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Examining Project Manager Insights of Agile and Traditional Success Factors for Information Technology Projects: A Q-Methodology Study

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Note: This is an extract of a 34 page research report, which in turn, is a condensation of the 300 page dissertation. For the research report, see: www.asapm.org/articles/MJDoherty.pdf.

Executive Summary

Two dominant research views addressing disappointing success rates for information technology (IT) projects suggest project success may depend on the presence of a large number of critical success factors or advocate for agile project management as an alternative to traditional practice. The purpose of this Q methodology study was to use views of experienced project managers to explore the contribution of success factors and management approach to project success.

This study used a sample of 519 project managers with experience leading or working on IT projects and employed a two phased research approach by employing a frequency analysis of project manager preferences for the entire sample followed by a Q analysis from a random subsample of project managers to uncover dimensions of their subjective opinions and identify clusters of project manager participants who shared common viewpoints.

The frequency analysis showed a clear preference for traditionally worded critical success factors over agile critical success factors and tended to support prior research investigating critical success factors for IT projects such as the importance of clearly stated and measurable goals and objectives and a strong commitment from upper management to provide resources, authority, and influence for the project.

The Q analysis of the subsample identified three composite factors which explained 47% of the variance representing different perspectives of project manager opinion about the importance of various critical success factors: a people-project focus, user/client involvement focus, and a traditional project management focus. This study successfully used Q methodology to evaluate and group a set of divergent critical success factors based upon the views of project management practitioners and may provide an explanation for the long list of critical success factors found in IT project management research studies.

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The research results presented in this report come from a broader research study comprising a Doctoral Dissertation entitled: “Using Organizational, Coordination, and Contingency Theories to Examine Project Manager Insights on Agile and Traditional Success Factors for Information Technology Projects” completed by the author at Walden University in November 2011.

Summary and Conclusions

This study employed Q methodology to explore the subjective insights or practicing project managers about the role of suspected critical success factors and management approach in IT project success. The results showed the overall strength of opinion for the entire sample regarding critical success factors and management approach, but also presented a Q analysis from a random subsample of project managers to uncover dimensions of their subjective opinions and identify clusters of project manager participants who shared common viewpoints.

An analysis of the overall frequency of statements placed at the extremes of the sorting grid for the entire sample showed a clear preference for traditionally worded critical success factors over agile critical success factors and no strong preferences for any critical success factor focused on project management processes. Collectively, these results tended to support prior research investigating critical success factors for IT projects. Critical success factors that seemed particularly important included:

1. A strong commitment from upper management,
2. Clearly stated and measurable goals and objectives,
3. The interpersonal and project management skills of the project manager,
4. The skills and expertise of the project team,
5. A detailed and realistic the project schedule, and
6. Clear, unambiguous, and obtainable project requirements.

While these results tended to confirm prior research, they demonstrated areas of agreement and did not characterize the entirety of project manager opinions, which is far more complex. To better characterize project manager opinion Q methodology was applied to a random subsample of project managers.

The Q analysis of the subsample identified three composite factors, which explained 47% of the variance and represented different perspectives of project manager opinion about the importance of various critical success factors for IT projects. Interestingly each of these factors do not refute the overall preferences as seen in the frequency analysis, but rather emphasized an additional preference for a particular group of the factors that, in their opinions, were at the heart of IT project success.

Project managers loading on factor 1 exhibited a preference for success factors focused on the skill of the project team and the interpersonal skills of the project manager. The primary view among project managers who loaded on factor 2 was the importance of client/customer buy-in, characterized by the expressed importance for stakeholder participation in the project, a sense of ownership by the users, and an organization that minimizes resistance and problems. Project managers associated with factor 3 emphasized a focus on the importance of traditional project management skills associated with controlling and monitoring project progress in conjunction with a detailed planning function.

Although the three factors seemed to represent slightly different perspectives regarding critical success factors important to IT project success, they shared a collective belief about the importance of commitment from upper management to provide resources, authority, and influence for project success. Additionally, all three factors included the importance of clearly stated and measurable goals and objectives among their top five statements. There was also a general agreement among the three viewpoints about the importance of the project manager possessing the interpersonal skills necessary to build trust, motivate people, and resolve conflict. The three factors exhibited some similarity among critical success factors considered unimportant to IT project success as well.

There was universal agreement that conducting an IT project in an organization that embraces a loosely controlled adaptive view focused on continuous learning, improvement, and the inevitability of change, was not critical to success and may in fact negatively influence chances for success. Additionally, the importance of self-organizing work teams and performing project work in organizations having a cooperative horizontal business culture and value face-to-face communication also ranked low in importance as critical for IT project success. One general tendency observed was that statements relating to people-oriented critical success factors seemed to fare the best, as statements from this category of CSFs were missing from statements aligned as most unimportant for any of the three composite factors.

Project manager opinions about critical success factors aligned with an agile or traditional project management approach were also consistent across all three factors. Although there was some appreciation for a few aspects of the agile approach to IT project management among participants loading on factor 2, project managers in this sample on the whole did not collectively support agile-related critical success factors as important for IT project success. Project managers loading on factors 1 or 3 consistently listed agile oriented success statements as the most unimportant for project success and only statements associated with the traditional approach as most important. The sole feature associated with an agile approach that came close to agreement among all project managers in this sample involved the importance of participation by the project customer.

The management of IT projects is a complex and dynamic phenomenon. A variety of perceptions and attitudes abound in relation to what is appropriate, desirable, or needed for successful completion of an IT project. The research literature mirrors this diversity of opinion through the presence of such a large number of suspected critical success factors. Using Q methodology to identify composite factors representing clusters of opinion, these findings addressed the interrelationship among success factors, which is a major criticism of the critical success factor approach for studying IT project management (Fortune & White, 2007; Goldfinch, 2007).

The Q-methodology portion of this study uncovered some of the opinion clusters that may help to explain differences in previous studies with respect to IT project critical success factors and provide a better understanding of the variety of project manager opinion on this important topic. Depending upon the size of the sample, clusters of participants representing the subjective viewpoints found in this study, or other viewpoints, could produce different sets off critical success factors and may be a contributing factor to long list of critical success factors found in IT project management research studies. This study successfully used Q methodology to evaluate and group this set of divergent critical success factors based upon the views of practitioners. The analysis was not concerned with where specific opinions fell, but on discovering patterns of opinion and demonstrated a potentially powerful tool for determining practitioner perspectives about diverse and perhaps conflicting research findings.