TEN MANAGEMENT STRATEGIES TO AVOID CONSTRUCTION CONFLICTS

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ABSTRACT: The conflict problems encountered in the construction projects led to prolonged delays in implementation, interruptions and sometimes suspension. This paper has described ten fundamental management principles to avoid conflicts in construction field and increase the productivity. They are: i) hire good (not cheap) construction professionals ii) set reasonable time and cost goals iii) recognize contractors and designers are in business to make profit iv) draft a clear contract document v) pick a suitable project delivery system vi) implement a front-end approach vii) accept construction project as a dynamic process viii) need of education and training of professionals ix) accountability and teamwork in construction site, and x) avoid negligence.

Kew Words: Construction, Conflicting factors, Conflict avoidance, Management strategies, Successful completion.

1. INTRODUCTION

Complexity in the construction project is increasing year by year [1], hence in a complex construction work; conflict could be inevitable due to its various relationships and activities. According to Cheeks [2], the best laid plans cannot anticipate all of the contingencies that are possible; adjustments to the design are virtually inevitable; external events such as material shortages or labor stoppages cannot be predicted; the plans and specifications are prone to multiple interpretations; and misunderstandings are part and parcel to human transactions.

The complexity of construction industry has been often found resulted in complex disputes, which predominantly arise from the composition and magnitude of the work, multiple prime contracting parties, poorly prepared and/or executed contract documents, inadequate planning, financial issues, and communication problems [3]. Construction disputes should never escalate into litigation as construction litigation cost is expensive as well as process is lengthy [4]. Even any one party wins the case after a long time of litigation the winner could not taste the win enthusiastically. Therefore, the contracting parties require looking for conflict avoiding measures in their projects.

The purpose of this paper is to discuss about simple conflict preventing or avoiding approaches. The rationale behind these objectives was to propagate the concept of "prevention is better than cure." Present form of this paper is the synthesis of various construction conflict related literatures and intended to explore the various ways to avoid construction conflict. Nonetheless, it is hoped that this paper will be valuable contribution regarding the construction problem solving.

2. MAIN CONSTRUCTION PARTICIPANTS

Conflicts and disputes in construction sites affect performance of all the stakeholders e.g. sponsors, owner group, design and supervision consultant team, contractors, subcontractors, labor force etc. However in simple terms, construction is an enterprise involving four major groups or parties, all of whose actions can influence productivity [5]. They are: owners, designers, constructors and the labor force. The efforts of all four of these parties are essential if an owner's project is to become reality. The cost, quality, and timeliness of the labor force depend not only on their skills and desires to work but also on the performance of the three other parties who control the ingredients necessary for productivity at the work face [5].

These four parties work by own interest to fulfill the overall project objectives. The owners have of interest to get the quality structure as economic as possible. Designers convert the owner's conceptions into specific and detailed directions through drawings and specifications. Designers may have interest to show their creativity or consider aesthetics rather than cost and time. Constructors (contractor/subcontractor) have interest of doing work in timeliness and minimum cost and handover the finished structure to a satisfied owner. Labor forces transform the directions depicted in plans and specifications into reality through their skills and efforts, working individually or in crews directed by foremen.

3. GROUP CONFLICT AND CULTURE

According to Deutsch (1969), there are two dimensions of conflict: issue-based and interpersonal as shown in Fig.1.

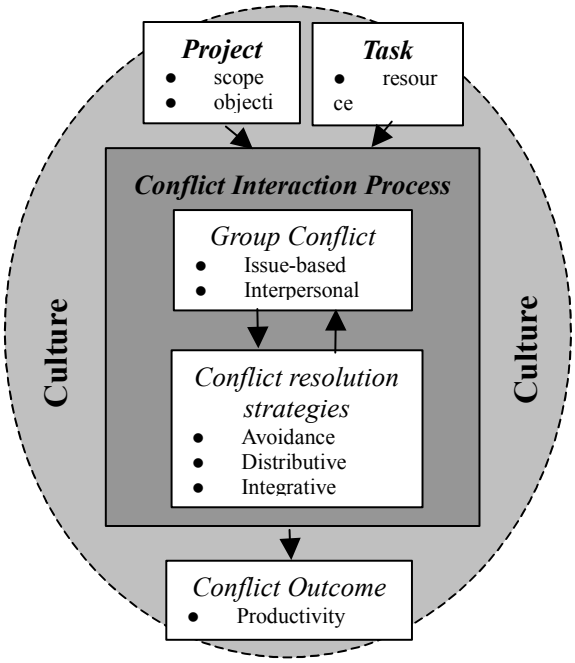

Figure 1. Conflict generation process [6]

Issue-based conflict, which focuses on task related issues, is very desirable because it brings out the differing views and issues of the task, helping groups to better understand the task and hence develop better solutions. Interpersonal conflict tends to draw attention away from the task because it is usually targeted at persons within the group. This type of conflict can be detrimental to group functioning and hence undesirable [6].

Culture depicts the way members of a society relate to each other and to the environment. Hofstede (1984) has described four dimensions of culture in his empirical study [6]. They are: i) power distance, ii) uncertainty avoidance iii) individualism, and iv) masculinity. In construction management context, these cultures can be understand by i) forcing (power) ii) transferring risk attitude iii) vested interest of party, and iv) status of party.

4. CONSEQUENCES OF CONSTRUCTION CONFLICTING FACTORS

A construction project is considered only as a successful project, if it is completed within the originally scheduled time period, within budgeted cost and with specified quality. Apart from these three fundamental success measures, there are number of other variables on which the success of a project depends on. Pinnell [4] has viewed many, if not the majority of construction problems (and the resulting disputes) occur because of poor project management practices and these problems are happened to be minor in the beginning, but they take on mountainous proportions if not addressed quickly by the contracting parties. If disputes are not resolved promptly, they tend to drag on and escalate and can cause project delays, lead to claims, require litigation proceedings for resolution, and ultimately destroy business relationships [6].

In another view, it is believed that most of the disputes and conflicts have been originated when the contracting parties trying to protect their risks and threat factors and transferring those risks to other parties. The category and scale of risks may be varied from one project to another by various project attributes e.g., scope of projects, where they are located etc. A building project may have less conflicting issues, where as mega projects like power plants, high-speed express highways etc. may have more conflicting issues. Various literatures have described the conflicting issues in construction industry; however, due to the space restriction review of them could not be possible here.

5. CONFLICT AVOIDANCE STYLES

Several researchers have discussed about empirical methods of conflict resolution. Bacal [7] has outlined 4 approaches – avoidance, collaboration, power-based and compromise as different modes of dealing with conflict. In this approach each of these may fit a certain situation better than the others. Mah [8] has suggested maintaining the trust and keeping the promises as very much important to manage the relationship between the two parties like a marriage.

Sillars (1980) identified three common patterns of conflict resolution strategies: avoidance, distributive, and integrative [6]. In this context, avoidance is the failure to confront or attempt to resolve conflict. Distributive strategy emphasizes the achievement of the outcomes of one party over those of the others. Integrative strategy attempts to identify and achieve outcomes that are mutually satisfying to all parties. Bragg [9] has explained three basic approaches to deal with conflicts in workplaces. They are: i) avoiding conflict, ii) suppressing conflict and iii) turning conflict into positive outcome. Out of these three approaches, he withheld the first two approaches as these will not work successfully.

Kirchof et al. (1989) and Groton (1997) have described five conflict resolution approaches from a project manager's viewpoint: withdrawal, compromise, forcing, smoothing, and problem solving [10]. Leung and Yu [11] also have explained five conflict resolution styles: competition, collaboration, avoidance, accommodation and compromise. Following sections discuss the construction management strategies, which have encompassed the all above stated management styles toward avoiding the conflict

6. MANAGEMENT STRATEGIES

Conflict should always be a matter of avoiding. We should not work as preparing ourselves for dispute. If the project management body did not apply a good management tools then there could be project disorder. A degree of disorder existed among the existing approaches to

management of projects, and significant implications of project failures for stability and prosperity of affected organizations [12]. Therefore the owner shall act various management principles and subjective decisions during preconstruction as well as construction phase.

The fundamental principles of management such as cost-time relationship, time priority, accountability, rewards, knowledge, efficiency and innovative thinking [13] are the useful tools which will be useful to curtail the initial conflict situation of conflict curve, during project implementation and drive the project to the target without facing accidents. Following sections briefly deal about the various management strategies to be taken to avoid conflict.

6.1 Hire good (not cheapest) construction professionals

Using a strong program management firm and design team (accountable, knowledgeable and innovating thinking) early on will save money in the end by providing continuity and allowing integration of design and construction expertise. And make sure the team reflects the owner's business style and philosophy. Remember on the cost side, too low a budget may attract only claim-oriented contractors to bid [14].

6.2 Set reasonable time and cost goals (Cost-time relationship)

As projects get larger, the pressure to move faster and squeeze margins becomes greater (see Fig. 2). A widely recognized principle is that spending more monies during planning and design will reduce the time and cost required for construction by avoiding unforeseen conditions reducing to a minimum design errors and omissions, and developing schemes that will support the most efficient approach. Spending more monies in planning with comparison to final saving is much negligible. The ability to influence decisions falls off sharply as time on the project passes as shown in Fig. 2. This indicates that early decisions have much greater importance than later ones [1].

Time is the essence of a construction contract. Timely completion of projects must be made a priority. Critical resources should be applied to projects based on the importance of the project.

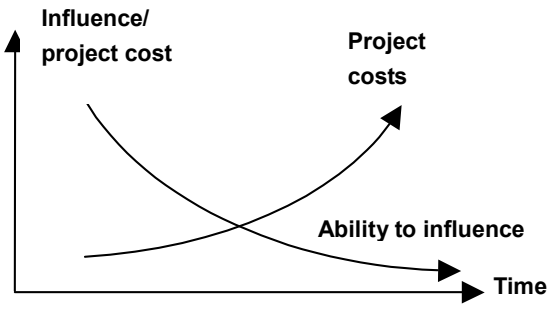

Figure 2. Time, cost and influence relationship

6.3 Recognize that contractors and designers are in business to make profit, not to accept every risk.

These firms have varying tolerances for risk and want it to be fairly allocated and compensated. The tendency of owners to try to achieve cost certainty by expressly allocating every risk to the contractor in a lengthy contract is usually a recipe for future project change orders and litigation [14]. If the owner wants to transfer the risks and uncertainty to the contractor, then the owner should also be prepared to face increase in the bid amount. Because, a contractor could respond to such risk allocation by increasing its bid to take into account such clauses.

One measure of contract's efficiency and effectiveness is its ability to clearly assign risks between contracting parties [15]. The most successful owners recognize that risk should be allocated to the party best able to control it-even if that means taking on some of it themselves [14].

6.4 Draft a clear contract document

There is no single standard form of contract that can apply to every permutation and combination of situations that might arise on a construction project [14, 15]. A clear contract should be drafted that addresses not only the normal construction issues but also ones that are unique to the project. A power plant where many trades must work in the same space at the same time presents different coordination challenges than a linear project like a highway. Contracts are the basis of liability in today's construction industry; contractual claims represent 90% of all claims that occur in the industry [15]. Therefore, it is important to tailor project, rather than vice versa. No contractors are going to invest their time and energy, and absorb the risk inherent in a construction project for free of cost [1].

A recent study carried out by Acharya et al [16] revealed that change site condition, local people interruptions, design changes, double meaning in specifications, change scope are most critical problems in the construction field. The contract should clearly address these problems. Clients should also create the environment for contractors to do the work in safer and comfortable way.

6.5 Pick a suitable project delivery system

There are two common ways to hire construction teams, first a traditional method of design/bid/build and other is an improved method of design/build. In design/bid/build method, the owner hires different team to design and construct the project, but can be as involved as it wishes and even make changes during construction. In the other type of contracting, the owner gives performance specifications to the project team and then steps out of the process. This minimizes frequency of interaction between the contracting parties. There are many variations to these basic systems [14].

6.6 Implement a front-end approach

There are two approaches to cope with project risk and conflicts: front-end and back-end. In the front-end approach, potential risks and conflicts are identified and analyzed before the participants have started to rely on each other, are negotiated among the participants (in connection with risk transfer tools like, insurance), are documented clearly, and are monitored as the work progresses to identify (and resolve) deviations at the earliest possible time [17]. In the back-end approach, risks and conflicts are dealt with as they arise.

The best way to initiate a front-end approach is to hire the consultants with construction expertise. Much of the success of a project depends on identifying risk and striking a balance between competing approaches. That is why; the relative cost of hiring experts is considerably small in comparison to the cost of dispute resolution, especially on large, complex projects [14]. Front-end approach also gives participants an opportunity to set their profit and contingency requirements based on a reasonable understanding of the risks that they have assumed.

6.7 Accept that construction projects constantly change

The situations and relationships in a complex heavy infrastructure projects constantly change with change in construction phases (it is somewhat also applicable in small projects). Since these projects serve so many constituencies and are massive in scale, changes in the political climate, fluctuations in the price of raw materials, or financing constraints could arise during design, procurement, and construction phases. The financial, management, and legal structure of the project must be sufficiently flexible to handle the uncertainties [14].

6.8 Need of education and training of participants

Engineers are the basic level technical professionals involved in construction projects. Generally, biggest mistakes professionals make is that they assume they know all the answers, and fail to listen, which serves as an exit point conflicts in construction. So, the conception of conflict free project shall be put on them right from their starting of the career. An engineering undergraduate program should serve primarily for the mastery of certain skills of the profession. These skills are the foundation for a career as an engineer [18]. Successful and profitable engineering agencies shall implement education and training programs at all levels of the organization.

6.9 Accountability and teamwork in construction site

The project team must be accountable for their performance. Teamwork is the collaboration between managers and non-managers, between owner and contractor, between functions, between customers and suppliers. In a project, for the quality management perspective, teamwork among collaborators is necessary and it has profound impact on construction management. Therefore, performance of the team with regard to timely completion of the project should be measured for all participants who make up the project team, i.e. project officials, consultants, contractors, individuals, government line agencies etc. [13].

6.10 Avoid negligence

To achieve timely completion of a project, both the owner and the contractor must understand how the contractor plans to sequence the work and what the durations are for the different components of the work [18]. According to Thomas and Messner [19], "…the court enforced the no-damage-for-delay clause where delays were caused by simple negligence involving inaction, lack of diligence, and lack of effort." This example clearly explains that sign of negligence, bad faith, interference, dishonest etc. are legal issues; hence to avoid conflicts due to these, both owner as well as contractor should be cooperative and have full understanding.

7. CONCLUSIONS

As the construction industry is large, volatile and requires tremendous capital outlays, greater risks, challenges and complexity always exist during implementation of projects. Many construction industry researchers have viewed that majority of construction problems or disputes occur because of poor management practices. If disputes are not controlled in the beginning, they could take on mountainous proportions later, which might be difficult to solve. Therefore, best practice of solving dispute is to prevent them from occurring by application of best management principles. They are: i) hire good (not cheap) construction professionals ii) set reasonable time and cost goals iii) recognize contractors and designers are in business to make profit iv) draft a clear contract document v) pick a suitable project delivery system vi) implement a front-end approach vii) accept construction project as a dynamic process viii) need of education and training of professionals ix) accountability and teamwork in construction site, and x) avoid negligence.

It is hoped that the ten construction management strategies described in this paper would contribute an important role toward reducing the construction conflicts.

REFERENCES

[1] Gould, F.E. *Managing the Construction Process,* 2nd Ed., Prentice Hall. (2002).

[2] Cheeks, J.R., "Multistep dispute resolution in design and construction industry", *Journal of professional issues in engineering education & practice (ASCE),* Vol. 129 (2), pp. 84-91, 2003.

[3] Harmon, K.M.J., "Resolution of construction disputes: A review of current methodologies", *Leadership and management in engineering (ASCE),* Vol. 3 (4), pp. 187-201, 2003.

[4] Pinnel, S., "Partnering and the management of

construction disputes," *Dispute resolution journal* (Feb.), American Arbitration Association (AAA), 1999.
[5] Oglesby, C.H., Parker, H., and Howell, G., *"Productivity improvement in construction*", McGraw-Hill Inc., 1989.
[6] Quaddus, M.A. and Tung, L.L., "Explaining cultural differences in decision conferencing," *Communications of the ACM,* http://delivery.acm.org > Vol. 45 (8), 93-98. 2002.
[7] Bacal, R., "Is conflict prevention the same as conflict avoidance," *Work911/Bacal & Associates* http://www.work911.com/conflict/carticles/conav.htm , 2005.
[8] Mah, M., "Outsourcing insights: Managing the relationships," *Cutter consortium*, Vol. III, 2004.
[9]Bragg, T., "Three ways to deal with conflict in organizations," *Peacemakers training*, <http://www.terry bragg.com/article_Organizational Conflict.htm> 2001.
[10] Ock, J.H., and Han, S. H., "Lessons learned from rigid conflict resolution in an organization: Construction conflict case study", *Journal of Management in Engineering* (ASCE), Vol. 19 (2), pp. 83-89, 2003.
[11] Leung, M. Y., and Yu, R.K.T., "An investigation of conflict resolution in the construction industry," *Journal of construction procurement*, Vol**.** 9 (1), pp. 5-14, 2003.
[12] Cicmil, S., "Quality in project environments: a non conventional agenda", *International journal of quality and reliability management,* Vol. 17 (4/5), pp. 554-570, 2000.
[13] Thomas, H.R. & Ellis, R.D., "The root causes of delays in highway construction," *82nd Annual Meeting of Transport Resear. Board*, USA, <www.wsdot.wa.gov> 2002.
[14] White, P. R., "Law/courtroom news-Owners should make early decisions on major construction," New York *Construction News (May),* http://newyork.construction.com , 2005.
[15] Shapiro, B., "Construction claims and contracting strategies", http://www.maxwideman.com/guests/claims/ intro.htm , 2005.
[16] Acharya, N., Lee, Y.D., and Kim, J. K, "Conflicting factors in Korean construction industry" (Unpublished), 2005.
[17] Jutras, R., "Managing project risk and conflict: A project lawyer's "front-end" perspective", The Revay Report, Vol. 21 (1), www.revay.com/english/21no1en.pdf , 2002.
[18] Hecker, P.A., "Successful consulting engineering: A lifetime of learning", *Journal of management engineering*, Vol. 13 (6), pp. 62-65, 1997.
[19] Thomas, H.R. and Messner, J.I., "No damages-for delay-clause: Evaluating contract delay risk", *Journal of professional issues in engineering education & practice, (ASCE),* Vol. 129 (4), pp. 257-262, 2003.