THE EFFECT OF RELATIONSHIP CONFLICT AND PROCESS CONFLICT ON TEAM LEARNING PERFORMANCE: WHICH IS MORE IMPORTANT

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ABSTRACT

This study explored the effects of relationship conflict and process on team learning performance, exploring which one is more important, in a Chinese cultural context. A survey instrument was sent to 500 R&D team members in the R&D departments of 100 high-tech firms in Taiwan. Usefulness analysis of hierarchical regression analysis was performed on the data, showing that relationship conflict and process conflict which one has more effect on team learning performance. Results showed that relationship conflict has a greater effect on team learning than process conflict. The implications for managers to manage team is discussed.
INTRODUCTION

Flat organizations enable many enterprises to react effectively to environmental changes, satisfy consumer demand, and cope effectively with technological advances, globalization and competition. Although such teams may increase organizational competitiveness, they also may also be a source of conflict. Understanding how conflicts take place within teams is an important management task.

Three types of conflict styles have been identified: task conflict, relationship conflict, and process conflict (Jehn, 1994). Studies of conflict within teams have pointed to cognitive style as an important factor in shaping and moderating team internal conflicts. Although researchers originally categorized task conflict as positive conflict, and relationship and process conflict as dysfunctional, recent work suggests that task conflict may be negative or positive, depending on the nature of the task given to the team. Decision-making teams and project teams both operate under high uncertainty and high complexity. Task conflict in such circumstances may have a positive effect. By contrast, task conflict in teams engaged in simple or routine tasks is generally dysfunctional (De Dreu & Van Vianen, 2001; De Dreu & Weingart, 2003).

In this study we examine research and development teams, which operate under high uncertainty and high complexity. Hence, task conflict should be positive. In Taiwan, team internal conflicts are shaped by the particularities of Chinese cultural patterns of conflict management, as well as by traditional and modern business practices. There is a greater emphasis on face in Chinese society, both one’s own and that of others, and a greater emphasis on maintaining the appearance of tranquility in interpersonal relationships than in Western society (Chen & Francesce, 2000; Hwang, 1987; Park & Luo, 2001; Xin & Pearce, 1996). A crucial concept for understanding how the Chinese view interpersonal relationships is that of guanxi. Guanxi refers to the network of interpersonal relationships including task roles, friendships and social relations, which facilitate an individual’s personal and organizational goals (Wright, Szeto & Cheng, 2002).

Guanxi is an important factor in successful team and individual performance in the Chinese business world; without guanxi performance is seriously impaired (Chen & Francesce, 2000; Xin & Pearce, 1996). Guanxi emphasizes trust and frequent interaction (Chen & Francesce, 2000; Hwang, 1987; Park & Luo, 2001; Xin & Pearce, 1996). Because of its network structure, guanxi not only intensifies team conflicts but ensures that sooner or later any team conflict will become a relationship conflict. Based on this observation, relationship conflict ought to have more impact on learning performance than process conflict, in Chinese society.

Taiwan is home to many high-tech firms whose industries are characterized by short product life cycles, high job complexity, intense competition, rapid technological change,
and emphasis on research and development. In Taiwan these firms stress team learning and reduced product R&D times as important strategies in enhancing firm competitiveness. This study investigates and analyzes team members in the R&D departments of Taiwanese high-tech firms in order to study the effects of relationship conflict and process conflict on team learning performance within a Chinese cultural context.

THEORETICAL BACKGROUND AND HYPOTHESES

Conflict and Team Learning Performance

Studies of learning performance have found that team learning performance is a part of overall team performance (Amason & Mooney, 1999; Amason, 1996; Hackman, 1990; Vinokur-Kaplan, 1995). Hackman (1990) suggested that indices of quality of team output could be used to measure team learning performance. Vinokur-Kaplan (1995) further defined these indices as decision-making, problem solving capacity and creative capacity. Individual learning performance has been defined as accommodation and assimilation of information to individual cognitive capacity, resulting in cognitive capacity improvement (Banks & Millward, 2000; Edmondson, 1999; Hinsz, 1995). Thus, for the purposes of this study, learning performance includes creativity, problem solving capacity and accommodation and assimilation of information (Banks & Millward, 2000; Edmondson, 1999; Eskildsen, Dahlgaard & Norgaard, 1999; Hinsz, 1995).

Conflict among team members is divided into three types, task conflict, process conflict and relationship conflict (Jehn & Mannix, 2001). Process conflict stems from ambiguities in the principles used to delegate tasks, responsibilities and resources (Jehn, 1994). Relationship conflict, also called affect conflict (Jehn & Mannix, 2001), depends on individual factors in interpersonal relationships (Amason & Mooney, 1999; Cappozzoli, 1999; Jehn & Mannix, 2001; Rahim, 2002; Verderber & Verderber, 1995). As we have already mentioned, task conflict is positive when the task is one of high uncertainty or high complexity. Since this research investigates R&D teams, which operate under high uncertainty and high complexity, task conflict is not investigated in this research.

Studies show that process conflict and relationship conflict are dysfunctional conflict types, with a negative effect on learning performance (Amason, 1996; De Dreu & Weingart, 2003; Jehn & Mannix, 2001; Simons & Peterson, 2000). Relationship conflict is an awareness of interpersonal incompatibilities, including affective components such as feelings of tension and friction. It also involves personal issues such as dislike among team members and feelings such as annoyance, frustration, and irritation (Amason &
Mooney, 1999; Jehn & Mannix, 2001; Verderber & Verderber, 1995). In Chinese society, as we have seen, relationships are governed by concepts of face and guanxi, with guanxi itself an important source of conflict. Given this strong emphasis on proper management of interpersonal relationships in Chinese society, process conflicts tend to evolve into relationship conflicts. We thus propose that relationship conflict has more impact on team learning performance than process conflict in Chinese society.

Hypothesis : Relative to process conflict, relationship conflict will be a stronger predictor of learning performance.

METHODS

Samples and Procedures

The Taiwan government’s definition of “high tech firm” was used to identify high tech firms among Taiwan’s Top 500 companies. A total of 237 such firms were identified. From that population 100 companies were selected by random sampling, weighted to reflect the relative proportion of firm types in the study population.

Five questionnaires per company (total=500) were mailed out. The instructions asked that the questionnaires be filled out by members of R&D teams. 241 questionnaires were returned, an effective return rate of 48.2%. Thirteen questionnaires were incomplete or otherwise invalid, leaving 228 valid questionnaires.

Measures

Two questionnaires addressing conflict including relationship conflict and process conflict, and team learning performance were used as the source of empirical data for the statistical analysis. A principle factor analysis with oblique rotation was used.

Conflict including relationship conflict and process conflict, was measured by Jehn & Mannix’s (2001) and Amason’s (1996) conflict types scale. Five items gauged the level of relationship conflict; Cronbach’s $\alpha$ was .92 and explained 76.9% of the variation. Three items gauged the level of process conflict, Cronbach’s $\alpha$ was .87 and explained 89.6% of the variation. The response format was a 5-point Likert scale with scores ranging from 1 = “none” to 5 = “a great deal”.

Team learning performance was measured with scales developed by Banks & Millward (2000), Hackman (1990), Hinsz (1995) and Vinokur-Kaplan (1995). Sixteen items gauged the level of learning performance; Cronbach’s $\alpha$ was .92 and explained 62.3% of the variation. The response format was a 5-point Likert scale with scores
ranging from 1 = “none” to 5 = “a great deal”.

Analysis

To examine a variable’s unique contribution to learning performance, we conducted a usefulness analysis (Darlington, 1968; Trembley & Balkin, 2000). Specifically, relationship conflict and process conflict were separately entered into a hierarchical regression equation in separated steps and in reverse order. A usefulness analysis of hierarchical regression analysis was used to test Hypothesis.

RESULTS

Descriptive Statistics

The means, standard deviations and correlations for all of the variables are presented in Table 1. Table 1 shows that many of independent variables were intercorrelated. The remedy for multicollinearity was modification of independent variables using orthogonal residual method in order to diminish statistical errors.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Samples</th>
<th>Mean</th>
<th>s.d.</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.Relationship conflict</td>
<td>228</td>
<td>2.20</td>
<td>0.78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.Process conflict</td>
<td>228</td>
<td>2.38</td>
<td>0.80</td>
<td>0.74</td>
<td></td>
</tr>
<tr>
<td>3.Team learning performance</td>
<td>228</td>
<td>3.93</td>
<td>0.46</td>
<td>-0.34</td>
<td>-0.34</td>
</tr>
</tbody>
</table>

Note: p<0.05(r>=0.12); p<0.01(r>=0.17).

The relationship effect

Table 2 shows the comparison of the unique contributions of relationship conflict and process conflict in predicting variance in learning performance. Relationship conflict was entered first, followed by the process conflict. Results showed that when relationship conflict is entered first, process conflict has no significant explanatory effect on variations in learning performance (change in $R^2 = .001$). By contrast, the relationship between relationship conflict and learning performance is significant even when process conflict is entered first (change in $R^2 = .064$, p<.000). This supports Hypothesis. The results showed that relationship conflict is more strongly related to learning performance than process
conflict.

Table 2
Usefulness analysis: effect of relationship conflict and process conflict

<table>
<thead>
<tr>
<th>Variables</th>
<th>Learning performance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>□ R²</td>
</tr>
<tr>
<td>Step1 Relationship conflict</td>
<td>.114***</td>
</tr>
<tr>
<td>Step2 Process conflict</td>
<td>.001</td>
</tr>
<tr>
<td>Step1 Process conflict</td>
<td>0.051**</td>
</tr>
<tr>
<td>Step2 Relationship conflict</td>
<td>0.064***</td>
</tr>
</tbody>
</table>

Note: *P < .05 , **P < .01 , ***P < .001

DISCUSSION

The purpose of this study was to identify the impact of relationship conflict and process conflict on team learning performance. Our finding is relationship conflict is more significantly correlated with team learning performance than process conflict. The results support Hypotheses.

We found that relationship conflict is a more significant predictor of learning performance than process conflict. This is consistent with the findings and predictions of Chen & Francesce (2000), Hwang (1987), Park & Luo (2001), and Xin & Pearce (1996) regarding the perceived importance of relationships in Chinese society. However, without an extensive database of results from other societies, it is difficult to substantiate this explanation.

IMPLICATIONS

The participants of this study are team members of research and development department in Taiwanese high-tech companies. Our results showed that relationship conflict had a higher impact on learning performance than process conflict in Chinese society. Robbins (2003) argued that in order to reduce relationship conflict, managers could build up team status, promote team efficacy, and enhance interactions among team members to advance team cohesion and improve compatible climate and trust among members. We are not so certain that increasing the depth of relationships among team members is the right answer in a Chinese context, since relationship conflict is an importance obstacle for learning performance. Perhaps more could be achieved by increasing the distance between team members, keeping relations more “professional”
and less “personal,” and reducing the level of personal investment in professional relationships.

Research participants were individual members in R&D teams in high-tech industries in Taiwan. Keller (1992, 1995) and Shin and Zhou (2003) divided the job tasks of R&D into two types, research and development. Our study looked at individual members in firms in fields where most of the companies are engaged in OEM/ODM work, with a strong emphasis on the development side of R&D. Thus, our results may have wide application to high-tech industries in Taiwan, South-East Asia and Mainland China.

Future studies should focus on the effects of moderating factors, such as team compositions or job complexity (Robbins & Fredenall, 2001; Wiersema & Bird, 1993; Shaw, 1983), should be explored in subsequent studies.

REFERENCES


Eskildsen, J. K., Dahlgaard, J. J. & Norgaard, A. (1999). The impact of creativity and


