Boundary-Spanning Behaviors of Leaders and Project Team Performance: A Study on Software Projects of Punjab- Pakistan

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ABSTRACT

In recent times research and interest about the dynamics of boundary management in projects and its impact on team is increased. But the recent explorations seem to lack empirical evidence on understanding the particular behaviors of a leader, which may affect the team performance positively and are frequently used by project managers. In Pakistan, where software project managers face ever-changing environment and they have to manage both inner and outer boundaries; it is of great importance to know which boundary-spanning behaviors are more practical to implement. For this very reason, this study is focused to analyze particular boundary spanning behaviors which have positive impact and can improve project team performance. Boundary-spanning behaviors used by project leaders include buffering, representing, collaborating, negotiating and external monitoring. Considering the sample of 85 project leaders, the results show that all boundary spanning behaviors have positive influence on project team performance and they are highly significant for the team performance. Negotiation is the most important and prominent behavior among all boundary spanning behaviors. Furthermore, the results reveal that all the behaviors have positive impact on team performance.

KEY WORDS: Leadership, Boundary-spanning behaviors, project leader, project team performance

1. INTRODUCTION

Project managers who are responsible to manage with ever-changing environment inside and outside the organization, their interactions and communication within and outside the organization to the participants and stakeholders have been found to result in conflict that may influence project team performance [47, 36, 24, 38]. A recent research concluded that management by inspirational motivation, contingent rewards and management by active exception have the highest effects in workplace [49]. Software project leaders more often rely on technological skills and tools to facilitate collaboration and association in project teams[25] where managing the boundaries across inter and intra organization is known as a critical factor and a challenge for the leaders that requires additional time and effort to prepare teams for success [5, 55]. One key finding from the past research studies is the saliency of boundaries that exist within organization, and only by successfully spanning these boundaries can teams begin to perform better. Researchers agree that it is important for organizations to focus on both relationships between organizations and the external environment [4]. Aldrich and Herker [4] define boundary spanning roles as connecting “organizational structure to environmental elements, whether by buffering, moderating, or influencing the environment.”

Where the environment is treated as information available to the organization through search or exposure. A survey was conducted by Ancona and Caldwell [3], the result they found was, there is a positive correlation between boundary spanning management within and outside organizations, and performance of the team. But in a research conducted by Chevrier [10], he found that project managers often do nothing when they faced boundaries which can contribute to an overall reduction of project and its team performance. Therefore, it is important to note here that the role of a leader, who is usually a project manager in software project, is of great importance. All the roles and the behaviors a project manager depicts are critical to project team performance which ultimately is the responsible for the success or the failure of the project.

Research on the role of project managers to manage boundaries through boundary spanning behaviors in projects is much less robust. Therefore, since little is known about the role or leader and impacts of boundary spanning behaviors in software projects, this research targets that existing gap.

Research Question:
Do boundary spanning behaviors influence project team performance positively?

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2. LITERATURE REVIEW

Project manager’s leadership style and behaviors makes a prominent difference due to their fundamental role in planning, coordination, conflict management and many other significant aspects of project management [44]. Being responsible for the entire team and beyond team-oriented leadership roles, project leaders bring value through their skills and talent to manage key relationships inside as well as outside the team. Certainly, overall project performance and the performance of the team working for a project, is dependent highly on access to external resources, coordination with stakeholders and support from top management and other management who influence the project and its performance throughout project life [3]. Tushman and Katz [48] denoted this behavior of the project leader as boundary spanning behavior. Research on team management recently has revitalized this concept [19, 28, 39, 40, 45] and elucidated the overall impact of boundary spanning role on project performance. Nevertheless, its impact on team performance is still not in focused. For instance, what types of boundary-spanning behaviors have the greatest impact on project performance and do they all influence the performance of the team? To the best of my knowledge, till now, previous studies have focused either on one type of boundary spanning behaviors, for example, searching for external knowledge [45] or considered boundary spanning as a single activity with no distinction between different types of behavior. This research was designed to try and fill this gap by developing the conception that particular boundary-spanning behaviors are beneficial and leader plays a very significant role in improving project team performance. For example, concentrating on relations with external stakeholders may consume a lot of time and energy and can give more productive results if the leader utilizes his role efficiently. Although Information technology projects differ in size and scope, an essential aspect of success rests in having good leadership and effective skills in managing technical and non-technical resources including human resource. The competence of the manager of the organization determines the competence of the organization [1].

A little empirical research has been done on the role of the project leader’s behavior. A very few studies have proposed some evidence of some conceptual evaluations [40]. Some of previous research studies advocate that the abilities of a team leader to handle boundaries are related to their “organizational influence”. This perception combines informal positions and hierarchical influence [17, 46]. This study suggests a balancing observation in which boundary spanning is seen as being interpersonal in nature; therefore, the role and the personal soft skills of project leader may significantly impact the abilities of project team to successfully perform their roles. Different roles of project leaders seems to have bonds within and outside the organization that results to provide easy pathways to support and technical help as well. Some leaders have not those strong social ties, which leads to leader only struggling against the boundaries and saving resources and their time.

2.1 Boundary spanning Behaviors of leaders

In addition to influencing internal events within the energy unit, most leaders will facilitate performance with behaviors that give relevant info concerning outside events, get necessary resources and help, and promote the name and interests of the energy unit. 3 distinct external behaviors embody networking, external watching, and representing.

2.1.1 Buffering

It is necessary for many leaders to create and maintain favorable relationships with peers, superiors, and outsiders who will give info, resources, and political support [26, 30, 35, 41]. Buffering includes attending conferences, skilled conferences, and ceremonies; connection relevant associations, clubs, and social networks; socializing informally or act with network members; and exploitation relationship-building ways (e.g., finding common interests, doing favors, exploitation ingratiation). Additionally to developing their own networks, leaders will encourage relevant networking by subordinates. Buffering could be a supply of data that may facilitate different leadership behaviors; however there are potential prices if it’s overdone (e.g., time demands and role conflicts). Proof that buffering will facilitate leadership effectiveness is provided by survey studies [34, 50], by studies with incident diaries, interviews, or observation [2, 15, 37] and by comparative case studies [32, 48].

2.1.2 Representing

Leaders sometimes represent their team or organization in transactions with superiors, peers, and outsiders (e.g., clients, suppliers, investors, and venture partners). Representing includes lobbying for resources and help, promoting and defensive the name of the team or organization, negotiating agreements, and coordinating connected activities. Different terms accustomed describe this kind of leadership responsibility embody "promoter," "ambassador," and "external organizer." Evidence that representing is expounded to effective leadership is provided by analysis exploitation survey questionnaires [3, 14, 49], analysis with incident diaries and interviews [9, 15] and comparative case studies [16, 29].
2.1.3 Collaborating

Leaders of project groups have additional fortunate comes after they have spare influence to get essential resources and support from prime management [33]. For work units that have high reciprocally with different subunits of the organization or with outsiders like suppliers, clients, and distributors, it's necessary for the leaders to coordinate activities, resolve disagreements, and buffer work-unit members from interference. Prime executives got to influence external stakeholders whose confidence and support are necessary to the success and survival of the organization [18]. Collaborating conjointly includes some political ways which will be wont to influence choices relevant for a leader's unit or organization; however analysis on the employment of political ways by leaders in organizations remains terribly restricted.”

2.1.4 Negotiating

Negotiation skills are among the most important for many workers. This is especially true for those in leadership positions. The project manager might need to negotiate with contractors, suppliers, and at times consultants. [36] Negotiating is to communicate in a way that make others influence so well to contribute to attaining firm's goals. It is the listening Ability to receive and effectively process information provided by others. The primary objective of these boundary spanning behaviors is the improvement of intra- and inter-organizational collaborations and communications [44].

2.1.5 External Monitoring

This external behavior includes analyzing info concerning relevant events and changes within the external surroundings and characteristic threats and opportunities for the leader's cluster or organization. Information could also be assumed from the leader's network of contacts with outsiders, by learning relevant publications and business reports, by conducting marketing research, and by learning the choices and actions of competitors and opponents. Another term for external watching is "environmental scanning" or "scouting." The extent to those prime executives accurately understands the external surroundings of their organization are said to monetary performance [7] and its additional necessary once the surroundings are dynamic and competitive. For a team or unit in a company, the importance of external watching depends on what proportion their performance is probably going to be stricken by external events.

Likewise, the necessity to closely monitor events in different subunits is decided by dependence on them. Proof that external observation is expounded to indicators of effective leadership is provided by survey analysis [13], analysis with essential incidents and diaries [15, 37], analysis with comparative cases [20, 22, 49] and a study exploitation and government team simulation [50].

2.2 Leadership for Team Performance

Software project team leaders' behaviors are oriented towards sustaining the team coordination, protecting the team from external disruptions and observing the team from a higher level to manage its effectiveness as a self-organizing agile team. Sanjiv Augustine at al. [6] defines leaders’ roles as identifying and analyzing the practices that are not being followed and removing the obstacles to their implementation. Unlike traditional boss type leadership behavior, agile leaders are expected to be the flag carrier of the team and they should act as a role model. Burke et al. [8] found out that use of transformational leadership behaviors are positively related to perceived team effectiveness.

2.3 Project Team Performance

Project groups will increase their possibilities of success by understanding and capitalizing on totally different activity designs for characteristic and understanding the variations, developing ways that to enhance operating relationships, and achieving project success [11].

Performance in software system development has many dimensions. Within the context of project groups, efficiency could be a subjective live of team operations, and also the team’s adherence to allotted resources. Effectiveness is measured by the standard of labor made and interaction with individuals outside the team. However, some researchers argue that it's inadequate to solely use productivity to represent performance, particularly in knowledge-driven processes. Moreover, activity the performance of a software system project is complicated [42] and is multi-dimensional and task connected [21]. Therefore, a well-liked model for analyzing cluster performance proposes 3 phases for activity team performance: input, cluster method, and output. The approach uses production efficiency, member’s ability improvement, and job satisfaction to live team performance [23]. There are studies that targeted on cost/schedule management [1, 12] or project method [27] side of team performance. Teams’ performance does not add up linearly with each team member. People’s performances are highly dependent on their environment (human and material). Therefore, the preferred skillset cannot be attained by addition of people having that expertise. Teams are designed with individuals who can work together and who increase (or do not decrease)
each other’s’ performance. It is not uncommon for managers to consider team member’s important characteristics and form a balanced team. In a recent study it was concluded that the team leader should be aware of the gap between the perceptions of the team members, and this will help to neutralize the negative effect of this gap on the team’s performance. If team management and the team members deal with the gap efficiently then they will be able to improve the performance of the team and it will also improve the interpersonal relationships inside the team [10]. In addition to considerations while forming the teams, performance of teams also depends on the monitoring and control activities over the team. Traditional project management processes rely on the proven mechanisms of planning, monitoring and control of project manager to get most from the team. Moreover, decision making is more concentrated at project manager and teams are managed to decrease conflicts and increase communication.

Hypothesis

H1: Buffering has positive impact on project team performance.
H2: Representing has positive impact on project team performance.
H3: Collaborating has positive impact on project team performance.
H4: Negotiating has positive impact on project team performance.
H5: External Monitoring has positive impact on project team performance.

3. METHODOLOGY

The purpose of this study is to find out the impact of boundary spanning behaviors on project team performance. Descriptive method is used with the help of prior knowledge regarding the concerned phenomenon. Simple random sampling was used to select software companies from the list available at PASHA (Pakistan Software Houses Association) and PSEB (Pakistan Software Export Board). Data was collected from major cities of Pakistan. A well-structured Questionnaire is used which is based on variables which were used in related to current study and were used by researchers in previous studies. In questionnaire 5 point Likert scale is used where 1 used for strongly agree and 5 used for strongly disagree. The questionnaire was distributed among project managers working on software projects. From 270 questionnaires, 235 completely filled questionnaires were received back. SPSS 20.0 was used for data analysis.

4. Data Analysis

The impact of boundary-spanning leadership behaviors which are buffering, representing, collaborating and negotiating are tested in this hypothesis. All four behaviors are tested through linear regression as we want to analyze the combine effect of these behaviors on the dependent variable.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Pearson Correlation</th>
<th>p-value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buffering has positive impact on project team performance</td>
<td>.68</td>
<td>.009</td>
<td>Accepted</td>
</tr>
<tr>
<td>Representing has positive impact on project team performance</td>
<td>.54</td>
<td>.009</td>
<td>Accepted</td>
</tr>
<tr>
<td>Collaborating has positive impact on project team performance</td>
<td>.51</td>
<td>.009</td>
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</tr>
<tr>
<td>Negotiating has positive impact on project team performance</td>
<td>.86</td>
<td>.001</td>
<td>Accepted</td>
</tr>
<tr>
<td>External Monitoring has positive impact on project team performance</td>
<td>.62</td>
<td>.005</td>
<td>Accepted</td>
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</tbody>
</table>

A model was computed to measure the overall impact of all boundary-spanning leadership behaviors on project team performance. The model yields good fitness because its adjusted R² is 0.193, coefficient of the Durbin-Watson test is 1.536, and F-value is 8.003 and its P-value is .005. Thus it is concluded that the model is found to be good fit. Moreover, the model reflects that there is no problem of multi-co-linearity as the Tolerance values are ranging from 0.70 to 0.85 and VIF values ranged from 1.20 to 1.45 which shows that there is no problem of multi-co-linearity. The ANOVA table showed that the model is significant at .005 which means that model is appropriate to analyze the team performance affected by boundary-spanning leadership behavior. Value of Pearson correlation of each hypothesis is depicting that each variable has a strong positive relation with project team performance.

Overall impact of boundary spanning behaviors are calculated by taking the average of five items i.e. buffering, representing, collaborating, negotiating and external monitoring. Total 235 project managers responded to the items of boundary spanning behavior. Minimum response is 1.00 that shows agreeableness while the maximum response is 5.00 that shows strongly disagree. Majority of the managers at software companies consider that they encourage boundary spanning behavior to improve the performance of their team. The individual impact of buffering on project team performance is highly positively significant with project team performance having p-value of .009. The individual impact of representing on project team performance is highly positively significant with
project team performance having p-value of .009. The individual impact of collaborating on project team performance is highly positively significant with project team performance having p-value of .009. The individual impact of Negotiating on project team performance is highly positively significant with project team performance having p-value of .001. Having high value of significance it is the most influential behavior among all boundary-spanning leadership behaviors. The individual impact of external monitoring on project team performance is highly positively significant with project team performance having p-value of .005.

5. Conclusion:

From analysis and previous research studies, it is proved that boundary spanning behaviors are highly significant for project team performance. Among all the behaviors related to of boundary spanning behaviors, negotiating is the most influential behavior. If a project manager manages to negotiate with team, peers and stakeholders inside and outside organization, he can have a major impact on the performance of the project team. As far as boundary spanning overall management is concerned, this is obvious from the results that all the behaviors related to boundary spanning contribute a major part to improve project team performance.

By depicting boundary spanning behaviors, project managers can help improving the performance of the team working on the project. Software projects meant to face ever-changing environment whether by the team inside organization or the stakeholders outside organization. Software projects are the kind which requires a quick response to all the changes made and a prompt action to cope up with the defined change. Most importantly the specifications and scope of a software project is said to be very uncertain one as it may take many changes during the process. Technological project managers are risk takers as innovation is the key to success for these kinds of projects and are well trained to embrace change efficiently with all their soft skills. A project manager is leader who gets the things done by his team with an influence on them. This influence should be positive so that the team bring out more productivity in their work and become more focused for the success of the given project. The team who is working on the project must be aware of all the inner challenges as well as outside changing environment which could influence their performance. For this very reason it is project manager’s job to protect the team from outside pressures and interference and filter the external communications to the team so that they can perform well and up to standard and expectations of the stakeholders.

Boundary spanning behaviors by the leader also includes acting as an ambassador for the team and to get communicate in the flow with every stakeholder. Project leader also promote and manages to communicate the achievements of the team to others outside the team. These behaviors also include collaborating with others outside the team and managing and coordinating external relationships, schedules, and tasks. The most important and influential behavior is negotiating resources for the team and negotiating goals with internal and external stakeholders specifically in ever changing and challenging environment. It was also observed that analyzing information about trends, events and changes in the external environment to identify threats and opportunities for the team is also an important behavior which is relatable to boundary spanning behaviors. In short boundary spanning behaviors of leader greatly influence the project team performance positively.

6. Future Implications:

This study proposes that boundary spanning behaviors should be adopted by the project managers working on software projects to get a smooth life cycle of a project and should also be examined in different kind of projects other than software projects. Also the impact of these behaviors should also be tested in different phases of the projects having different influence and specifically on the final outcome of the project i.e. success/failure.

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The authors declare that they have no conflicts of interest in this research.

REFERENCES


