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Abstract Title: Using Stakeholder and Social Network Theories to Improve Project Success

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Abstract

The success of project completion may, at least in part, be dictated by the relationships among the various stakeholders of the project. These relationships, however, have received little attention in the project management literature. Questions such as who are the key stakeholders, and whether and how the salience of relationships among these stakeholders changes over the project lifecycle will provide valuable insights to the success of project work.

The first step lies in identifying salient stakeholders. For this, stakeholder theory raises an apt question – ‘who and what really counts’ (Freeman, 1994). This may be followed by examining the strength of relationships between the stakeholders - social network theory provides a lens for examining these relationships. Using these theories, practitioners and researchers may examine how the temporal pattern of connections among the various stakeholders over the lifecycle of the project may affect the complexity and the success of project work.

Key words: Project management, relationships, stakeholder theory, social network theory

Using Stakeholder and Social Network Theories to Improve Project Success

Introduction

As change happens faster, more organizations turn to project management as a methodology to plan and manage changes. The dynamics of managing a project have become more complex, not only because of the push for a reduced cycle time in this hypercompetitive economy, but also because the success of the project is now measured on multiple parameters. One attribute that contributes to project success is ‘successful stakeholder management’ in projects. The success of project work is, at least in part, dictated by identifying various salient stakeholders, managing robust relationships with them, making decisions that satisfy stakeholder objectives and leveraging the resources necessary to achieve the objectives (Bourne, 2006: 1, Flannes and Levin, 2001: 15, Milosevic 2003: 330). Moreover, the salience of stakeholders may shift during the lifecycle of some projects. Executives often are actively involved early in the project and are involved primarily at reporting intervals and as requested during the project execution providing the project is going well (Englund and Bucero 2006: 77). Project management literature has given little attention to these issues thus far. Questions such as who are the key stakeholders, and whether and how the salience of relationships among these stakeholders changes over the project lifecycle will provide valuable insights to the success of project work.

This paper is an effort to fill this gap in the literature. We use social network theory and stakeholder theory as our guiding lens to examine our research questions. While stakeholder theory helps identify the stakeholders by examining ‘who and what

really counts' in the project, social network theory examines the finer granules of communication patterns among the people integrally involved in the process. We use these theories to examine the temporal pattern of connections among the various stakeholders along the project life cycle in two distinct projects – a construction project and a research and development project. These projects are picked as a theoretical sample, and we expect valuable findings from this research for practitioners and researchers.

The paper begins with a brief overview of what project management means. We then discuss the literature on project success and project life cycle. Thereafter, we provide a brief overview of the literature on stakeholder theory and social network theory. Since this is a conceptual piece at this point in time, we discuss our proposed method, data analysis, and expected findings from this research.

Project Management Introduction

Any set of related work activities that collectively have a performance goal of creating a unique outcome, subject to time and resource limitations, can be organized as a project. A successful project achieves the goals, without exceeding the limitations, and also helps the organization and its customer further other objectives.

Project management includes all of the initiating, planning, executing, monitoring, controlling, and closing activities needed to successfully create the desired project deliverables. These activities are carried out by the project manager and many other individuals over the life of a project. This project life is often mapped in distinct stages called life cycle stages or phases. Project management includes establishing

objectives, balancing competing demands, and adapting to the expectations of various stakeholders (*PMBOK® Guide*, 2004: 8). Project stakeholders can be broadly considered as any person or group that either impacts the project or is impacted by the project. The impacts can be positive or negative and they can be from the process of performing the project or as a result of project deliverables.

Project Success

An old adage project managers have been fond of expressing is “cost, schedule, or performance – choose any two”. That meant the managers felt they could deliver any two of the three elements of project success, but not all three. Project performance is now widely understood to be composed of both scope and quality. Even this four objective model of project success is still very limited. Various authors have contributed to our expanding understanding of project success.

Flannes and Levin (2001: 20,21) assert that projects exist because of internal and external customers. Modern customers assume a more active role in projects than in the past. Project success must include meeting customer requirements and customer use of the project products. Pinto (2004: 16-20) chronicles the evolution from the simple iron triangle of cost, schedule, and quality through benefits to the organization and benefits to stakeholders. Kloppenborg et. al. (2006: 23-24) describe 13 specific measures that are grouped into three broad categories of meeting agreements, customer, and future. Shenhar and Dvir (2007: 219-220) introduce a 26 element project success model with the categories of project efficiency, impact on customer/user, impact on the team, business and direct organizational success, and preparing for the future. While many of the

individual elements in the three preceding models are similar, Shenhar and Dvir specifically also consider the needs of an additional stakeholder – the project team. For this paper we will use the Shenhar and Dvir project success assessment questionnaire as shown in Exhibit 1. Each of these items will be asked at project closure using a Likert type scale.

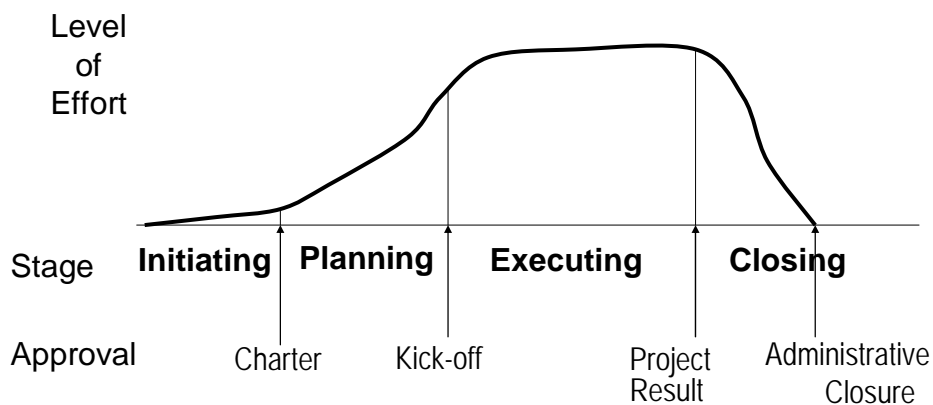
Exhibit 1: Project Success Assessment Questionnaire

1. Project Efficiency
 - a. The project was completed on time or early.
 - b. The project was completed within or below budget.
 - c. The project had only minor changes.
 - d. Other efficiency measures were achieved.
2. Impact on the Customer/User
 - a. The project improved the customer's performance.
 - b. The customer was satisfied.
 - c. The product met the customer's requirements.
 - d. The customer is using the product.
 - e. The customer will come back for future work.
3. Impact on the Team
 - a. The project team was highly satisfied and motivated.
 - b. The team was highly loyal to the project.
 - c. The project team had high morale and energy.
 - d. The team felt that working on the project was fun.
 - e. Team members experienced personal growth.
 - f. Team members wanted to stay in the organization.
4. Business and Direct Organizational Success
 - a. The project was an economic business success.
 - b. The project increased the organization's profitability.
 - c. The project has a positive return on investment.
 - d. The project increased the organization's market share.
 - e. The project contributed to the organization's direct performance.
5. Preparing for the Future
 - a. The project's outcome will contribute to future projects.
 - b. The project will lead to additional new products.
 - c. The project will help create new markets.
 - d. The project created new technologies for future use.
 - e. The project contributed to new business processes.
 - f. The project developed better managerial capabilities. (Shenhar and Dvir 2007: 219-220)

Project life cycle

Projects follow a predictable pattern or life cycle. A project life cycle consists of several stages during which deliverables are created and end with approval of the deliverables. The simplest way to envision this is that a project must somehow start – therefore, there is an initiating stage that starts with the germ of an idea for a project and culminates in a decision to perform the project (or at least a decision to plan it in more detail and then make the decision whether to perform the project. In the vast middle time on most projects there is a combination of planning and executing of project work. The most deliberative approach would have all of the planning completed before beginning any project execution. The last stage in a project life cycle, closing, begins when the project’s customers formally accept the project deliverables and ends when all the books are closed, documentation is complete, resources are reassigned, etc. This basic project life cycle is shown in Exhibit 2.

Exhibit 2 – Basic Project Life Cycle Model



(Adapted from Kloppenborg, T. J. Contemporary Project Management, 2009: 8)

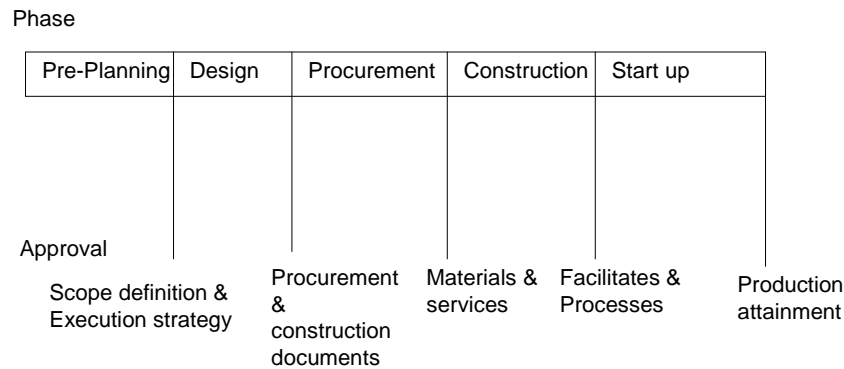
Do projects follow a generic life cycle process? Many industries and even many companies have their own variations on project life cycle models. Research in project management has begun to provide some perspective that there are a variety of ways that projects may actually take shape. The complexity and variety of project life cycles may, at least in part, be dictated by the industry in which the project is housed. While all projects may begin with the initiation stage, the emergence of projects along their life cycle may not exactly and perfectly map on to the planning and execution stage as was initially intended. The project life cycle process may therefore vary along the deliberate and emergent continuum (Mintzberg & Waters, 1985). In their paper, Mintzberg and Waters propose various types of strategies, each embodying differing degrees of what might be called deliberateness and emergentness. A perfectly deliberate strategy is one that is realized to form exactly as it was intended. Such strategies (1) are articulated in concrete details, (2) are collectively understood and accepted by all key organizational members and (3) do not experience any interference from the external forces such as market, technology, etc. A perfectly emergent strategy is one that is realized without any intention and it falls on the other end of the Mintzberg & Waters continuum. While each of these pure typologies may be rare to find, we may find tendencies in the directions of deliberate and emergent types.

For purposes of this paper, we will focus our attention on two industry models to illustrate differences. One big difference in approach stems from how early in a project it is possible to understand with confidence exactly what work will need to be completed. On projects where the work can be completely described through planning alone, it

makes sense to do most of the planning first and then most of the executing.

Construction projects often are closer to the deliberate end of the continuum. Exhibit 3 is a construction project life cycle model.

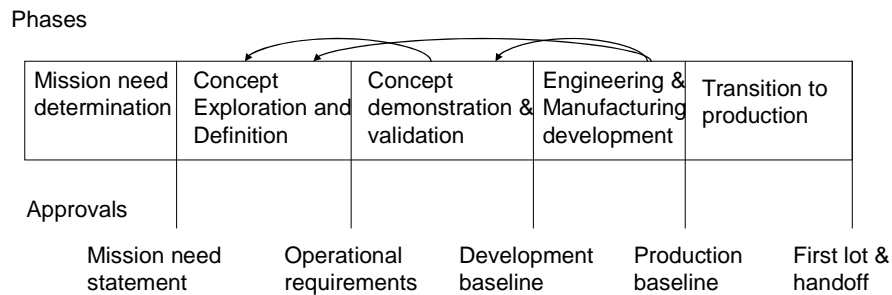
Exhibit 3 – Construction Project Life Cycle



Adapted from Kloppenborg, T. J. Contemporary Project Management, 2009: 58)

At the other extreme, some projects require execution of early project work before later work can even be planned. This may be the case when the results of early work dictate what is feasible in later work. Also, on many of these projects, if some results are not as expected, feedback into an earlier stage may be required. Information system, quality improvement, and research and development projects often require this type of emergent planning. Exhibit 4 is a research and development project life cycle model.

Exhibit 4 – Research and Development Project Life Cycle



(Adapted from Kloppenborg, T. J. Contemporary Project Management, 2009: 57)

Stakeholders in Project Management

Project stakeholders are those who can impact the project and those who can be impacted by the project. From the perspective of project management literature, it is important to identify the key stakeholders for project success (Sutterfield et al, 2006, Milosevic 2003). Project managers need to identify all stakeholders, determine which are most important, develop relationships with at least the important stakeholders, and communicate effectively with all of the stakeholders. One way to identify stakeholders is to determine who can impact the project and who the project can impact. These impacts can be positive in the sense of helping the project achieve success or negative in the sense of making it more difficult to achieve project success. These impacts can be to either the process or the results of the project. Some researchers such as Milosevic (2003: 331) break the impact upon project process down further into providing or withholding resources, defining project requirements, and people and communication issues.

Further, stakeholders can be internal to the company performing the project, internal to the company that is a customer of the project, or external to both. Exhibit 5 illustrates the ways to classify stakeholders.

Exhibit 5 – Stakeholder Classification

	Internal to Performing Organization	Internal to Customer Organization	External to Both Organizations
Can Positively Impact the Project Process			
Can Negatively Impact the Project Process			
Can Positively Impact the Project Results			
Can Negatively Impact the Project Results			
Can be Positively Impacted by Project Process			
Can be Negatively Impacted by Project Process			
Can be Positively Impacted by Project Results			
Can be Negatively Impacted by Project Results			

(Adapted from Kloppenborg, T. J. *Contemporary Project Management*, 2009: 57)

The list of stakeholders can become quite daunting and unworkably large. Therefore, most project managers realize they need to have a way to prioritize among them. The simplest (and not very effective way) some project managers use is to pay attention to their paying customer and their boss and disregard all others. While bosses and customers are indeed important to project (and personal) success, many other stakeholders need to be considered. However, one must realize that some stakeholders are more important than others and need to be more central to project planning and execution. The intensity of stakeholder impact on a project can be considered by using a stakeholder influence grid (Milosevic 2003: 332) or by a stakeholder circle™ (Bourne 2006: 6).

Further, it is as important for project managers to develop robust relationships with these various stakeholders (Bourne & Walker, 2006) at different life cycle stages of

the project for the success of the project. Questions such as who are the key stakeholders in such relationships, and whether and how the salience of these relationships changes over time remain to be answered. Stakeholder theory and social network theory provide valuable insights to explore such questions. Hence, a brief review of stakeholder theory and social network theory seems appropriate.

Stakeholder Theory and Social Network Theory

Stakeholder theory has recently begun to receive attention in the project management literature (e.g., Bourne & Walker, 2006; Sutterfield et al, 2006). A key issue in stakeholder theory is to identify the salient stakeholders – ‘who and what really counts’ (Freeman 1994). Freeman’s classic definition defines a stakeholder as “any group or individual who can affect or is affected by the achievement of the organization’s objective” (Freeman 1984, p. 46). Mitchell et al. (1997) further advanced the literature by proposing a theory of stakeholder salience which suggests that a stakeholder’s ability to command salience in a relationship is determined by the perceptions of three key attributes of stakeholder claims: power, legitimacy and urgency.

While the limited stakeholder research in project management has directed our attention to the need to identify salient stakeholders and build relationships with them for project success, what is little known is ‘how’ project managers could identify these salient stakeholders, ‘how’ they could examine the relationships between these various stakeholders, and ‘whether’ the salience of stakeholders shifts during the project lifecycle.

Social network theory provides an appropriate lens and offers tools for examining

the relations among these stakeholders. According to this perspective, “actors are embedded within networks of interconnected relationships that provide opportunities for and constraints on behavior” (Brass, Galaskiewicz, Greve and Tsai, 2004, p. 795). This stream of research examines the content that flows through relationships (e.g., workflow information, communication, affect (friendship), influence (advice)) – content which aids in examining the strength of relationships. Using social network analysis, research has identified different patterns of communication in different types of work arrangements, has compared the density and types of relationships in different work groups and has predicted powerful positions in work groups and in organizations. Using this perspective, researchers have also been able to explain the variance in outcome measures such as organizational innovation (Tsai, 2001; Tsai & Ghoshal, 1998), organizational survival (Baum & Oliver, 1991), job satisfaction (Roberts & O’Reilly, 1979), power (Brass & Burkhardt, 1983; Krackhardt, 1990) and work group performance (Cummings & Cross, 2003) to name a few.

Research Question

In order to understand the behavioral complexities of project management success, our research seeks to address the following questions:

1. who are the key stakeholders in such relationships,
2. and whether and how the salience of these relationships changes over time remain to be answered.

We seek to conduct a field study on projects from two distinct industries – one each from the deliberate and emergent categories. This follows a theoretical sampling

logic (Eisenhardt, 1989; Yin, 1994) of identifying data samples that are selected for similarities and differences. Such a theoretical sampling helps examine patterns of similarities and differences and is useful to develop emergent themes in nascent research streams such as ours.

Proposed Method:

In addressing our research questions, we seek to examine the communication patterns among the project stakeholders. At the initiation of the project, we will ask project managers for names of persons (1) who will be affected by the project outcomes and process; (2) who they will ask for inputs to the project (workflow network); and (3) who they will talk frequently about project-related activities to ensure the success of the project (communication network). These listings will provide the raw data for (expected) central players in this project. Similar questions will be asked again at the planning and at the closing phase of the project. This time we will ask project managers and members of the project team for names of persons (1) who will be affected by the project outcomes and process, (2) who provided them with inputs to the project (workflow network); (3) who did they talk about project-related activities (communication network); and (4) how frequently they communicated with people (identified in #2 and #3) during the project. During the project closing phase we will also ask the project managers, members of the project team, and those identified as the most key stakeholders to answer the Project Success Assessment Questionnaire shown in Exhibit 1.

Data analysis:

Using social network software (UCiNet), we will analyze the data to examine communication patterns during the project life cycle.

1. Communication patterns will allow us to examine the central players during each of these projects. These patterns will also allow us to examine whether the salience of stakeholders has shifted across the project duration.
2. Data can also be further analyzed to examine the structure of hierarchy in the communication structures in both types of projects.
3. Data will be useful in analyzing the quality of flow (workflow and communication) in networks in both types of projects.
4. We will analyze the communication patterns, structure of hierarchy in communication structures and quality of flow with respect to the success in each of the projects.

Expected findings:

1. We anticipate seeing consistency in stakeholder names across the project duration in projects that follow a deliberate path (construction projects). We also expect that salience of stakeholders is likely to shift across the entire project duration in projects that follow an emergent path (R&D projects).
2. We anticipate that projects that are complex and follow an emergent path will reach out to multiple players for workflow and communication networks. We will expect to see more overlap between the workflow and communication networks in projects following a deliberate path.

3. We also anticipate that communication structures will be flatter in projects that are complex and follow an emergent path.
4. We anticipate that the above stated propositions will be related to project success.

Contributions

A primary goal of this paper was to relate the behavioral complexities in managing projects. Managing projects is not a straight jacket approach. Identifying key stakeholders in the project and maintaining good relationships with them ensures the success of projects. However, projects may vary in their levels of complexity, and the salience of stakeholders may shift during the project lifecycle in certain types of projects. An important strength of this paper lies in examining whether and how the salience of stakeholders may shift across different types of projects. Such an understanding of temporal shifts in stakeholder salience may be extremely useful for theoretical development in the field as also for the practicing managers.

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