND STAKEHOLDERS ON PERFORMANCE INDICATORS**

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Sub-Themes: Rebuilding and developing the profession

## **Abstract**

Studies indicate project success should be viewed from the different perspectives of the individual stakeholders. Project managers are owner's agents. In order to allow early corrective actions to take place in case a project is diverted from plan, to accurately report perceived success of the stakeholders by project managers is essential, though there has been little systematic research in this area. The aim of this paper is to report the findings of an empirical study that compares the level of alignment between project managers and key stakeholders on a list of project performance indicators. A telephone survey involving 18 complex project managers and various key project stakeholder groups was conducted in this study. Krippendorff's Kappa alpha reliability test was used to assess the alignment levels between project managers and stakeholders. Despite the overall agreement level between project manager and stakeholders is only medium; results have also identified 12 performance indicators that have significant level of agreement between project managers and stakeholders.

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## **Introduction**

Much research has been done on seeking the best project success measurements (for example: Müller and Turner, 2007, Turner, 2009, Jacobson and Choi, 2008, Yu et al., 2005, Andersen et al., 2006, Kang and Moe, 2008, Müller, 2003, Pinto and Slevin, 1988, Atkinson and 1999, 1999, Bryde, 2005, Turner et al., 2008, Anton de Wit, 1988). These studies all recognise the importance of considering key stakeholders for project success. However, in reality, project manager is often the one who reports the perceived success of these stakeholders. Hence from a practical perspective, this study asks the question: how accurately can the project manager report the perceived success of the key stakeholder groups? However, there has been little to no systematic research in this area.

The aim of this paper is to report findings of an empirical study that investigate the level of alignment on project performance indicators between project managers and associated key stakeholders. A new model of success is adopted in this study, whereby success is assessed by project manager and different project stakeholders including owner, consumers, operators, project executive, lead contractors, other contractors and public stakeholders. Telephone survey was conducted in late 2009 and the data was analysed using Krippendorff's Kappa alpha reliability test. The next section details the research method adopted in this study.

## **Research Method**

Much debate concerned the identification of suitable measures of project success in the project management domain (Müller and Turner, 2007, Shenhar and Dvir, 2007, Turner and Müller, 2005, Turner and Müller, 2006). After all, the ultimate goal in project management is to be successful. As both Turner (2009) and Shenhar and Wideman (2002) point out, the success of a project is judged by different stakeholders against difference criteria. Thus one objective of this study is to identify leading performance indicators, which can be measured by the project team during project delivery to forecast as assessed by key stakeholders. The hope is the leading performance indicators will act as alarm bells to show if a project is diverting from plan so early corrective action can be taken. Further information including methodology and findings of the main research study can be found in Remington, Zolin and Turner (2009) and Turner, Zolin and Remington (2009).

This paper reports the initial findings captured from a survey undertaken with a public organisation in the defence industry. The survey took place in late 2009 over a two months period. The study objective is to examine the level of agreement between project managers and project stakeholders in project success factors. Critical

stakeholder groups include Project Managers, Owners/Sponsors, Consumers, Operators/End Users, Project Executives, Lead Contractors, Other Contractors/Suppliers, and Public Stakeholders (Turner et al., 2009). Definition of each project stakeholder is summarised in Table 1.

Table 1: Definitions of project stakeholders

<b>Owners/Sponsors</b>	Are people or group who pays for the project
<b>Consumers</b>	Are people or group who buy the product and obtain the benefit from the project’s outcomes
<b>Operators/End Users</b>	Are people who will use the product and/or services the project is developing
<b>Project Executives</b>	Are senior managers from the owner or sponsor organisation
<b>Lead Contractors</b>	Are people who design/manage the project
<b>Other Contractors/Suppliers</b>	Are people who provide goods/materials/works/services used by the project
<b>Public Stakeholders</b>	Are people who concern about the project or product environmental, social or economical impacts; such as the media

The project success model used in the survey was developed based on existing project success and failure instruments including (Müller and Turner, 2007, Turner, 2009, Jacobson and Choi, 2008, Yu et al., 2005, Andersen et al., 2006, Kang and Moe, 2008, Müller, 2003, Pinto and Slevin, 1988, Atkinson and 1999, 1999, Bryde, 2005, Turner et al., 2008). Questions relating to stakeholder satisfaction with relevant project success and failure factors were asked.

Telephone survey was carried out with 18 project managers nominated by the defence organisation who were working in existing complex projects at the time of study. Project Managers were asked for their opinion about how the other stakeholders would rate various success factors and indicators on a five-point Likert scale (1 = to no extent and 5 = to great extent). The Project Managers’ answers were then compared with the responses from the stakeholders to indicate the extent to which Project Managers are in touch with the perceptions of project success held by the various stakeholder groups. Seventy-nine representatives from the stakeholder groups participated in the survey. An example of the measurements used in the survey is shown in Table 2 below.

Table 2: Project success factors – sponsor/owner perspectives  
*To what extent do you think the project’s sponsor/owner believe that your project currently...*

<b>Measurement of Success</b>
1. Has clear specifications?
2. Has a clear purpose?
3. Has an accepted purpose?
4. Has appropriate program at the high level?

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5. Has appropriate project plan?
  6. Has open communication?
  7. Has stakeholder endorsement?
  8. Has interested investors/owners?
  9. Has appropriate project specifications? (they are satisfied with them)
  10. Has effective communication pathways?
  11. Has efficient decision-making processes?
  12. Has a good relationship with the prime contractor?
  13. Has a useful prototype?
  14. Has good performance?
  15. Has achieved earned value targets consistently?
  16. Has met appropriate net project execution costs?
  17. Has met environmental standards in project execution?
  18. Has met safety standards in project execution?
  19. Has a good relationship with the project owners?
  20. Has consistently met safety standards in operation in the past 6 months?
- 

In order to examine the alignment levels between Project Manager and stakeholder groups, an inter-rater reliability test was carried out using Kappa and Krippendorff's Alpha (Krippendorff, 2004b, Lombard et al., 2002, Hayes and Krippendorff, 2007). Kappa and Krippendorff's Alpha is appropriate for interrater reliability calculations because Project Managers and project stakeholders are asked to give their perceptions on items that are given to them. Krippendorff's  $\alpha$  is a generalisation of several reliability indices and is well regarded (Lombard et al., 2003). Its flexibility allows its application on data with any number of measures, ordinal measurement and does not require a minimum sample size (Krippendorff, 2007), which is particularly suitable for this study.

Potential benefits of this research include the benefit to academic and the project management community in understanding the perceived level of project success/failure factors from complex project manager community and stakeholder groups. Also, there are practical benefits to policy development in improving the way project success are assessed by project manager and stakeholders.

## Results

Krippendorff's Kappa alpha reliability estimates (see Table 4) were calculated using the SPSS software and a macro provided by Hayes and Krippendorff (2007). Table 3 interprets the significance of the Krippendorff's  $\alpha$  value derived from Krippendorff (2004a) and Lombard et al. (2003).

Table 3: Interpreting the value of Krippendorff's  $\alpha$

$\alpha$	Interpretation	
0.700 – 0.799	Significant agreement	<i>Appropriate in exploratory studies</i>
0.800 – 0.899	Considerable agreement	<i>Mostly acceptable</i>
0.900 – 1.000	Strong agreement	<i>Nearly always acceptable</i>

According to Table 3, twelve items have the Krippendorff's  $\alpha$  value over 0.700, indicating significant agreement between the respondents for those 12 success

measurements. Krippendorff's  $\alpha$  is known to be more conservative (Lombard et al., 2003). A tentative conclusion that can be drawn from the results in Table 4, there is significant agreements on some measurements between Project Managers and project stakeholders. Moreover, there is particularly strong agreement level between project management and other contractors.

Table 4: Inter-rater reliability test results

	Alpha	LL 95%CI	UL 95%CI	Units	Observrs	Pairs
<b>Owner</b>						
Good Performance	0.7637	0.6102	0.8929	14	2	14
Met environmental standards in project execution	0.8255	0.6286	1	12	2	12
Met safety standards in project execution	0.7601	0.6017	0.9009	13	2	13
<b>Consumer</b>						
Received the project consumer's acceptance	0.7258	0.4381	0.9254	14	2	14
<b>Project Executives</b>						
Good risk awareness	0.7070	0.3988	0.9773	14	2	14
Managed risk appropriately	0.8648	0.6830	0.9755	14	2	14
Consistently met safety standards in operation in the past 6 months	0.7576	0.5744	0.9168	10	2	10
<i>Met safety standard in project execution</i>	<i>0.6882</i>	<i>0.4459</i>	<i>0.8941</i>	<i>12</i>	<i>2</i>	<i>12</i>
<b>Lead/Prime Contractor</b>						
Allowed the lead contractor to obtain a reasonable profit	0.8355	0.6529	0.982	7	2	7
<i>Demonstrated contract compliance consistently</i>	<i>0.6717</i>	<i>0.4917</i>	<i>0.8359</i>	<i>9</i>	<i>2</i>	<i>9</i>
<b>Other Contractors</b>						
Good relationship with the prime contractor	0.8673	0.7551	0.9795	10	2	10
Clear specifications	0.8157	0.6662	0.9456	10	2	10
Trusted the other contractors	0.7282	0.5481	0.8891	10	2	10
Collaborations with other contractors	0.8754	0.7375	0.9809	10	2	10
Allowed the other contractors to obtain a reasonable profit	0.9605	0.8815	1	7	2	7
<i>Helps the other contractors to achieve their appropriate business goals</i>	<i>0.6621</i>	<i>0.3428</i>	<i>0.9083</i>	<i>10</i>	<i>2</i>	<i>10</i>
<b>Public</b>						
<i>Met environmental standards in project execution</i>	<i>0.6905</i>	<i>0.4258</i>	<i>1</i>	<i>7</i>	<i>2</i>	<i>7</i>

## Conclusions

There is significant understanding by Project Managers on some measures of project success with Owners, Consumers, Project Executives, Lead or Prime Contractor, Other Contractors and the Public. The Project Managers agree on the largest number of items with Other Contractors.

Project Manager correctly evaluated Owners perceptions on three very important items:

1. Good Performance
2. Met environmental standards in project execution
3. Met safety standards in project execution

Project Managers agreed with Consumers that they had received the project consumers' acceptance. This is again a very important success factor.

With the Project Executives, project managers agreed on four important risk issues including:

1. Good risk awareness
2. Managed risk appropriately
3. Consistently met safety standards in operation in the past 6 months
4. *Met safety standard in project execution*

With the Lead or Prime Contractor, the Project Managers understood two very important aspects of project success:

1. Allowed the lead contractor to obtain a reasonable profit
2. *Demonstrated contract compliance consistently*

Finally, Project Managers correctly evaluated Other Contractors' perceptions on a large number of issues:

1. Good relationship with the prime contractor
2. Clear specifications
3. Trusted the other contractors
4. Collaborations with other contractors
5. Allowed the other contractors to obtain a reasonable profit
6. Helps the other contractors to achieve their appropriate business goals

Although there were not a lot of items correctly evaluated by the Project Managers for stakeholder groups other than the Other Contractors, the Project Managers appear to understand the most important issues for each stakeholder group.

In conclusion Project Managers can correctly evaluate the major aspects of project success for each stakeholder group.

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