Problems Associated With Defining Project Success

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Abstract

The paper establishes the relation between the problems associated with defining the project success criteria at the project initiation phase to the potential challenges when it comes to the project execution and close out. A targeted literature review identified: 1) basing the definition on narrow set of criteria, 2) using ambiguous criteria, 3) having competing or conflicting criteria, 4) in adequate or incomplete set of criteria, 5) using unrealistic criteria and 6) Considering all the criteria as equally important (not-ranked criteria) as the most important problems in defining the success criteria. The study relates and analyse the effects of these problems and their inheritance in the execution and evaluation phases of the projects. A web-based survey in the Norwegian industry initiated to investigate the effect of six success criteria definition problems on the: (1) Lack of top management support (2) Lack of alignment in the project organization to project success criteria during execution phase. (3) Subjectivity of measuring the achievement of the targeted success criteria at closeout and evaluation phase. The survey managed 155 respondents with a very high data reliability. The survey revealed and further testified the literature findings that there is very strong correlation between these problems related to defining project success criteria. The research also indicated that these problems are mostly related to poor or inadequate stakeholder’s involvement during initiation phase, lack of alignment of the organizations to project success and poor top management support.

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1. Introduction

Within the last two decades, there has been a lot of research on the concept of project success criteria. The current research within this field could be grouped into the following three areas:

1. Assessment of project success at or after completion; this class of research focuses on defining what constitutes project success. It includes categories concerning stakeholders’ perspectives, timeline, project size or type (Baccarini, 1999; Lim & Mohamed, 1999; Lipovetsky, Tishler, Dvir, & Shenhar, 1997; Shenhar, Dvir, Levy, & Maltz, 2001). This research also extends to examining how the perception of success has changed over the years (Collins & Baccarini, 2004; de Wit, 1988; Ika, 2009; Kam Jugdev & Ralf Müller, 2005; Wateridge, 1995). This class of research is indeed the most dominant in project management literature on the subject, and it seeks to define a clear rational for deciding whether the project was a success/failure, and to some extent, the degree of success/failure. Within this category there is also increasing recognition to consider the dynamic nature of projects and look at success from a subjectivist view as well (Ika, 2009). It was de Wit (1988) who first suggested a distinction between project success and project management success. Project success embodies the perceived value of a project when the result or product is in operation. Focusing on project success may lead to consideration of criteria such as product use, user or client satisfaction, and benefits to users or clients (McLeod, Doolin, & MacDonell, 2012).

2. The importance of defining project success criteria up-front in the project for managing the project. This class of research looks into the objectives of defining project success criteria beyond the need for evaluating project outcome or project process by different stakeholders. This class of research is less dominant in project management literature and looks into the significance of the criteria as a tool for shaping and managing a project (Kam Jugdev & Ralf Müller, 2005).

3. The third category of research considers the potential threats and challenges influencing the initial definition of criteria. These problems, if not accurately addressed at the start of the initiation phase, will lead to further complications in the execution and evaluation phases of the project. An overview of these problems will be outlined in the next section. The goal of this study is twofold. First we intend to examine the scope of the potential threats and challenges influencing the initial definition of project success criteria. Second, we intend to examine and analyse the correlations between these problems and other factors that usually arise during execution and evaluation phases. In particular, the study is aiming to investigate the correlation between the problems of defining success criteria and the following three factors:

- Lack of top management support
- Lack of alignment in the project organization to project success criteria during execution phase.
- Subjectivity of measuring the achievement of the targeted success criteria at closeout and evaluation phase.

In this study we are looking for statistical evidence that problems or shortcomings related to defining project success has any impact on important success factors top-management support or on aligning the project organization during execution or on assessing the outcome of the project.

1.1. Theoretical Framework. Typical challenges associated with stating project success criteria in the initiation phase

1.1.1. The narrowness of the defined criteria

Narrow focus refers to selecting a limited set of criteria that would be used to in managing the project focusing only on criteria that embodies project management success. A narrow focus may reflect weak alignment between projects and business goals. Several authors, however, stressed the importance of regarding projects as tools for value creation in an organization (Ingason & Jónasson, 2009; Williams & Samset, 2010; Winter, Smith, Morris, & Cicmil, 2006). This missing alignment may lead to several challenges for the organization during the execution phase in terms of lack of top management support which is considered important success factor for projects (Belassi & Tukel, 1996; Pinto & Prescott, 1988; Yang, Shen, Drew, & Ho, 2010).
1.1.2. Ambiguity

Ambiguity refers to the formulation of success criteria which may be differently interpreted (Duimering, Ran, Derbentseva, & Poile, 2006). Ambiguous criteria are also known as soft or subjective criteria (Crawford & Pollack, 2004). Examples of ambiguous criteria includes intangible criteria such as user satisfaction, being intuitive in use, user friendliness and ease of use. Time taken to clarify and understand the criteria may subject them to new interpretation and therefore to change project priorities, and might lead to improper allocation of resources or to misunderstandings in the project organization.

1.1.3. Diversity

The presence of competing and conflicting criteria due to the diversity of a stakeholder’s interest, power and influence is another risk factor that complicates the definition and selection of success criteria. Diversity reflects the degree of variation among stakeholders or within the project scope (Hussein, 2012b). The diversity of stakeholders may involve geographical locations, national cultures, working practices, awareness of objectives (goal misperception), and the variety of skills or disciplines that are used in a project. The challenge that faces projects is how to accommodate the diverse, and even contradictory, expectations of all the stakeholders. Contradictory expectations give rise to complicated situations that require effective decision-making (Maylor, Vidgen, & Carver, 2008)

1.1.4. Incompleteness

An additional factor that complicates the definition of project success criteria is lack of full knowledge about the range of project stakeholders at start-up or lack of knowledge about the full range of use of the product or system (Young, 2006, p. 71). This is part of the fundamental uncertainty that characterizes project management (Atkinson, Crawford, & Ward, 2006). The consequences of lack of full knowledge about stakeholders or operational use of the product might result in having incomplete set of success criteria. This might lead to improper allocation of resources, conflicts or to misunderstandings in both the parent organization as well as in the project organizations.

1.1.5. Unrealistic targets

Something that leads to the imperfect definition of success criteria is the (blown optimistic or pessimistic) expectation regarding the target of, for example, time, cost, or expected benefits (Chapman, Ward, & Harwood, 2006). This may lead stakeholders to perceive a project that was in fact successful in achieving near-optimal results as a partial failure.

1.1.6. Lack of ranking

This risk factor arise when the project fail to identify the relative importance of each success criteria. That is all the criteria are considered to have the same importance (Young, 2001). This lack of ranking among the criteria might complicate or even slow decision making on a later stage. It also complicates the evaluation of the final outcome of the project.

2. Research objectives

We have summarized in Table 1 the typical changes associated with project success criteria in initiation and planning phases. The aim of this study is to examine and analyse the correlations between the problems shown in Table 1 and other problems that usually arise during execution and evaluation phases. In particular, the study is aiming to investigate the correlation between the above-mentioned problems shown in Table 1 and the following three problems that complicates project organizations ability to manage the project and they include: (1) Lack of top
management support. (2) Lack of alignment in the project organization to project success criteria during execution phase. (3) Subjectivity of measuring the achievement of the targeted success criteria at close out and evaluation phase.

Table 1. Summary of challenges associated with defining project success criteria.

<table>
<thead>
<tr>
<th>Risk factor</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unrealistic</td>
<td>Use of optimistic or pessimistic targets in the formulation of success criteria.</td>
</tr>
<tr>
<td>Ambiguous</td>
<td>Use of ambiguous/soft criteria that might be interpreted differently</td>
</tr>
<tr>
<td>Narrow</td>
<td>Success criteria contain a limited set of criteria that focuses only on project management effort.</td>
</tr>
<tr>
<td>Diverse</td>
<td>Having conflicting or competing criteria in order to accommodate the multiplicity and diversity of stakeholders.</td>
</tr>
<tr>
<td>Alike</td>
<td>Lack of order or rating of each success criteria. That is all criteria are considered equally important</td>
</tr>
<tr>
<td>Incomplete</td>
<td>Failing to identify all success criteria due to lack of knowledge about stakeholders</td>
</tr>
</tbody>
</table>

2.1. Lack of organizational commitment and top management to project success criteria in the execution phase.

According to Thomas and Fernández (2008) companies who used the criteria effectively during execution phase were willing to re-direct project resources based on an *a priori* understanding of the relative importance of project success criteria and were willing to stop projects. This resulted in improved project management and better use of resources. This implies that defining proper success criteria or clusters are simply not enough to achieve excellence in project management (Hartman, 2000). Proper measures in terms of strategies, rules, resources, and metrics should accompany these success clusters as well. For instance, achieving the long term and wider benefit requires strong involvement of the sponsor or the project owner as disclosed by Munns and Bjeirmi (1996).

2.2. Lack of alignment in the project organization to project success criteria.

A lack of alignment to project success criteria in the project organization is another risk factor that might complicate project management. Thomas and Fernández (2008) found that companies with high levels of confidence in their IT projects have used the intermediate results actively in managing projects. This included; (1) the management of the project according to the agreed definition of success, (2) a willingness to stop projects, (3) accountability for results, (4) and a connection to learning. They further found that companies without accountability for results tended to complete ex-post evaluations inconsistently or not at all. There also appeared to be a greater tendency for politically motivated misrepresentations. Couillard (1995) demonstrated through a field study the correlation between an understanding of project objectives and effective project risk management. Hussein (2012a) provided several examples of how poor alignment impacts outcome.

2.3. The subjectivity of measurements in the evaluation phase of the project.

Making a verdict regarding success or failure may not be unanimous among project stakeholders. Rad (2002) Attributes the reason for these different verdicts is that people subtly modify the interpretation of quantitative indices of project performance. These issues include items such as trust, team spirit, morale, responsiveness, punctuality, customer focus, communications, teamwork, conflict resolution, trust, integrity, honesty, sociability, and flexibility. The use of symbolic and rhetoric evaluation of project success and failure was therefore suggested by (Ika, 2009).

3. Methodology

The research was staged in three different phases; the first phase was an extensive literature review to short list the most important problems associated with defining the success criteria. Literature review formulated the problem and defined the research direction. Literature pool was gathered from ‘Google Scholar’ with the keywords ‘success criteria’. The relevant literature was the synthesised with the help of abstract reading the special importance was given to relevant case studies.

The second phase of the study tested the literature findings with the help of a web-based survey. The survey was distributed to 2000 practitioners through Project-Norway database. Project Norway is a Norwegian association that has several associated companies that works in different areas. The survey was anonymous, but respondents had the...
opportunity to leave their contact information if they are willing to discuss the results of the survey with the author. A number of 155 respondents returned valid responses and among them 15 respondents have expressed willingness to take part with in-depth interviews.

The survey was devised in two stages first stage build up the association of the problems presented in Table1. Within themselves and in the stage two respondents selected the degree to which they believed each of the problems from the Table 1. correlate with (1) Lack of top management support. (2) Lack of alignment in the project organization. (3) Subjectivity of evaluation. Respondents selected, on a scale from one to six where one represented low and six high.

The third phase analysed the survey data using descriptive and analytical statistics. The survey data was than validated by calculating the reliability coefficient. Cronbach's alpha measures how well a set of variables measures a single one-dimensional latent construct. The reliability test for the questionnaires gave an overwhelming coefficient of 0.833, categorizing the data into highly reliable. A reliability coefficient of 0.70 or higher is considered "acceptable" in most social science research situations. Data was assumed to be on continuous scale so Pearson was used for correlation.

4. Findings

The collected data was examined for statistical correlations between the problems that are frequently encountered in the initiation phase as shown in Table 2. Significant correlations below (p =0.01) are marked with bold. The results obtained show for instance, in the initiation/planning phase basing the project on an “Incomplete” set of project success criteria due to lack of knowledge about important stakeholders has strong correlation to using criteria that are not ranked (correlations coefficient 0.411). “Incomplete” is also correlated moderately to having unrealistic criteria (correlations coefficient 0.361), competing criteria (correlations coefficient 0.340) and ambiguous criteria (correlations coefficient 0.367). This result indicates that poor definition and involvement of important stakeholders manifest itself in the way project success is defined. One could say that possible warning signs of poor stakeholders identification and involvement include 1) having a set of success criteria that are all equally significant with no indication of the degree of importance of these criteria, 2) having criteria that are not are not consistent but rather competing or conflicting is another indicator of poor involvement, 3) having optimistic or pessimistic targets is another indication that these targets have not been selected based on through assessments of expectations and constraints, and 4) having ambiguous criteria. Measures such as early involvement, stakeholder’s analysis, communication and approval routines should contribute to resolving this risk factor.

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Incomplete</th>
<th>Not ranked or prioritized</th>
<th>Narrow</th>
<th>Unrealistic</th>
<th>Competing</th>
<th>Ambiguous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incomplete</td>
<td>Pearson Correlation Sig. (2-tailed)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not ranked or prioritized</td>
<td>Pearson Correlation Sig. (2-tailed)</td>
<td>.411**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Narrow</td>
<td>Pearson Correlation Sig. (2-tailed)</td>
<td>.227**</td>
<td>.450**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unrealistic</td>
<td>Pearson Correlation Sig. (2-tailed)</td>
<td>.361**</td>
<td>.303**</td>
<td>.216**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Competing</td>
<td>Pearson Correlation Sig. (2-tailed)</td>
<td>.340**</td>
<td>.229**</td>
<td>.112</td>
<td>.436**</td>
<td>1</td>
</tr>
<tr>
<td>Ambiguous</td>
<td>Pearson Correlation Sig. (2-tailed)</td>
<td>.367**</td>
<td>.195*</td>
<td>.218**</td>
<td>.316**</td>
<td>.366**</td>
</tr>
</tbody>
</table>

N = 155 ** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

Results show also that having “not ranked” criteria are strongly correlated to having “narrow” definition of success (correlations coefficient 0.450). The results may suggest that having a set of success criteria that are all considered equally significant with no indication of the degree of importance of these criteria is more apparent when defining project success criteria that focuses on project management success only (time, cost and specifications). It appears that
these criteria are considered equally important which might complicates the project managers’ task in balancing these three constraints. The results show also that having unrealistic criteria is strongly correlated to having criteria that are not coherent but rather competing or conflicting (correlations coefficient 0.436). This may suggest that respondents see having competing criteria as yet another expression of having unrealistic criteria and not a separate or an independent problem. Results also indicate that using “Ambiguous” criteria is moderately correlated with having incomplete, unrealistic and competing criteria. This correlation might be interpreted as if an ambiguous criterion is used as a way out to deal with the conflicting and unrealistic expectations of project stakeholders. That is keeping everybody pleased by formulating vague and unclear criteria.

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Incomplete</th>
<th>Not ranked or prioritized</th>
<th>Narrow</th>
<th>Unrealistic</th>
<th>Competing</th>
<th>Ambiguous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of top management support.</td>
<td>Pearson Correlation</td>
<td>0.218**</td>
<td>0.228**</td>
<td>0.323**</td>
<td>0.341**</td>
<td>0.292**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.006</td>
<td>.004</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Alignment in the project organization</td>
<td>Pearson Correlation</td>
<td>.314**</td>
<td>.080</td>
<td>.216**</td>
<td>.312**</td>
<td>.154</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.322</td>
<td>.007</td>
<td>.000</td>
<td>.056</td>
<td>.019</td>
</tr>
<tr>
<td>Subjective Assessment</td>
<td>Pearson Correlation</td>
<td>.363**</td>
<td>.289**</td>
<td>.270**</td>
<td>.239**</td>
<td>.347**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.001</td>
<td>.003</td>
<td>.000</td>
<td>.000</td>
</tr>
</tbody>
</table>

N= 155. ** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

The collected data was also examined for statistical correlations between the problems in the execution and evaluation phase and the problems associated with defining project success criteria in the initiation phase. The significant correlations are marked in bold in Table 3. The results obtained show for instance, that lack of top management support is moderately correlated with two problems from the initiation phase, 1) using narrow set of criteria (correlation coefficient 0.323), that is failing to link project objectives to business objectives, 2) the use of unrealistic criteria (correlation coefficient 0.341) seems as well being a contributing factor. These results may suggest that avoiding focusing solely on project management success criteria and having more realistic expectations could enhance top management support and commitment. Results also show that, lack of alignment in the project organization is moderately correlated with 1) basing the project on unrealistic criteria (correlation coefficient 0.312), and 2) having incomplete set of criteria (correlation coefficient 0.314). This may suggest that basing the project on optimistic or pessimistic targets or incomplete set of criteria creates a sense of skepticism and distrust in the project organization and this contribute to fewer adherences to these criteria in the project organization. The results also show that subjectivity of measurements is moderately correlated to 1) basing the project on an incomplete set of project success criteria and 2) having ambiguous criteria, 3) having competing criteria. This may suggest that subjective or negotiated assessment of project success is not only because those criteria are hard to measure or intangible but also because of the nature of the defined criteria such as incompleteness and conflicting and unrealistic expectations.

5. Conclusions

The goal of this paper was to conduct an empirical investigation to examine the correlation between several problems that complicate the definition and management of project success criteria. On the basis of a literature review six different factors were identified. A survey was then conducted in order to collect empirical data about the frequency of occurrence of these factors in real life projects. The results suggest that the problems related to the definition of project success criteria at the initiation phase are correlated with each other and could be attributed to poor stakeholders identification and involvement. They include 1) having a set of success criteria that are all equally significant with no indication of the degree of importance of these criteria, 2) having criteria that are not coherent but rather competing or conflicting, 3) having optimistic or pessimistic targets is another indication that these targets have not been selected based on through assessments of expectations and constraints, and 4) having ambiguous criteria. Measures such as early involvement, stakeholder’s analysis, communication and approval routines should contribute to avoid or reduce these problems. Results of the survey also suggest that using vague or ambiguous criteria that might be interpreted
differently is significantly correlated with having incomplete, unrealistic and conflicting criteria. This correlation might be interpreted as if ambiguous and vague formulation of project success criteria is used as a way out to deal with the conflicting and unrealistic expectations of project stakeholders. That is keeping everybody pleased by formulating vague and unclear criteria. Results also suggest that top management support could be improved by taking measures to include success criteria that embody both project management and project success and concurrently balancing these expectations to avoid unrealistic criteria. Alignment in the project organization could also be improved by basing the project on realistic and clear targets in order to create a sense of believe and trust in the project. The results suggest that subjective or negotiated assessment of project success is because of the nature of the defined criteria such as incompleteness and conflicting and unrealistic expectations.

References


