

INVESTIGATION OF CONSTRUCTION CONFLICT RESOLUTION IN HONG KONG

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Conflict cannot be avoided, but must be managed. An optimum level of conflict enhances productivity and, subsequently, improves the participant's satisfaction. Based on the conflict management knowledge and two-factor satisfaction theory, a cyclical conflict management model is developed in the paper. A questionnaire survey has been conducted to investigate the relationship between the conflict resolution behaviour and the satisfaction levels of client representatives and contractor representatives. The results indicate that both compromise and collaboration conflict resolution styles significantly correlate to the satisfaction level of client and contractor representatives (refer hypothesis 1), while client is dissatisfied with the avoidance resolution style in the management process (refer hypothesis 2). Besides, satisfaction levels of contractor representatives towards their own accommodation resolution style differ from the satisfaction levels of client representatives towards the contractor representative's accommodation resolution styles and vice versa (refer hypothesis 3).

Keyword: conflict management, behavioural conflict resolution, satisfaction, client, correlation coefficient, model

INTRODUCTION

The construction industry is a labour intensive industry which involves extensive human interactions, therefore conflict often arises between the participants in the construction projects. An appropriate conflict management approach can assist project manager to co-ordinate the works effectively (Hamouid 1996). Conflict management improves participants' satisfaction through the decision making process and the implementation process. In construction industry, the project participants include client, project manager, architect, engineer, contractor, sub-contractor, etc. Broadly, they can be classified into two main groups: (1) client and client's representative (e.g. architect, engineer, quantity surveyor); and (2) contractor and contractor's representative (e.g. contractor project manager, site agent, contractor quantity surveyor). Based on these two groups, relationships between the behavioural conflict resolution styles and the levels of satisfaction are investigated in this paper.

CONFLICT MANAGEMENT

The sources of conflicts in the construction industry are generally divided into five categories, namely contract (Hills 1995), design (Degoff, 1985), economic, management and time (Adrian, 1981). In this paper, 'conflict' is defined as an incompatible interactive process at latent and overt level where the divergent interest, group and organization in the construction processes exceeds the threshold level of intensity (Rahim 1986). Due to the intensive interaction amongst the project

participants, conflict management is an important factor in the entire project management processes. As mentioned by Ban (1995), 'conflict is like water: too much cause damage to people and property; too little creates a dry, barren landscape devoid of life and colour. We need water to survive; we need an appropriate level of conflict to thrive and grow as well'.

Conflict management involves two stages: diagnosis and intervention:

Diagnosis

The aims of diagnosis are to reveal the conflict in an organization and to ensure an appropriate conflict resolution style applied by the participants (Rahim 1992). Diagnosis consists of measurement of conflict, investigation of sources, and analysis of the relationships between the level of conflict and the organizational effectiveness, etc. The results of diagnosis should indicate whether it is necessary to apply conflict management and which type of intervention should be applied (Rahim 1986). Therefore, diagnosis aims at explicitly identifying the causes and effects of conflict in the organization.

Intervention

Intervention is required if there is too little or too much conflict or the conflict is not handled effectively (Rahim 1986). A proper diagnosis should give a clear indication for the intervention approach. Generally, there are two basic approaches to intervene the conflict: behaviour of individual and structure of organization.

Structural intervention aims at resolving the conflict by changing the organizational structure. It includes differentiation and integration mechanisms, hierarchy, procedures and reward systems. Structural design of an effective organization should be consistent with the nature of task, technology and environment (Lawrence and Lorsch, 1967). The greater the congruence among these factors, the more effective is the management of conflict. However, there is no perfect structural design for all organizational structures. Indeed, it is difficult to alter the matrix and the complicated organizational structure in the industry.

The behavioural approach attempts to improve organizational effectiveness by changing members' culture – attitudes, values, norms, beliefs, etc. Behavioural interventions are designed to help the organizational participants apply appropriate resolution behaviour styles for searching the 'real' causes of conflict and reaching the functional solutions in the management processes.

In summary, conflict management not only refers to maintaining an optimum level of conflict but also involves resolving conflict with appropriate resolution styles of behaviour (Rahim 1986). Intervention may not be required if the diagnosis shows optimum level of organizational conflict with appropriate conflict resolution style.

THE MODEL

The Construction industry is a project-based industry. During the construction period, construction team members such as project manager, architects, engineers, quantity surveyors, main contractors and sub-contractors are drawn from different firms in order to form a matrix organizational structure for the particular project. 'The firms involved in each project are independent companies, which are organizationally interdependent in term of project. This situation creates a potential for conflict between the needs of each firm and of each project' (Walker 1989: 105-122). Conflict

may arise between the needs of individual firms and the needs of projects. Actually, it is difficult to fulfil the needs of all participants for the particular project.

Underpinning the behavioural conflict management and two-factor satisfaction theory, a cyclical conflict management model is developed in this paper for the construction industry (see Figure 1).

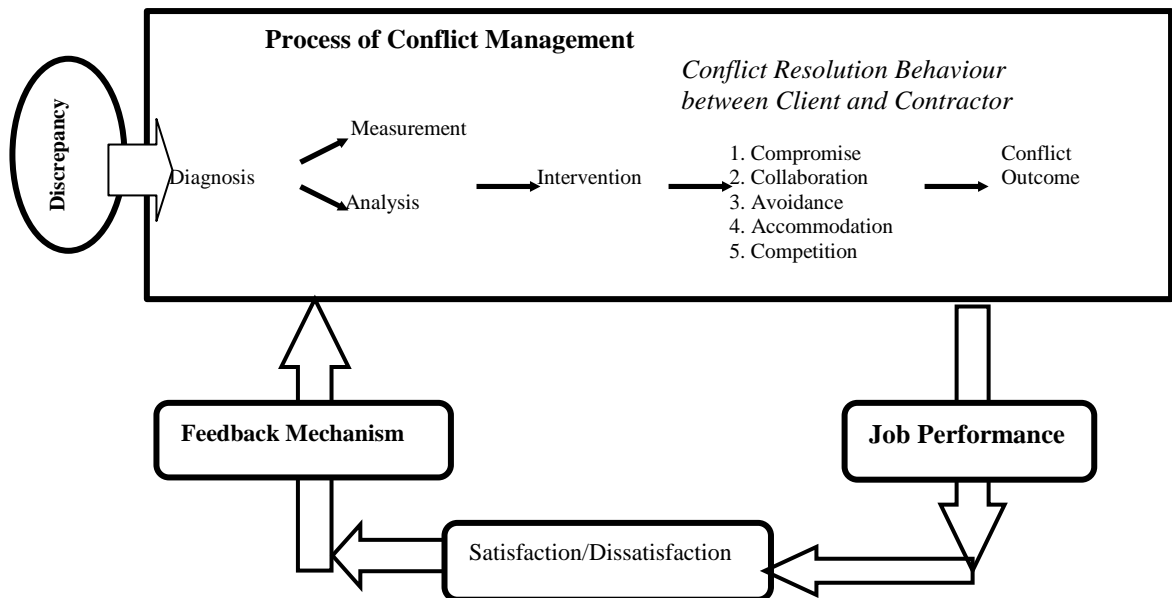


Figure 1: A Cyclical Conflict Management Model

In this model, conflict management is divided into two cardinal steps:- diagnosis and intervention. Diagnosis consists of measurement and analysis stages for identifying the conflict in the organization, while intervention includes behavioural and structural approaches for setting the optimum level of conflict. For the behavioural approach, conflict can be solved assertively (concern for self) or co-operatively (concern for others). Based on these two dimensions, five conflict resolution styles are classified, namely collaboration, compromise, accommodation, competition and avoidance. An optimum level of conflict leads to high job performance, while too high or too low level of conflict cannot improve job performance and participant satisfaction. In the cyclical model, level of satisfaction is a feedback mechanism influencing potential conflict among the parties in subsequent tasks.

BEHAVIORAL CONFLICT RESOLUTION

In order to obtain an optimum level of conflict in the management processes, the five conflict resolution styles are classified in two dimensions: 'concern for others' (cooperativeness) and 'concern for person' (assertiveness) (Thomas and Kilmann 1974; Rahim 1986; Boulding 1962) (see Figure 2).

Competition Resolution Style

This is a win-lose style. the participants are highly concerned for self and lowly concerned for others. The dominating person frequently utilize the formal authority of a mutual superior. He/she often goes all out to win his or her objective and ignores the needs and expectations of other parties.

Collaboration Resolution Style

This is a win-win style. The participants are highly concerned for self and for others at the same time. In this situation, the parties aim at solving the problem and clarifying the differences amongst the parties by assertive and co-operative conflict-handling method, e.g., openness, exchanging information and reaching a solution accepted by all parties.

Avoidance Resolution Style

This is a lose-lose style. A person may recognize the conflict in the project but simply withdraw or suppress it in the conflict resolution process. The relationships amongst the parties are easily broken down by this unassertive and uncooperative conflict-handling style.

Accommodation Resolution Style

This is a lose-win style. A person, 'conflict absorber', neglects his or her own concern to satisfy the concern of the other party. This unassertive and co-operative style can maintain the relationship between the parties in the decision process, but it is difficult to simulate the latent conflict for further discussion and selection. Feelings of hostility may be hidden in the group discussion.

Compromise Resolution Style

This style emphasizes sharing and does not have clear winner or loser. In the decision, each party gives up parts of their opinions for compromise. A compromising party gives up more than a dominating but less than an obliging party.

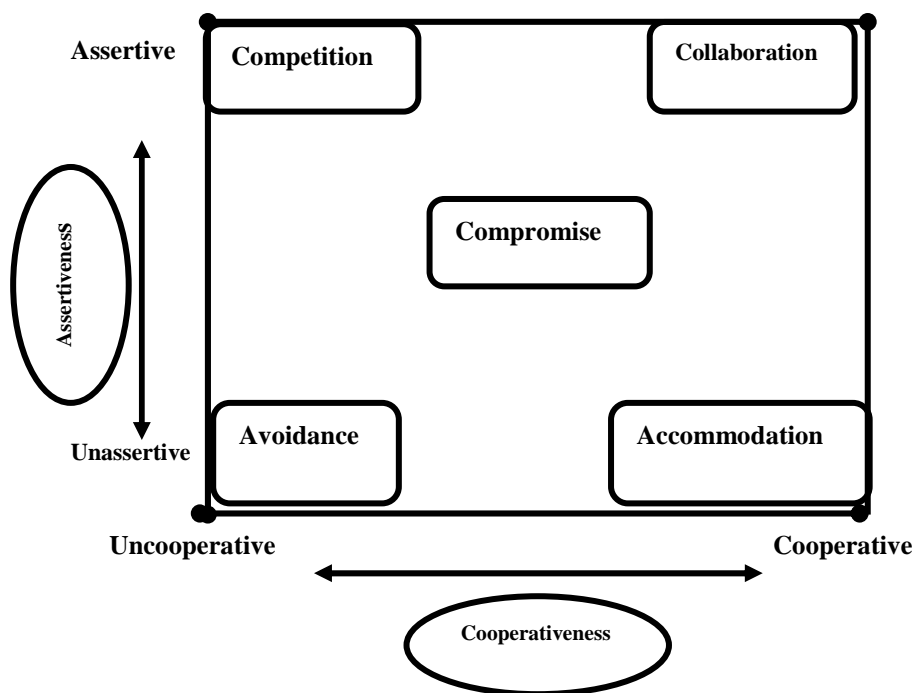


Figure 2: Two-dimensions of Conflict Resolution Styles (Note: Thomas and Kilmann 1974; Rahim 1986)

Nowadays, Interactionist view of organizational conflict (Miles 1980) is the most acceptable conflict management concept. Although some theorists regard antithesis comments on the organizational conflict, interactionist view still stresses the function

of conflict. According to the Interactionist view of organizational conflict, conflict involves two possible outcomes - functional and dysfunctional. Conflict is necessary as the benefit could be obtained from the encouragement of opposition. Functional conflict supports the goal set and improves the job performance. Reducing conflict may lead to reduce the effectiveness or certainty of top management group (Rahim 1986), but too much conflict may break the relationship amongst the project team members. Dysfunctional conflict may obstruct group behaviour and performance in the implementation process. Conflict management is, thus, aimed at achieving an optimum amount of conflict for leading to the functional outcomes.

CONFLICT SATISFACTION

Conflict is an essential factor influencing the job performance and the participants' satisfaction. Satisfaction is defined as an individual's perception to the value that the job provides, which is a function with weighting on different aspect of the job, resulting from the appraisal of the personal value. The level of satisfaction depends on the differences between the actual performance and the expected performance of an individual. When determining the level of satisfaction, factors could be classified into satisfaction primary factors and dissatisfaction primary factors. Two-factor satisfaction theory (Herzberg 1957) suggests that there is a continuous range from satisfaction through neutral to dissatisfaction. Different facets influence feelings of satisfaction and dissatisfaction. Either low level of satisfaction or dissatisfaction leads to affective psychological conflict, e.g., incompatible feelings and emotion amongst the participants, in the subsequent task.

Based on the developed cyclical conflict management model, three hypotheses are established in this paper for investigation of the relationship between the behavioural conflict resolution and the satisfaction.

Hypothesis 1: Contractor representative and client representative are satisfied with both compromise and collaboration resolution styles.

Hypothesis 2: Client representative are dissatisfied with avoidance resolution style.

Hypothesis 3: The satisfaction level of contractor representative towards his/her own accommodation resolution style differs from the satisfaction levels of client representative towards the contractor representative's accommodation resolution styles and vice versa.

QUESTIONNAIRE SURVEY

Two sets of questionnaires were prepared and distributed to 45 Contractor Representatives and 55 Client Representatives respectively. In this paper, general and specialist contractors represent the contractors' opinion, while consultants including Architect, Engineer and Quantity Surveyor represent client's comments. The validity percentages are 60% (27) for Questionnaire I (contractor representatives) and 45.5% (25) for Questionnaire II (client representative).

In order to investigate the relationships between the conflict resolution styles and the satisfaction levels of contractors and clients, the correlation coefficient technique is used in the data analyses.

Table 1 shows that there is significant correlation between the compromise resolution styles and the satisfaction levels of contractor (+0.385**) and client (+0.744**); and between the collaboration resolution styles and the satisfaction levels of contractor

(+0.408**) and client (+0.566**). In contrast, avoidance, competition and accommodation styles dissatisfy both contractor and client.

Table 1: Correlation Coefficient for Hypothesis I

| Conflict Resolution Behaviours | Contractor Representative | Client Representative |
|--------------------------------|---------------------------|-----------------------|
| Compromise Style | +0.385** | +0.744** |
| Collaboration Style | +0.408** | +0.566** |
| Avoidance Style | -0.217 | -0.508** |
| Accommodation Style | -0.129 | -0.285 |
| Competition Style | -0.334 | -0.532** |

[Note: * - correlation is significant at the 0.05 level; and ** - correlation is significant at 0.01 level.]

Table 2 indicates detailed relationship between satisfaction levels of client representative and contractor representative towards both client’s resolution styles and contractor’s resolution styles. According to the results in table 2, both client and contractor are satisfied with compromise and collaboration styles. Therefore, the hypothesis I for the correlation between compromise style and satisfaction level and between collaboration styles and satisfaction level are supported in this study.

Table 2: Correlation Coefficient for Hypothesis II

| Conflict Resolution Behaviours | Contractor Representative’s Conflict Resolution Styles | | Client Representative’s Conflict Resolution Styles | |
|--------------------------------|--|--|--|--|
| | Contractor Representative’s Satisfaction Level | Client Representative’s Satisfaction Level | Contractor Representative’s Satisfaction Level | Client Representative’s Satisfaction Level |
| | A: | B: | C: | D: |
| Compromise Style | +0.442* | +0.788** | +0.473* | +0.727** |
| Collaboration Style | +0.522** | +0.566** | +0.617** | +0.573** |
| Avoidance Style | +0.030 | -0.577** | +0.058 | -0.726** |
| Accommodation Style | -0.480* | +0.546** | +0.115 | -0.471* |
| Competition Style | -0.013 | -0.533** | -0.368 | -0.394 |

Note: * - correlation is significant at the 0.05 level; and ** - correlation is significant at 0.01 level.

Avoidance style does not have significant relationship with the satisfaction level of contractor representatives, but table 2 shows that it has significant negative correlation with the satisfaction level of client representatives (-0.726**). Moreover, the client representative are dissatisfied with the contractor’s avoidance style (-0.577**). Therefore the hypothesis 2 is supported, i.e. client are dissatisfied with the avoidance resolution style in the management process.

At the same time, the correlation between contractor’s accommodation style and contractor’s satisfaction level and between client’s accommodation style and client’s satisfaction are significantly negative (-0.480* and -0.471* respectively), while the correlation between contractor’s accommodation style and client’s satisfaction level is significantly positive (+0.546**). The results indicate that either client or contractor representatives do not want to give up all of his /her concerns to satisfy the other party. This survey supports the hypothesis 3 for the correlation between accommodation resolution style and level of satisfaction.

In summary, the results of the three hypotheses are illustrated in figure 3.

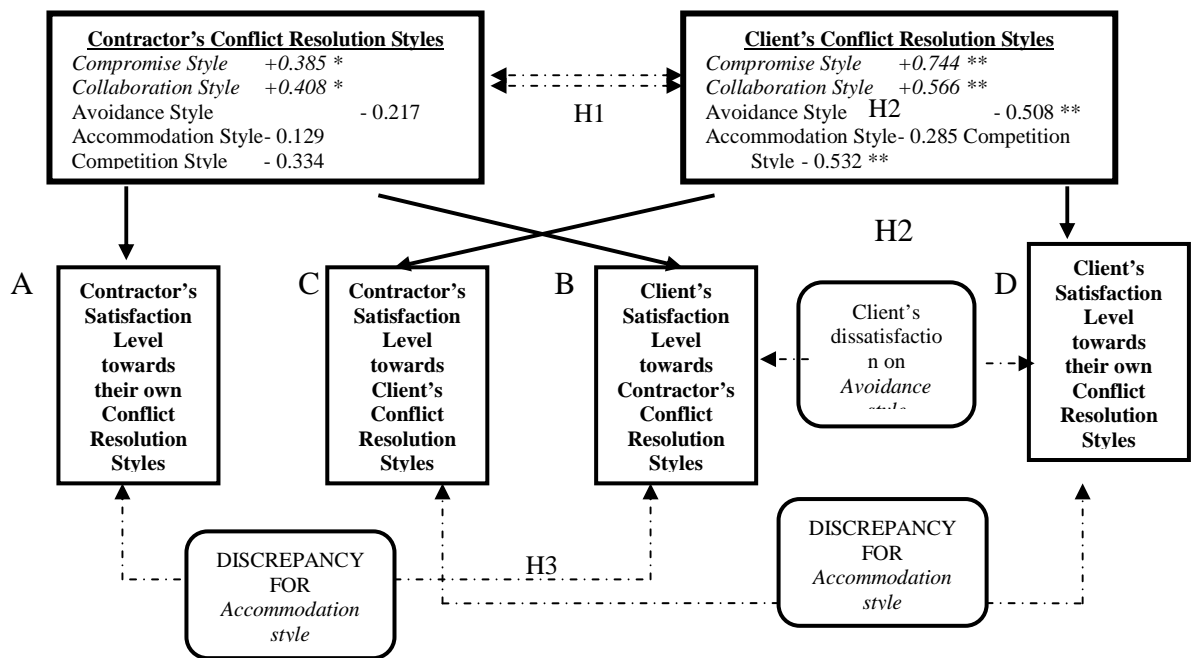


Figure 3: Summary of the Results

[Note: H1-H3 refer the hypotheses; A-D refer the columns listed in Table 2; (+ xxx) = positive correlation coefficient; (- xxx) = negative correlation coefficient; * = correlation is significant at the 0.05 level; and ** = correlation is significant at 0.01 level]

DISCUSSION

As mentioned, conflict cannot be eliminated but must be managed. In the construction industry, conflict often exists amongst the project team members, especially between the client and the contractor. Conflict functionally and dysfunctionally influences project productivity, job performance, turnover rate, organizational commitment, etc. An Optimum level of conflict leads to high level of participants' satisfaction in the management process.

Behavioural conflict resolutions are classified into five styles, namely avoidance, compromise, competition, collaboration and accommodation. Collaboration and compromise styles are considered as efficiency conflict resolution styles between the client and the contractor representatives, because they solve the conflict by co-operative attitude. For these resolution styles, project participants can solve critical conflict on time, reduce additional cost for arbitration and improve the entire project quality. The construction industry is a high technology industry, collaboration and compromise styles provide an opportunity for the project participants to share and discuss of the problems for improvement of the project productivity and performance.

Accommodation resolution styles cause dissatisfaction of client and contractor representatives. Arbitration, alternative dispute resolution, etc. may be involved in the competition styles, due to the difficulties in achieving on a common goal or decision amongst the participants. Therefore, longer period, extra cost and additional manpower are often required in this kind of conflict resolution style. For the accommodation style, affective conflict such as incompatible feelings and emotion may easily be aroused amongst the participants, because the person (either client or

contractor) often neglect his or her own concern in order to satisfy the concern of other party.

Avoidance style is considered as a negative approach for the conflict resolution. A person may recognize that a conflict exists but merely reacts by withdrawing or suppressing the conflict. In modern construction industry, all parties should stimulate and solve the conflict pro-actively, therefore the client and client representatives are dissatisfied with this behavioural style in conflict management process. Indeed, it is difficult to obtain function outcome by adoption of avoidance style for conflict resolution.

CONCLUSION

This paper shows that compromise and collaboration conflict resolution styles cause high levels of satisfaction for the client representative and the contractor representative. Therefore, compromise and collaboration conflict resolution styles are recommended to the construction participants in the decision making process due to the higher level of satisfaction for both client and contractor representatives.

At the same time, the survey indicates that client are significantly dissatisfied with the avoidance resolution style in the conflict resolution process for construction projects. Both parties are dissatisfied with the accommodation conflict resolution styles applied by them but satisfy that style applied by the other party. It reflects that, in construction industry, both client and contractor expect the other party to give up his/her views and follow his/her opinion in the decision making.

However, since only a limited sample size is collected in this study, further research with an increased sample size is recommended in order to support the relationship between the behavioural conflict resolution styles and the satisfaction of client and contractor representatives.

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