ROLE OF ORGANIZATIONAL CULTURE ON PROJECT SUCCESS

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ABSTRACT

The purpose of this study is to investigate organizational factors that contribute to project success. A survey based research is conducted with project managers to study the relationship between current and preferred organizational cultural orientation and project success. The study revealed that clan culture is significantly related to project performance, as well as internal and external business success factors. Implications of the findings for the organization and further research directions are given.

Key Words: project success, project management, organizational culture, performance

INTRODUCTION

Despite the developing tools and techniques in risk management and scheduling, as well as movements in organization structure towards heavyweight project organization, projects fail dealing with uncertainty. Projects also fail to meet time, cost and expectation targets. Software development projects for instance are known for being completed way over budget and behind schedule [8]. As more and distributed teams are engaged in projects, change in customers’ need and top management strategies and policies as well as change created by competitors and innovation become impossible to manage and affect the success of a project.

Several researchers stated the significance of organizational factors in knowledge and technology transfer and work team effectiveness [4], [7]. Firms with more flexible change oriented cultures were found associated to higher levels of technology transfer versus more stable direction oriented cultures were related to higher levels of knowledge transfer. Furthermore, an organizational culture that supports communication and cooperation between teams was significantly found related to team leader effectiveness and team member satisfaction. Janz and Prasarnphabich [10] emphasized the importance of knowledge centered culture and found a significant relationship between organizational climate and cooperative learning. Nahm et al. [13] pointed to the need of more research incorporating organizational culture as they cited the very few who did in manufacturing, specifically in manufacturing technology adoption. As these findings are promising, there is very little research conducted in the role of organizational culture in project management. Despite the extensive research in PM processes and techniques, as well as project leadership, organizational culture is largely under-examined in PM research. Therefore, the purpose of this study is to determine specifically what type of organizational culture enhances project performance and consequent internal and external business outcomes.
BACKGROUND

Organizational Culture

Organizational culture is defined as the set of values, beliefs, and behavioral norms that guide how members of the organization get work done. Many organizational factors were attributed to team effectiveness. Organizational context is defined as management processes, organizational culture, and organizational systems that exist within an organization. Doolen et al. [4] found significant and positive linear relationship between team leader effectiveness and team satisfaction and the organizational culture that supports communication and cooperation among teams. Variables used to define organizational culture were based on the parameters such as the extent to which organizational culture supports the positive inter-team interactions or the integration of the team into the rest of the organization, and the extent to which organizational culture values and supports teams and teamwork. Their study focused on production teams and addressed one business unit of a Fortune 50 high technology company.

Nahm, et al. [13] revisited the impact of organizational culture on time based manufacturing and performance. Based on a sample of 224 firms they determined what espoused values support a high level of time-based manufacturing performance. Schein’s [14] conceptualization of culture was used for cultural orientation. Schein describes a hierarchy of artifacts, underlying assumptions and espoused values to measure organizational culture. Schein’s measurement is based on constructs such as customer orientation, beliefs on investing in facilities and equipment, beliefs on working with others, etc, and asks about the perceptions of the subjects regarding these constructs. Their study showed positive relationship between customer orientation and beliefs, between beliefs and time-based manufacturing, and between time-based manufacturing and performance. Although Schein’s hierarchy provides a meaningful framework to understand the organizational culture, it lends itself more as a measure of organizational climate that is studied by the risk, reward, warmth and support dimensions. Risk is the orientation toward potentially innovative initiatives with uncertain outcomes. Reward is a measure how employee performance is recognized. Warmth is a measure of friendliness of the atmosphere in the organization. And support is a measure of the organization’s interest in the welfare of the employee [9], [11], [12].

A recent publication in PM found that the very basic assumptions of an organizational culture itself may restrain the knowledge transfer processes [6]. They claim that a project orientation in fact may restrain knowledge transfer as it leads to knowledge silos. A case study is used to underline the restraining nature of organizational culture based on Schein’s hierarchy.

This study uses the Organizational Culture Instrument (OCAI) developed by Cameron and Quinn [2]. OCAI is used to diagnose an organization’s culture, and is helpful for determining ways to change the culture. OCAI is based on a theoretical model called the Competing Values Framework (CVF). CVF was developed initially from research conducted on the major indicators of effective organizations. Two major dimensions emerged from the study that organized the indicators into four main clusters. One dimension differentiates effectiveness criteria that emphasize flexibility, discretion, and dynamism from criteria that emphasize
stability, order, and control. The second dimension differentiates effectiveness criteria that emphasize an internal orientation, integration, and unity from criteria that emphasize an external orientation, differentiation and rivalry. Together these two dimensions form four quadrants, each representing a distinct set of organizational effectiveness indicators. These indicators define the core values on which judgments about organizations are made. Each quadrant has been given a label to distinguish its most notable characteristics. Cameron and Quinn define four broad cultural orientations in organizations: clan, adhocracy, hierarchy and market. The Clan culture stresses the importance of participation, cohesion, shared values, commitment and high morale, while the Adhocracy Culture assumes that innovation and initiative lead to success and encourage entrepreneurial, creative and visionary behavior. The Hierarchical culture is characterized by a structured workplace with formal rules and policies and a focus on efficiency, timeliness, and control. The Market Culture perceives the external environment as hostile with choosy consumers and a need for the organization to be both results and production oriented.

**RESEARCH FRAMEWORK**

**Research Model and Methodology:**

![Research Framework Diagram]

Organizational Culture (CVF)
- Clan
- Adhocracy
- Hierarchy
- Market

Project / Business Success Factors
- Project Performance
  - Efficiency
  - Effectiveness,
  - Team satisfaction
- Business Performance
  - Internal (Organizational)
  - External (Market)

Figure 1. The Research Model

**Organizational Culture**

The Organizational culture assessment instrument assesses six key dimensions of organizational culture. Six questions were asked, each question consisting of four alternatives. Each of these
alternatives describes the four cultural orientations, i.e. clan, adhocracy, hierarchy and market. Users are asked to divide 100 points among these four alternatives deeding on the extent to which alternative is similar to their own organization. These responses mean that your rating your organization currently. The users rate their organization as they think what should be in five years in order to be successful. Six questions pertain to:

- Dominant Characteristics of the organization: what the overall organization is like
- Organizational Leadership style and approach that permeate the organization
- Management of Employees, the style that characterizes how employees are treated, and what the working environment is like
- Organization Glue or bonding mechanisms that hold the organization together
- Strategic Emphases that define what areas of emphasis drive the organization’s strategy
- Criteria of Success that determine how victory is defined and what gets rewarded and celebrated

These six constructs are all meaningful as they reveal what the organization and management values are, how success is defined, and what the leadership and work environment characteristics are. These six constructs are measures for diagnosing the current and preferred culture environment.

Mediating Variables:

- Type of sector
- Job title
- Years of service
- Sex
- Age
- Number of subordinates reporting directly

These variables are asked during the survey and summarized as part of the descriptive analysis results.

Outcome Variables:

- Project performance

Project success has been traditionally measured as project completion on time, within budget, and to specifications. Meeting customer expectations is added to these measures as client satisfaction and customer welfare became important. As projects are accomplished by teams, one of the measures of success is how much work team was satisfied to work together[4]. Efficiency was found loaded highest on meeting scheduled goals and on meeting budget goals. Effectiveness on the other hand is more associated with satisfaction measures. [1], [5]. Based on these studies, project performance is measured by two constructs: Project Efficiency (meeting
time, budget targets), and Project Effectiveness (meeting client expectations, team member satisfaction).

- **Business performance**

Business performance measures are adopted from Nahm et. al. study [13] where the researchers measured an organization’s performance by sales growth, return on investment, market share gain, and overall competitive position. Furthermore Dvir et. al. [5] also used similar measures for project success, such as project created a new line. Internal organization success factors are savings benefits of projects, projects resulting in sales growth, and overall business performance compared to last year.

External organization success factors are increased market share, whether the organization improved its competitive position, and organization performance compared to the best worldwide competition.

**Research Methodology:**

Surveys are distributed online to 400 project managers with a valid response return of 21.5% during 6 months of data collection period. A contact list of a local PMI chapter, PMI web site and a selected contact list form an ASQ local chapter are targeted. The sample consisted of project managers, unit or program managers or executives of information managing projects and project groups.

**Research Hypotheses:**

- H1: A significant relationship exists between organizational culture and project performance
- H2: A significant relationship exists between organizational culture and business internal and external success factors

**RESULTS**

66% of the respondents were from service sector including the government and construction. 34% were form manufacturing. 48% of the respondents were between 40 and 55 years of age. 43% had no subordinates directly reporting to them, and 23% had 4 – 10 subordinates. The distribution of culture orientation is as follows:
Table 1. Culture orientations of project managers- Mean scores

<table>
<thead>
<tr>
<th>Culture Orientations</th>
<th>Current Orientation</th>
<th>Preferred Orientation</th>
<th>Cultural Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clan</td>
<td>22.9</td>
<td>29.9</td>
<td></td>
</tr>
<tr>
<td>Adhocracy</td>
<td>16.6</td>
<td>22.6</td>
<td></td>
</tr>
<tr>
<td>Market</td>
<td>31.7</td>
<td>21.5</td>
<td></td>
</tr>
<tr>
<td>Hierarchy</td>
<td>28.8</td>
<td>26.0</td>
<td></td>
</tr>
</tbody>
</table>

As seen in Table 1, diagnosing the current cultural orientation, the most common culture is market orientation followed by hierarchy. On the other hand for the preferred culture, clan is found as the most preferred followed by hierarchy. All mean scores are statistical significant (F: 15, P<0.0001; F: 6.94, P<0.001). Further t test showed that under current culture orientations, the difference between market and hierarchy is not statistically significant. Regarding the preferred culture, the difference between adhocracy and market is not statistically significant. Whereas, the difference between clan and other orientations is significant.

The questionnaire data is analyzed by PLS Graph based on Partial least Squared Method as the sample size was 86. Table 2 shows the reliability of constructs. The composite reliability reflects the scale values while simultaneously considering other constructs in the model.

Table 2. Composite Reliabilities

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Average</th>
<th>Composite Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clan</td>
<td>0.581</td>
<td>0.893</td>
</tr>
<tr>
<td>Adhocracy</td>
<td>0.638</td>
<td>0.913</td>
</tr>
<tr>
<td>Market</td>
<td>0.682</td>
<td>0.927</td>
</tr>
<tr>
<td>Hierarchical</td>
<td>0.546</td>
<td>0.877</td>
</tr>
<tr>
<td>Project Performance</td>
<td>0.651</td>
<td>0.882</td>
</tr>
<tr>
<td>Internal Success</td>
<td>0.559</td>
<td>0.791</td>
</tr>
<tr>
<td>External Success</td>
<td>0.723</td>
<td>0.886</td>
</tr>
</tbody>
</table>

Table 3 shows the path coefficients and t values for the significant relationship. The statistical significance of the overall loadings and the standardized β’s, a bootstrap analysis was utilized [3]. The bootstrap is a nonparametric method for approximating the accuracy of the estimates derived by PLS.
Table 3. Hypotheses Testing

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Path coefficient</th>
<th>T value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project performance-Current Clan orientation</td>
<td>0.53</td>
<td>3.35***</td>
</tr>
<tr>
<td>Internal success- Current Clan orientation</td>
<td>0.49</td>
<td>3.02***</td>
</tr>
<tr>
<td>External success- Current Clan orientation</td>
<td>0.44</td>
<td>2.66***</td>
</tr>
<tr>
<td>Project performance-Preferred Clan orientation</td>
<td>0.46</td>
<td>2.55**</td>
</tr>
</tbody>
</table>

**: p < 0.05

**: p< 0.01

Based on Table 3, Hypothesis 1 stating a significant relationship between organizational culture and project success is accepted for Clan cultural orientation. The Clan culture stresses the importance of participation, cohesion, shared values, commitment and high morale. The clan culture orientation is found related to project success, i.e. timely completion of the project, the extent the budget requirements and expectations are met, and project team satisfaction. Furthermore, Hypothesis 2 is also accepted for clan culture. Organization internal success as a result of the projects, i.e. savings, sales growth, overall performance of the organizational unit compared to last year is significantly related to clan culture. Market share, improvement in the competitiveness of the organization, and unit’s performance improvement compared to their best worldwide competition were also found related to clan culture.

**CONCLUSION**

A survey based research model is designed to study the relationships of organizational culture orientations to project performance and consequent internal and external business success. Clan culture is found significantly associated with project efficiency and effectiveness as well as internal and external organizational success. Clan was also found as one of the preferred culture orientation to be related to project performance. Further analysis of this study will include the combined relationship of project management maturity and culture orientation on project success. This study contributes to project management research by revealing the role of organizational culture on project success. This finding can explain why some projects fail or do not contribute fully to the growth of the organizations. The Market culture based on results, and Hierarchical culture characterized with formal rules and policies do not seem to contribute to project success. It is deceiving however that adhocracy culture that assumes innovation, creative and visionary behavior does not seem to play a role in project success. Further studies should
investigate this. This study showed that more orientation towards clan culture will help to improve project success. This means increased employee empowerment and participation & involvement of the teams, more cross-functional teamwork, more horizontal communication and caring climate, and more recognition for employees will have a positive influence on how projects successfully completed and put the business in a better competitive situation. For clan type of culture, managers are to be competent in managing teams, interpersonal relationships, and development of others. Managers should facilitate effective cohesive, smooth functioning high performance teamwork. Managers should also facilitate effective interpersonal relationships, and help individuals improve their performance, expand their competencies, and obtain personal development opportunities.

REFERENCES


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