Rethinking Project Governance - The Role of the Project Owner

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ABSTRACT

The literature has come a long way in its handling of project performance measurement, from being preoccupied with output delivery to focusing on benefit generation. Although this change in research direction has significant implications for project governance, the matter has received little attention in the literature, which is still preoccupied with the accountability of project managers for efficient output delivery. This paper investigates the impact on project success of recognizing an additional accountability associated with benefit generation. A study involving 102 managers in Asia-Pacific countries confirmed that risk moderates the relationship between ownership accountability strategies and project success. Consistent with control-trust-risk theory, results of the study confirm that a strategy based on control is more effective in a stable environment.

Successful projects enhance organizational value (Shenhar & Dvir 2007). One of the major success predictors is an effective project governance structure (Lechler & Dvir 2010). Project governance provides a formal representation of the organizational arrangements that surround a particular project. Given the temporary nature of projects (Malach-Pines, Dvir & Sadeh 2009) and the need to separate ownership from control (Bozec, Dia & Bozec 2010), each project requires a unique governance structure which, while distinct from the relatively stable standing structure of the participating organization(s), must, nevertheless, co-exist with it.

Despite general acceptance that they are important, existing models of project governance in the literature appear to be incomplete and of questionable value (Lechler & Cohen 2009). A major criticism is that they are dated and disconnected from recent project theories, especially those targeting the realization of benefits (Zwikael & Smyrk 2012). Because the literature has tended to view projects as initiatives to deliver outputs (such as a bridge, or an information system), to specification, on time and within budget, project governance models recognize only one accountability—that of the project manager for the efficient delivery of outputs (Lewis, Welsh, Dehler & Green 2002). However, recent literature offers support for the proposition that projects should be viewed differently - as exercises which seek the beneficial changes desired by the funding organization (Scott-Young & Samson 2009). Reduced operating costs, increased quality levels, reduced infant mortality are all examples of beneficial changes sought from projects of different
kinds—each of which is expressed as a (desirable) outcome (Zwikael & Smyrk 2012). For the purposes of this paper we use the terms “outcome” and “benefit” interchangeably.

While the importance of project benefits is well recognized, accountability for their realization appears to be either treated ambiguously or ignored (Remenyi et al. 1997). In this paper we argue that this radically different (benefits-oriented) view of projects has significant implications for governance and accountability. The research question this paper attempts to answer is “what changes are required in project governance to support benefit realization?”. Accordingly, we investigate the impact on project performance (in various project contexts) arising from the assignment of accountability for benefit realization. The paper’s structure includes an analysis of the literature, a theoretical framework, and a discussion of a field study.

RELATED THEORIES AND HYPOTHESIS DEVELOPMENT

Corporate Governance

Governance provides a framework for ethical decision making and managerial action within an organization that is based on transparency, accountability, and defined roles. Corporate governance concerns the manner in which corporations are regulated and managed (du Plessis et al. 2005), and deals with the need to balance achievement of the organization’s goals with those of its stakeholders, including society in general and shareholders in particular.

A governance structure seeks to reduce conflicts that might otherwise impact negatively on performance, and provides a framework through which the objectives of the organization are set (OECD 2004). Recent studies have highlighted the importance of autonomy (Fuchs 2010) and ownership (Cai & Tylecote 2008) in corporate governance.

Accountability, a major part of organizational governance theories, is strongly influenced by agency theory (Jensen 2000). In an agency relationship the principal engages an agent to perform some service on their behalf. Such an arrangement usually involves delegation of decision making authority to the agent. Agency theory highlights the goal conflict that arises when individuals with differing preferences engage in cooperative effort (Eisenhardt 1989).
Recent governance literature analyzes separately issues of control and trust, in particular under various levels of performance risk – the risk of failing to deliver the agreed benefits (de Man and Roijakkers 2009). Control-trust-risk theory argues that control is a superior strategy in a stable environment with low performance risk, whereas trust is required in a turbulent environment with high performance risk.

**Project Governance**

A project is defined as a unique process intended to achieve target benefits (Zwikael & Smyrk 2012). Members of the teams formed to undertake projects are usually drawn from across functional and organizational boundaries (Sundstrom et al. 1990). However, because organizations are typically functionally-oriented, most of the relationships amongst project team members are unlikely to be recognized in the existing organizational structure. As a result, the standing governance models of organizations are rarely suited to the management of projects, and a separate arrangement is needed.

Based on agency theory (Eisenhardt 1989), a project manager acts as an agent for a principal from the funding organization, and is thus held accountable by the principal for the efficient delivery of outputs (Jensen 2000). Because project managers have their own interests, they will do what is best for the funding organization only if the respective interests of the two parties are aligned (Muller and Turner 2005). The complexities emerging from such a relationship supports the need for a structured project governance model.

Project governance structures have traditionally been built around two entities: the project manager who is accountable for efficient output delivery, and an overseeing forum, which is responsible for monitoring and controlling this work. The historic justification for this is that for many years projects have been perceived as processes that conclude with the implementation of one or more outputs. Accordingly, they have been evaluated only by the extent to which each project has achieved its agreed scope within the constraints reflected in a budget and timeframe (Jha & Iyer 2007).

However, it is widely recognized in more recent literature that, in addition to outputs (deliverables, which take the form of artifacts), projects have specific target benefits to achieve (Shenhar & Dvir 2007). Benefits take the form of a notional flow of value to a beneficiary (Zwikael & Smyrk 2011). Despite a shift in the focus of the literature from output to benefit management, little
has been said about the implications of benefit realization for project governance (Remenyi et al. 1997). While the existing literature tends to be very specific and prescriptive about outputs-related roles in projects (e.g. Pryke 2005), in general, discussion about benefits-related roles, such as champion, sponsor, owner, and program manager (e.g. Muller & Turner 2005; OGC 2009), ignores the concept of accountability for target benefits.

Because benefit realization is the underlying objective of all projects (Zwikael & Smyrk 2012), this paper proposes that an accountability for target benefit realization also be established. Such a proposal remains in accordance with a principle that is widely accepted in the literature (for example Dvir & Lechler 2004)—that accountability for outputs lies with the project manager.

**Project Ownership Accountability**

Each project has a funder(s) - the entity who approves the resources required for a project (Zwikael & Smyrk 2012). As a result, the funder (alone) has the power to decide on the target benefits from a project. Because of their seniority and the associated demands on their time, funders are often unable to involve themselves meaningfully in particular projects, and so, consistent with agency theory (Jensen 2000), they may elect to assign ownership accountability to someone else to ensure that their target benefits are realized. Such assignments are also in alignment with the recognized importance of ownership in the governance literature (Cai & Tylecote 2008) and of accountability in the project governance literature (Abednego & Ogunlana 2006).

To answer the question to whom should this accountability be assigned, we draw on existing theories for guidance. Firstly, we argue that it should not be the project manager because, when assigning a role, conflict of interest must be avoided (Simon 1976). A project manager contracted from outside the funding organization, for example, may be tempted to compromise future benefit realization in the immediate interests of efficient output delivery. Secondly, the governance literature suggests a single point of accountability in the organization, as well as a separation of project structures from standing organizational structures (Abednego & Ogunlani 2006; Garland 2009). Thirdly, we invoke the principle that in a transaction, a “purchaser” is to be identified and separated from the role of “provider” (Muller & Turner 2005). A project can be viewed as a transaction in which a client (the funder) orders a product (output) from a supplier (the project manager) for an
agreed fee (the budget). Fourthly, project managers usually have a mindset that better suits output delivery, rather than the realization of organizational benefits (Kerzner 2009).

Because the project manager should not be made accountable for project benefit realization, and to accommodate those situations where the funder does not want to take on that responsibility him/herself, a new organizational role is required - which we identify as the “project owner”. Typically the project owner will be a senior executive and often the line manager who might be responsible later for any ongoing operation of project outputs. In general, a functional manager or other senior executive can fill this role. Based on the discussion above, we argue that assignment of an accountability for project ownership will enhance project performance. Hence, we propose that:

\[ H_{1a}: \text{Higher levels of project ownership accountability improve project success rates} \]

Whereas this first hypothesis assumes a direct effect of ownership accountability on project success, several scholars have argued that the relationship between project management and success is mediated by project efficiency (Narayanan et al. 2011). That is, a project, in meeting its efficiency targets (related to cost and time) will show improved benefit realization. As a result of this line of thought, we propose a competing hypothesis:

\[ H_{1b}: \text{Project efficiency mediates the relationship between project ownership accountability and project success} \]

The Contingent Effect of Risk

While many theories and frameworks are generic, Shenhar (2001) argues that there is no “one size project”. In other words, project management theories that work well in one context may not be as effective in another (Scott-Young & Samson 2008; Swink, Talluri & Pandejpong 2006). This implies that different project governance structures may be required for various project contexts.

Risk is of particular interest in the literature, which suggests that level of project risk is an important factor that distinguishes one project context from another (Zwikael & Ahn 2011). For example, control-trust-risk theory suggests risk as a moderating variable in alliance governance (De Man & Roijakkers 2009), whereas Lewis et al. (2002) found uncertainty to moderate project management-performance relationships. More specifically, Zwikael and Sadeh (2007) found that
planning is more effective in high risk projects than in low risk ones. Hence, the following moderation hypothesis is proposed (also illustrated in Figure 1):

\[ H_2: \text{Risk moderates the relationship between project ownership accountability and success, such that the impact of ownership accountability on project success is higher in high risk projects than in low risk projects} \]

< Figure 1 about here >

**RESEARCH DESIGN**

**Measures**

*Dependent variable.* The dependent variable of this study, ‘project success’, was measured by funder satisfaction with the project realized benefits (Zwikael & Smyrk 2012) on a five point Likert scale.

*Independent variable.* The governance literature suggests that ownership accountability has two major dimensions. The first is the level of acceptance of this role by senior management (e.g. Abednego & Ogunlana 2006). This dimension reflects the importance attached by the funder to such an appointment and his/her willingness to delegate authority to the person who performs this role. The second concerns the level of involvement of the project owner, as reflected in the resource-based view of the firm (Pfeffer & Salancik 1978), which suggests that the level of involvement impacts performance. Using the control-trust-risk theory (de Man & Roijakkers 2009), level of acceptance can be treated as reflecting the level of trust between the principal and the agent, whereas level of involvement represents the depth of control exercised by the project owner. Hence, the independent variable of project ownership accountability is measured with reference to both the level of acceptance (by the funder) of the project ownership role and the subsequent level of involvement of the project owner in its execution. These constructs were gauged using a 5 point Likert scale based on two observed items in the questionnaire: the level of importance (to the funder) of assigning a person accountable for target benefits achievement and the level of effort invested by the project owner in this assignment during the project.

*Mediating variable.* Project efficiency was measured by two items: time and cost overruns in percentages, as suggested by Bryde (2005).
Moderating variable. One contextual factor was also included in the model as potential moderating variable – the level of ‘project risk’ at the beginning of each project, as reported by project managers on a five point Likert scale.

Data Collection

Two questionnaires were developed consisting of the constructs suggested above. The first questionnaire targeted project managers who were asked to (1) identify critical project and organizational characteristics, such as risk level, duration, cost, and the industry in which the organization operates, (2) report on the level of risk at the start of the project, and (3) the project owner’s level of involvement in the project. For the same project, the project manager’s supervisor was asked to report in a separate questionnaire on the level of acceptance of project ownership, and evaluate levels of project success, based on their satisfaction with the results generated from the project. The unit of analysis in this study was a project.

A call for participation in the study was sent to members of the Project Management Institute in the Asia Pacific region. This group was chosen because of their familiarity and experience with the project environment and seniority in their organizations. Out of the 102 responses received, 29 responses came from India, 16 from New Zealand, 15 from Australia, and the rest from different Asia Pacific countries. 20.2% of responses came from software organizations, 19.0% from services, 11.9% from engineering, 13.1% from government, and 8.3% from production organizations. This spread of industries in the sample appears to reflect the distribution of different industries in the local economies. Project duration ranged between 2 and 60 months with a mean of 15.6. 55.4% of the projects were undertaken for an internal funder within the same organization, while 44.6% of the projects were commissioned by an external organization.

RESULTS

Moderating hypotheses were tested by regressions using SPSS and mediating hypotheses by Structural Equation Modeling using AMOS. Because the evaluation of a structural equation model requires multiple measures (Dvir & Lechler 2004) two common measures were used. The Root Mean Square Error of Approximation (RMSEA) is a measurement of non-centrality, which estimates how
well the fitted model approximates the population covariance matrix per degree of freedom. Browne and Cudeck (1993) suggest that a RMSEA value smaller than 0.05 indicates a close fit and that the model should be accepted. The Comparative Fit Index (CFI) assesses the relative reduction in lack of fit, with a threshold value of 0.85 (Bentler & Bonett 1980).

All results were controlled for industry type and the type of project to the organization (internal versus external). Scale reliability, calculated using Cronbach’s alpha, suggests accepted levels for project ownership accountability and project efficiency of 0.78 and 0.69 respectively.

The first analysis, presented in Table 1, shows the correlations among all project variables, including Pearson correlation and significance level.

Table 1 shows significant correlations between project ownership accountability and project success, which encourages further analysis.

The Importance of Accountability for Benefit Realization

Two competing hypotheses were proposed for the direct or mediating effect of project ownership accountability on project success. Figure 2 presents the results of Structural Equation Modeling analyses conducted for this purpose, all controlled for risk. Both direct effect (RMSEA=0.11; CFI=0.97) and full mediation models (RMSEA=0.11; CFI=0.93) are only marginally significant. In order to find a model with better fit to the data, we also analyzed a partial mediation relationship, which provided more significant results (RMSEA=0.04; CFI=0.99).

A Chi-square test was conducted to statistically compare between the full and partial mediation models (see Table 2). For the loss of one degree of freedom, the partial mediation model offers Chi square higher by 14.9, which suggests a significantly (p<0.001) better fit than the full mediation model. Hence, we can conclude that project efficiency partially mediates the relationship between project ownership accountability and project success and claim that project ownership accountability improves project success rates. Furthermore, the significant direct impact of ownership accountability on project success, suggests that in our analysis of the second research hypothesis below, project success is more appropriate than project efficiency as the dependent variable.
The Moderating Effect of Risk

The second research hypothesis concerns the moderating effect of risk on the relationship between ownership accountability and project success. For this purpose, the results of a stepwise regression, where the main effect of ownership accountability and level of risk were entered in the first step and the interaction between them in the second, are presented in Table 3.

Results suggest that while project ownership accountability has significant positive effect on project success, its interaction with risk is insignificant and does not add much to the explained variance.

Following suggestions from the recent literature (e.g. de Dan & Roijakkers 2009), further analysis was conducted separately for each of the two dimensions of ownership accountability. The results, presented in Table 4, suggest that while the higher level of acceptance of project ownership improves project success for all risk levels, higher level of project owner involvement in projects is effective only in specific contexts. The moderating regression analysis shows that the interaction between risk and level of involvement of the project owner significantly affects project success.

DISCUSSION

Accountability for Benefit Realization

The literature identifies accountability as a core component of effective governance (Abednego & Ogunlana 2006; Brand 2007). Because benefit generation has become a widely accepted generic objective of all projects (Zwikael & Smyrk 2012), this study investigated the impact of an additional accountability for benefit realization on project performance. The results of an empirical study confirmed that the level of accountability for benefit realization has a positive effect on project success. As an extension to Shenhar and Dvir (2007) who claim project managers need to take responsibility for business results, we suggest that while the involvement of project managers in benefit realization is important, a project owner should hold this accountability. This is in alignment
with the governance literature, which recognizes the importance of ownership (Cai & Tylecote 2008), agency theory, which requires separation of ownership and control (Eisenhardt 1989) and Operations management literature, which highlights trade-offs between efficiency and effectiveness (Chase, Jacobs & Aquilano 2007).

The incorporation of a project owner into established models of project governance also has fundamental implications for the role of project manager. Whereas the literature has seen the project manager as the funder’s agent, we argue that the project owner should fill that role. We can now employ agency theory (Eisenhardt 1989) to construct a critical new link within the project governance model—whereby the project owner assigns an accountability to the project manager for delivery of outputs. The separation of the roles of project manager and project owner can be used as the foundation for a project governance model in which the project owner becomes the project manager’s client and the project manager becomes the project owner’s supplier (Muller & Turner 2005).

**Strategies of Ownership Accountability for Different Risk Levels**

In addition to confirming the positive relationship between accountability for benefit realization and project success, the results of this study also exposed the moderating effect of risk. This result reinforces the importance of risk as a contextual construct in the project environment (Zwikael & Ahn 2011).

More specifically, we found that for various levels of risk, accountability strategies have different impact on project success. It was found that the acceptance of the project owner role is important for all risk levels, as suggested by the governance literature (e.g. Abednego & Ogunlana 2006). However, as analyzed in Figure 3, higher levels of project owner involvement in the project are only effective in low risk projects.

These results are consistent with the control-trust-risk theory (de Man & Roijakkers 2009). In close correspondence to the project context introduced above, this theory uses the term “performance risk”, which is related to “factors such as market uncertainty, competition and governmental regulation” that may have negative effects on results. With regard to performance risk, the authors found “control to be a more valid option in a stable environment with low performance risk, whereas trust is required in a turbulent environment with high performance risk.” The concept of control is
based on measuring the gap between some actual and desired levels of performance and then executing actions that will close the gap. Similarly, much of the involvement of a project owner in a project is based on judging the acceptability of gaps between actual and desired levels of performance (as reflected in the project plan) and then facilitating actions that will close any unacceptable gaps. Thus, by recognizing an association between the level of involvement of the project owner and control, our results suggest that high level of owner involvement is an effective strategy only in low risk projects. This is consistent with the control-trust-risk theory, which states that control is an effective strategy for low risk environment.

When project managers are faced with a high degree of uncertainty about the successful delivery of their outputs (for example, developing a novel product in an R&D project) they will tend to become preoccupied with the relatively short term problems of project execution and less concerned with the relatively longer term goal of realizing benefits. In such cases, higher levels of project owner involvement may be seen as triggering conflict or “disturbing” the work of the project manager. However, in low risk projects (where delivery of outputs is more certain) involvement by the project owner to facilitate eventual benefit realization may be an effective strategy.

CONCLUSIONS

While in the past, the literature has focused on project output delivery, more recently it acknowledges the importance of benefit realization (e.g. Shenhar & Dvir 2007). Despite this shift in emphasis, the project governance literature has lagged behind, in that it has not yet been able to accommodate the implications of these developments for project organization, and hence is still concerned primarily with accountability for output delivery. Although attempts have been made to incorporate benefit accountabilities into project governance models (e.g. OGC 2007; Muller & Turner 2005), in general these appear to involve little more that “tacking on” accountabilities for benefits to an otherwise outputs-oriented structure, rather than redesigning the governance models from the ground-up. Based on results of an empirical study, this paper highlights the need to appoint a project owner for each project, suggests criteria for their selection and offers guidance in the formulation of
appropriate strategies of involvement. It also proposes revised roles for the project funder and steering committee in a project governance model.

Another contribution of this paper to the literature takes the form of extensions to project governance and agency theories. Based on control-trust risk theory (De Man & Roijakkers 2009) this paper proposes effective ownership strategies under various levels of risk. In particular, it recommends that a strategy based on control to be implemented only in a stable environment, whereas a strategy based on control be employed in a wider range of risk levels.

It is important to note here various limitations of this research, including the use of only two observed variables to gauge accountability for benefit realization, and its application of agency theory which has been the subject of some criticisms in the literature (see Munari et al. 2010). In addition, while this study tested moderation and mediation effects separately, future research might use a combined approach for moderation-mediation analysis using more advanced statistical tools. Finally, future research could develop more comprehensive measures for benefit accountability and validate the proposed theoretical framework in various types of project and organizational contexts.
REFERENCES


Figure 1: The Moderating Effect of Risk on the Relationship between Ownership Accountability and Project Success
Figure 2: Competing Structural Equation Models for the Impact of Ownership Accountability on Project Success (Controlled by Level of Risk)

Direct effect. $X^2=9.0; df=4; RMSEA=0.11; CFI=0.97$

Full mediation. $X^2=27.7; df=12; RMSEA=0.11; CFI=0.93$

Partial mediation. $X^2=12.8; df=11; RMSEA=0.04; CFI=0.99$
Figure 3: The Relative Importance of the Level of Involvement of the Project Owner for Two Levels of Project Risk
Table 1: Pearson Correlations among the Study’s Continuous Variables
(*p<0.05; **p<0.01; ***p<0.001; significant results in bold)

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<td>(2) Project efficiency (%)</td>
<td>27.30</td>
<td>34.46</td>
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<td>(3) Project success (1-5)</td>
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<td>(4) Risk level (1-5)</td>
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<td>-0.029</td>
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Table 2: Comparison between Two Competing Structural Equation Models

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<th>$X^2$</th>
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<td>Full mediation</td>
<td>27.7</td>
<td>12</td>
<td>0.006</td>
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<td>Partial mediation</td>
<td>12.8</td>
<td>11</td>
<td>0.305</td>
<td>0.04</td>
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Table 3: The Moderating Effect of Risk  
(*p<0.05; **p<0.01; ***p<0.001)

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<th>Model 2</th>
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<td>Project ownership accountability</td>
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<td>Level of risk</td>
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<td>0.208*</td>
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<td>Project ownership accountability * Level of risk</td>
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<td>F value</td>
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<tr>
<td>R squared</td>
<td>0.223</td>
<td>0.261</td>
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Table 4: The Moderating Effect of Risk on Accountability Dimensions (*p<0.05; **p<0.01; ***p<0.001)

<table>
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<th>Model 2</th>
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<td>0.386***</td>
<td>0.325**</td>
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<td>Level of risk</td>
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<td>Level of involvement * Level of risk</td>
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