

The contribution of project management and change management to project success

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Keywords

Project management; Change management; Organizational change; Risk management

Abstract

Project Management and Change Management are two management disciplines that contribute to the delivery of organizational changes. However, there is a lack of clarity about how these disciplines should work together, and evidence that there is some rivalry about which discipline should be managing organizational change projects. This research has analysed the responses of project managers and change managers to an online survey regarding each discipline's influence over factors that have been identified as critical to project success.

The results have been used to determine factors that were more typically influenced by each discipline. Significant differences of opinion about how these disciplines perceived the other's contribution were also identified from the results, suggesting possible sources of conflict between the disciplines. These results were used to create a framework to determine project manager and change manager responsibility for aspects of the delivery of a project, based on where significant project risks are anticipated.

Introduction

Project Management (PM) and Change Management (CM) are two management disciplines that have been identified by many authors as having the potential to effectively work together to deliver organizational changes (PMI, 2013a; Winch et al, 2012; Boddy & Macbeth, 2000; Levasseur, 2010; Leybourne, 2006; Pádár et al, 2011). However, the literature suggests that there is no consensus, and potentially even conflict, about the ways in which these disciplines can and should work together (Jarocki, 2011; Crawford & Nahmais, 2010).

One reason for this disagreement may be the different bodies of knowledge, contextual backgrounds, and traditions associated with PM and CM (Garfein & Sankaran, 2011; Lehmann, 2010). Differences have also been identified in how these disciplines perceive their and the other discipline's relative contribution to different project activities (Pollack & Algeo, 2014). This research takes a third position, investigating whether, and in which ways, project managers and change managers perceive each discipline's influence over different success criteria.

Literature Review

Although both PM and CM are used to manage the delivery of organisational change projects, "...project management and change management have been, and in most cases are, sold, practiced, and managed as two almost mutually exclusive project disciplines" (Jarocki, 2011). The disciplines have very different backgrounds. PM has drawn on approaches like Systems Analysis and Systems Engineering (Morris, 2002) and Cybernetics (Urli & Urli, 2000), all of which are examples of hard systems thinking. In its early years, PM was most consistently applied in the aerospace industry (Morris, 2013), and it tends to focus on ways of using quantitative techniques to control the schedule for delivery, the budget, and the quality of the final product (Yeo, 1993).

In contrast, CM is a younger field of practice and draws more significantly on the literature on human relations, communication, strategy and organizational development (Crawford & Namaid, 2010), including works by Connor (1993) and Phillips (1983). CM is a more diffuse field than PM, and there are a wide variety of different approaches available (Mento et al, 2002). Cao and McHugh (2005) have provided a detailed analysis of how CM has developed, and readers are referred to this paper for further examination of the development of the discipline.

Both of the CM and PM disciplines are used to manage organizational change, although when the two are compared, CM places less emphasis on a means-end orientation and controlled delivery. Rather, CM focuses on engaging leadership in the change, aligning with strategy, developing ownership of the change within the organization, and communicating and developing a compelling vision. While PM tends to focus on technique and method, CM has tended to emphasize the fundamental dynamics of how change occurs in organizations (Lehmann, 2010). Some authors have found that different skills are required to practice PM and CM (Garfein & Sankaran, 2011; Alsene, 1998). However, other research has also found strong similarities between the roles of project managers and change managers (Crawford, 2011).

Although these disciplines may have been informed by separate literatures, authors publishing in PM publications are increasingly frequently writing about, and drawing on, areas of concern that were more typical of CM (Urli & Urli, 2000). A trend of an increasing emphasis on issues related to people, such as motivation, teams and leadership, has been noted in the PM literature (Kloppenborg & Opfer, 2002) with less focus on process than people (Leybourne, 2007). Similarly, the recent inclusion of stakeholder management as a key knowledge area in the Project Management Body of Knowledge (PMI, 2013b), arguably the most recognizable guide to PM practice, provides further evidence of a shift towards people-related issues in this discipline.

Although a large proportion of the PM literature may continue to focus on control of deviation from a pre-determined plan, it appears that the divide between the literatures may be shrinking. The examination of the kinds of PM challenges that are faced on organizational change and IT projects are not necessarily those encountered in engineering or construction projects. Two recent studies of the PM and CM literatures focused on communication (Lehmann, 2010), and stakeholder roles (Pádár et al, 2011), and both found similarities between the literatures, with the former study finding an increasing convergence between the literatures. It has been noted that there is an "...obvious overlap between the two disciplines..." (Jarocki, 2011), and this overlap is apparent not just in the literatures that support these two disciplines, but also in their area of application.

Perhaps as a result of this lack of clarity about the boundary and working relationship between the disciplines, it has been identified that "...there is evidence of a degree of rivalry between Project Managers and Change Managers concerning who should be managing business change" (Crawford & Nahmais, 2010). This research seeks to contribute to resolving any disciplinary conflict by exploring practitioners' views about PM and CM in relation to their respective influence over factors that contribute to the successful delivery of projects. Specifically, this paper addresses the following research question:

What are Project Managers' and Change Managers' views about their disciplines' influence over factors that determine project success, and what can this tell us about how these disciplines should work together in practice?

Project success is a popular topic in the literature, with a great many academics contributing to the discussion about factors that contribute to the success of projects. Research into success often distinguishes between the factors that are specific to success in particular

types of projects, identifying different industries with varying requirements for success. Examples of this variation can be identified through focusing on success in virtual projects (Verburg et al, 2013); events projects (Cserháti et al, 2014); defense projects (Mazur et al, 2014); mega-projects (Chang et al, 2013); and Public Private Partnership projects (Zou et al, 2014). Alternatively, researchers have focused on aspects of process and decision making, such as the effect of risk management on project success (de Bakker et al, 2012); or the acceptance of ambiguity (Hagen & Park, 2013). Another broad area in which studies of project success are often conducted focuses on the impact of interpersonal factors on project success, such as the impact of top management support (Young & Poon, 2013); executive sponsor behaviour (Kloppenborg et al, 2014); leader's values (Aronson et al, 2013); project manager's personality types (Creasy & Anantatmula, 2013); and contractor's attributes (Alzahrani & Emsley, 2013).

The research presented in this paper falls into this last category, examining the relative influence that project managers and change managers have on specific factors that have been identified as contributing to successful delivery. This research has used (Rockart, 1979) definition of critical success factors as "...the limited number of areas in which results, if they are satisfactory, will ensure successful competitive performance ... They are the few key areas where 'things must go right' for the business to flourish". Fortune and White (2006) have conducted a comprehensive analysis of the literature on critical success factors, and their list of 24 factors forms the starting point of this research (listed below).

Methodology

The data that is used in this research was collected by an online survey, preserving respondents' anonymity. A link to the survey was distributed by three industry associations based in Australia, including the Change Management Institute, the Project Management Institute, and the Australian Institute of Project Management. The researchers also used social media and their professional networks to raise awareness of the survey, resulting in 455 respondents. The survey data was analysed using SPSS 22 statistical software.

Respondents were asked how they primarily professionally identified themselves, and were provided with the option of selecting: "Project Manager (including junior, senior, committee and sponsor positions)"; Change Manager (including junior, senior, committee and sponsor positions)"; or "Other" with a field where an additional response could be provided. Of the survey population, 56% were project managers (256); 14% were change managers (63); and 30% (136) selected "Other" or gave an invalid response. Invalid responses and respondents who identified themselves as belonging to a different discipline have been excluded from this analyses. Not all respondents answered all survey questions.

Respondents were also asked to rate the contribution that project managers and change managers make to specific success factors: "From your general experience, how significant is the influence of Change Management (CM) and Project Management (PM) personnel in affecting the following success criteria?" This question was followed by a list of the 24 success factors identified by Fortune and White (2006). Respondents were asked to separately rate each discipline's influence of each success factor on a seven-point Likert scale (1 - No influence, 7 - Very great influence).

A comparative ranking of success criteria contribution

To develop an understanding of which success factors are more clearly influenced by one discipline or the other, the averages of participants' responses to each question were taken, after normalising the data to account for the larger proportion of project managers in the survey population. The difference between respondents' average answer for project managers' and

change managers' contribution to each success factor was then taken. This difference between averages was used to create a ranking of success factors from those that were regarded as more consistently influenced by project managers, to those more consistently influenced by change managers (Figure 1).

Do the disciplines see their contribution differently?

The Mann-Whitney U Test was used to compare the differences between the project managers' and the change managers' responses regarding each discipline's contribution to the 24 success factors. This allowed the researchers to reveal areas where project managers and change managers agreed or disagreed about how significantly one of these disciplines contributed to a specific success criteria. Table 1 lists only those success criteria where it was possible to reject the null hypothesis that the distribution of the results was the same for the project managers and the change managers ($p < 0.01$). In other words, this table identifies those areas where there was a significant difference of opinion between the change managers and the project managers.

In each case where there was a significant difference of opinion, the disciplines identified that they provided a greater contribution to the success criteria. It is interesting to note that both project managers and change managers had a significantly higher opinion about their discipline's contribution to ensuring support from senior management, and ensuring user and client involvement than the other discipline. Similarly, ensuring involvement of the project sponsor / champion and ensuring senior management support were two areas where the change managers identified that they made a greater contribution than the project managers identified that change managers did. These results suggest a general misconception between the disciplines about the ways that both disciplines contribute to managing senior stakeholders, potentially signifying an area of conflict between the disciplines.

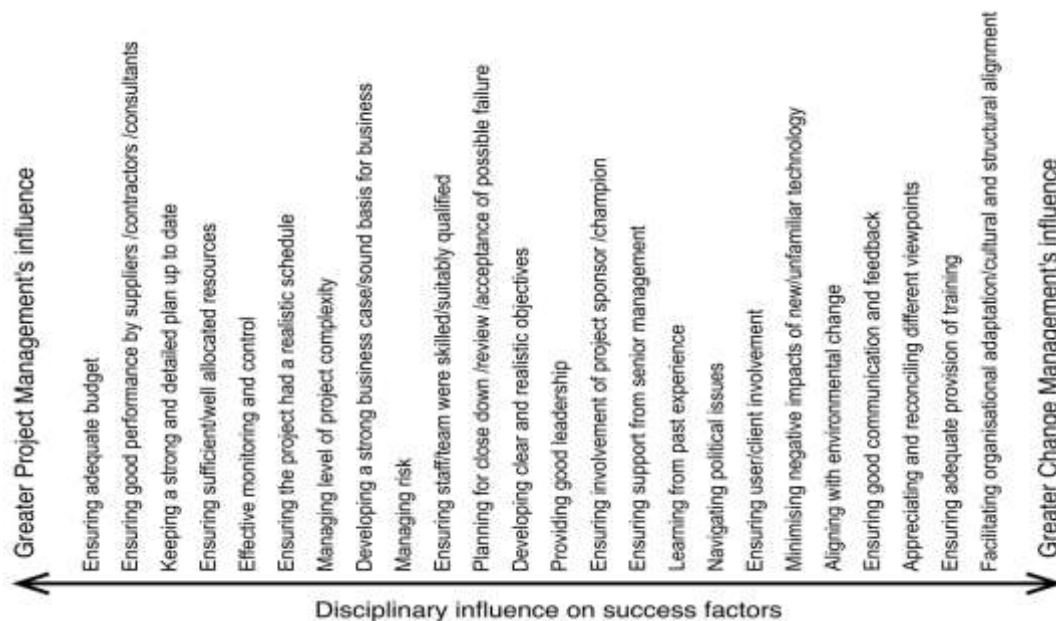


Figure 1. A comparative ranking of the disciplines' influence over success factors

The project managers also tended to rate their influence on the following success criteria significantly higher than the change managers rated their influence: Facilitating organization adaptation/cultural and structural alignment; Appreciating and reconciling different viewpoints; and Aligning with environmental changes. Each of these three success factors lie

towards the end of Figure 1 where change managers have the greater influence. This distribution of influence is hardly contentious, given the light treatment these issues typically receive in the normative project management guides produced by the professional associations, which tend to favour technical competencies. However, the disagreement about project managers' contribution to these criteria suggests that the project managers considered that they also played an important part in addressing these issues. This is consistent with the observations in the literature review of an increasing move in the PM literature to focus on aspects that were previously seen as more in the domain of CM.

The change managers also tended to rate their influence on the following success criteria significantly higher than the project managers rated their influence: Providing good leadership; Navigating political issues; and Managing level of project complexity. Each of these three criteria lie towards the middle of the continuum on Figure 1, suggesting that these are neither unequivocally within the domain of project management nor CM. These criteria represent areas where conflict might occur, based on the role of change managers in addressing these issues. The data suggests that change managers are more likely to consider that they have a particularly more significant influence over these success criteria than project managers think they do.

Question	Sig.	Median PM's response	Median CM's response	n	
Different opinions about project manager contribution	Ensuring good communication and feedback	.000	7	6	317
	Ensuring user/client involvement	.001	6	6	315
	Facilitating organisational adaptation/cultural and structural alignment	.000	6	5	315
	Appreciating and reconciling different viewpoints	.000	7	6	317
	Aligning with environmental changes	.005	6	6	317
Different opinions about change manager contribution	Ensuring support from senior management	.002	6	7	305
	Ensuring good communication and feedback	.000	6	7	305
	Ensuring user/client involvement	.003	6	7	304
	Providing good leadership	.003	6	7	303
	Ensuring involvement of project sponsor /champion	.000	6	7	303
	Navigating political issues	.002	6	7	302
	Managing level of project complexity	.000	5	6	300

Table 1: Areas of significant disagreement

The need for Project management and Change management

These findings have been used to categorise Fortune and White's (2006) critical success factors into four categories (Figure 2): those most strongly influenced by project management; those most significantly influenced by CM; those where both disciplines can and should contribute; and those where both discipline should contribute to a factor, but in different ways.

The results indicated that addressing risks associated with the factors on the left of Figure 2 fell within the remit of project management, while those factors on the right were most clearly influenced by CM. The issues in the centre of the figure were less easily associated with either discipline. Factors such as providing good leadership; learning from past experience; and choosing appropriate management tools were interpreted as being with the responsibility of both CM and PM, suggesting that management of these factors is significantly associated with whomsoever was in a position of authority and influence in the particular project.



Figure 2. Sources of risk and disciplinary contribution

The other factors were determined as being the responsibility of both disciplines, with both disciplines bringing a valid and different interpretation of each factor. Both PM and CM have a role to play in ensuring sponsor involvement. However, a project manager's role may involve ensuring the sponsor's engagement and participation in the decision making process, while a change manager's role may focus on ensuring the sponsor's personal commitment to the project. A project manager may focus on the need for senior management support in gaining adequate resourcing, while a change manager may focus on the visibility of senior management's support for a project. Project managers may focus on selecting the best resources for their team, while a change manager may focus on ensuring the team is appropriately trained. Project managers may focus on ensuring objectives are unambiguously and specifically defined, while a change manager may focus more on objectives as a way of facilitating interpersonal alignment between stakeholders. Project managers will focus on managing the process of review and possible close down, while a change manager will focus more on the interpersonal impacts of shutting a project down.

With respect to managing complexity, it was necessary to refer to Remington & Pollack's (2007) four types of project complexity. PM more typically focuses on managing complexity that arises from large and intricate programs of activity (structural complexity). As noted above, issues associated with managing the impact of new technology on recipients tends to be more associated with CM (technical complexity), while issues associated with a lack of agreement between stakeholders about objectives (directional complexity) and a changing context over time, necessitating realignment of the project (temporal complexity) were also more within the domain of CM.

Given the necessary limitations on time and resourcing common to most projects, it will not be possible to apply an equally large amount of attention to all critical success factors. As standard practice, it is recommended that risk analysis is used as the basis for identifying the

success factors that are most likely to be of concern in a particular project or industry. These four categories of critical success factors should then be used as a way of determining when and in which ways PM and CM can contribute to project success. In projects where no specific and significant CM risks are expected to occur, the need for a specialist change manager is less significant, and minor CM issues may be managed by a project manager with some CM knowledge, or by occasional CM support. In projects where no specific PM risks are expected to occur, but significant CM risks are expected, then the need for PM support will be less significant. In such a case, the project might be managed by a change manager with some PM skills, potentially supported by project administrative staff. In cases where significant risks are expected at both ends of this spectrum, then a cooperative arrangement will need to be reached, and the framework in Figure 2 could provide a basis for negotiating a division of responsibility.

Conclusion

This research has analysed the responses of project managers and change managers to an online survey with questions about their influence over a set of 24 critical success factors. Respondents' answers were used to create a comparative ranking of factors that were more typically influenced by project managers and factors that were more influenced by change managers. Statistical analysis of the results revealed significant differences in project managers' and change managers' opinions about each disciplines influence over half of the factors. In particular, a tendency was identified for each discipline to rate their influence over factors associated with managing senior management higher than they rated the other discipline's influence. This difference suggests that issues around the management of senior stakeholders may be a significant point of contention between the disciplines.

The findings of this research were used to categorize 24 critical success factors into four categories: those most clearly influenced by project managers; those most clearly influenced by change managers; those that were less clearly associated with either discipline, but could be contributed to by both; and those to which both disciplines would bring a different, but valid, interpretation. This framework has been developed as a supplement to project risk analysis, and could be of benefit in determining project manager and change manager responsibility for aspects project delivery, based on where significant risks are expected within specific industries.

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