CONTRACTORS' CONSTRUCTION CLAIMS AND CLAIM MANAGEMENT PROCESS

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Abstract

Construction claims have such high impacts on the projects' cost and time that the contractors should establish the effective claim management in their organizations. This research aimed at presenting the key concepts of construction claims, and construction claim management, focusing on the contractors' point of view. In addition, a questionnaire survey was done to assess the efficiency of the contractors in managing their claims. Three-hundred claim management staffs from contractors' organizations were then selected by using stratified sampling technique, taking into account their company locations. It was found that the active tasks that the contractors can perform efficiently consist of (1) recognition and identification of the change, (2) systematic and accurate documentation of the change, (3) analysis of time and cost impacts of the change. As to the defensive tasks, they are systematic and accurate documentation of change, and analysis of time and cost impacts of the change. On the other hand, the activities that the contractor can not perform well and should be improved are: (1) active notification of the change, (2) active negotiation of the claim, and (3) defensive recognition and identification of the change. The result from this research can help the contractors improve their weaknesses and maintain their strengths of their claim management process.

1. Introduction

Construction claims are found in almost every construction project. It is the seeking of consideration or change by one of the parties involved in the construction process. Nowadays, the substantially increasing volume of claims are the result of the rising complexity of the projects, the price structure of the construction industry and the legal approach taken by a lot of owners and contractors [17].

There are several researches that show the order of magnitude of the effects from construction claims on cost and time of the projects. Semple et al. (1994) presented the results of their survey of the claims in 24 construction projects in Western Canada. It was found that the large majority of claims involved some delays and in a number of cases delays exceeded the original contract duration by over 100%. As to the project cost, more than half of the claims were the additional costs of at least 30% of the original contract values. Callahan (1998) reported that transit agencies in the United States and Canada experienced an average cost growth of 7% of contract value from settlement of disputes and claims for heavy civil contracts. In Thailand, Khanchitvorakul (2000) surveyed the claim behavior of 21 the construction companies and discovered that the average cost growth from contract value causing by claims was approximately 7%, proximate to Callahan's finding.

Although construction claims have significant effects on the projects, they are not always given adequate considerations. Scott and Assadi (1999) concluded that the records available on sites seldom allow an as-built schedule to be constructed easily. Pogorilich (1992) reported that the daily report is often given the least amount of attention although it may be the most important document on the project. Surawongsin (2002) surveyed the construction claim management practices in

Thai construction companies and found that lack of awareness of on-site people is considered as the major problem of claim management. Inadequacies of supporting evidences, stemming from unaware project personnel as well as improperly designed documentation system, are the next serious shortcomings causing a loss of chance to recover incurred damages. Surawongsin also recommended the management level to pay more attention to these aspects for having an effective claims management system.

This research aimed at presenting the key concepts of construction claims, and construction claim management, focusing on the contractors' side. In addition, a questionnaires survey was performed to assess the efficiency of the contractors in managing their claims.

2. Construction Claims

Construction claim is a demand or assertion by one of the parties seeking, as a matter of right, adjustment or interpretation of contract terms, payment of money, extension of time or other relief with respect to the terms of the contract [17]. Kumaraswamy (1997) described the relations among "conflict", "claim" and "dispute". In summary, disputes are taken to imply prolonged disagreement on unsettled claims and protracted unresolved/ destructive conflicts. This concept can be illustrated by Fig.1.

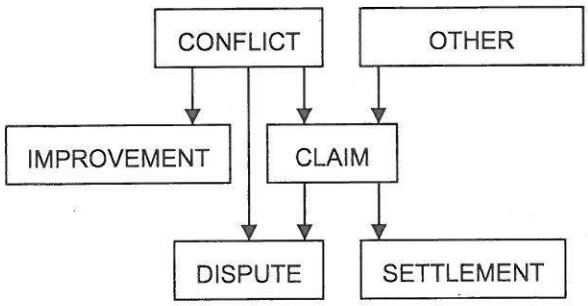


Fig.1 Relationships between conflicts, claims and disputes [16]

According to Bu-Bshait and Manzanera (1990), typical construction claims against owners are caused by a lot of reasons such as poor project planning, scope changes, constructive variation orders, errors and omissions, contract accelerations and expediting. There are various ways to classify construction claims into categories. However, they can be grouped into 3 groups.

The first group classifies claims into two basic types by the objectives of claims. They consist of (1) claim for extra time to complete the contract, and (2) claim for extra money arising out of the contract [7].

The second group categorizes claims by considering their legal bases, Chappell (1984), Alkass and Harris (1991) and Hughes and Barber (1992) classified claims into three major types:

1) Contractual claims

Contractual claims are the claims that fall within the specific clauses of the contract, typically ground conditions, valuation, variations, late issue of information, and delay in inspecting finished work.

2) Extra-contractual claims

This type of claim has no specific grounds within contract but is a result of breach of contract, which may be express or implied. An example of extra-contractual claim is the extra work incurred as a result of defective material supplied by the employer.

3) Ex-gratia claims

Ex-gratia claims are the claims that there is no ground existing in the contract or the law, but the contractor believes that he has moral grounds, e.g. additional costs incurred as result of rapidly increased prices.

The last group, as proposed by Adrian (1988), classified claims into four major types: (1) Delay claim, (2) Scope-of-work claim, (3) Acceleration claim, and (4) Changing-site-condition claim, in order to facilitate the calculation of damages of claims

3. Construction Claim Management

The word "Management" means the process of dealing with or controlling people or

things [11]. When combined with the meaning of the word "Claim" defined by Arditi and Patel (1989), the word "Construction claim management" can be construed as the process of dealing with or controlling the seeking of consideration or change by one of the parties involved in the construction process. Cox (1997) considered variation and claim management as the management of risks and should begin even before the start of constructions by both employers and contractors.

There are many sub-processes related to construction claim management. Levin (1998) indicated seven basic procedures for claims and change order administration. They are:

1) recognition and identification of change,
2) notification of change,
3) systematic and accurate documentation of change,
4) analysis of time and cost impacts of change,
5) pricing of change,
6) negotiation of claim, and
7) dispute resolution and settlement.

Recognition and Identification of Change

Construction claim recognition and identification involves "timely" and "accurate" detection of a construction claim. It is the first and critically important ingredient of the claim process [15]. Callahan(1998) viewed the ability to recognize an emerging problem that could lead to a dispute, and allowing for this problem to be dealt with early in its life as the most important part of dispute avoidance. He also presented the techniques used to anticipate or identify disputes at an early stage by all transit agencies in the United States and Canada, including the commuter rail agencies, which have undertaken construction in the last 5 years. They are (1) preconstruction meeting, (2) project meetings, (3) construction scheduling, (4) bid evaluation/ comparison, (5) project cost/ payment forecasting, (6) regular review of project documentation, and (7) proactive problem management at meeting.

In order to form a foundation for proper claim management and to keep the contractors out of troubles and free to concentrate on constructions of the jobs, Levin (1998) listed of the general circumstances that typically cause claims and variation order.

Notification of Change

Construction claim notification involves alerting the other party of a potential problem in a manner that is non-adversarial. Time limit requirements are very crucial and critical. An initial letter of a claim notice to the other should be concise, clear, simple, conciliatory, and cooperative. It should indicate the problem and alert the other party of the potential increase in time or cost [15].

Time limit requirement are normally specified in the contracts. For example, the Construction Contract (First Edition), prepared by Fédération Internationale des Ingénieurs-Conseils (FIDIC) requires the contractor to notify the employer within 28 days after he became aware or should have become aware of the event or circumstance [10].

Systematic and Accurate Documentation of Change

Records and documentation play a very important role in the settlement of contract claims. Bu-Bshait and Manzanera (1990) listed nine records usually needed to substantiate a claim. With more focus on the delay claim, Elnagar and Yates (1997) investigated the types of documentation used to determine the causes of project delays. The ten documents ranked as the top indicators of project delays are presented.

Jergeas and Hartman (1994) suggested that construction contractors should always file some necessary records. Fifteen records were listed in the paper. Furthermore, Adrian (1988) explained how some techniques such as camera, and recording devices can be alternatives in recording the important information.

However, there are many evidences showing that the importance of record management is not realized as much as it

should be. Scott and Assadi (1999) concluded that records available on sites seldom allow the as-built schedules to be constructed easily. Pogorilich (1992) reported that the daily reports are often given the least amount of attention although they may be the most important document on the projects. Too often daily reports are prepared with minimal details and are subsequently ignored by managements.

Analysis of Time and Cost Impacts of Change

There are several literatures concerning the calculation procedures of the time and cost impacts caused by the events entitling rights to claim. These can be grouped into two major categories: time impact analysis (or schedule analysis) and cost impact analysis.

There are several schedule analysis techniques such as: (1) Global Impact Analysis [2], (2) Net Impact Analysis [2], (3) Impacted As-Planned Analysis [17], (4) What-If Technique [3], (5) But-For Technique [2, 3, 18], (6) Contemporaneous Period Analysis Technique [2, 3, 18], (7) The Affected Baseline Schedule Technique [3], (8) Collapsed As-Built Analysis [3, 18], and (9) Fragnet Analysis [17]. The main differences of these techniques are their input schedules. Some techniques require as-planned schedule, while others require as-built schedule. Updated schedule is also the input for some schedule analysis techniques.

Pricing of Change

The purpose of this sub-process is to give the other party in the contract a substantive description and details of the extra costs incurred or to be incurred due to a contract change. This detailed cost description is necessary for understanding, negotiating, and justifying extra contract costs. Pricing of claims can be divided into two types:

1) Forward Pricing

Under this scheme, the price is negotiated before the work is done. This type of pricing method is typically preferred since it encourages prompt revision of the progress schedule, thus maintaining accurate record of the sequencing of the remaining work, the final contract price, and the final completion date.

2) Post pricing :

In post pricing, the risks have been incurred and the added costs have been known. The difficulty is identifying and isolating all the changes and their attendant costs. The claimants are supposed to have good cost records, with adequate descriptions of works performed. Thus, after a determination of the work which was affected by a change, the claimant will be able to identify and price all the costs associated with the changed work [17].

Adrian (1988) described the relationships between four types of claims (e.g. delay claim, scope-of-work claim, acceleration claim, and changing-site-condition claim) and each cost components (i.e. addition direct labor hours, equipment rental cost, interest cost or finance cost). Table1 summarizes the relationships.

Table1 Types of claim components for various types of claims [1]

Type of Cost Claimed	Type of Claim			
	Delay Claim	**Scope-of-work Claim**	**Acceleration Claim**	**Changing-site-condition Claim**
Additional direct labor hours	**X**	//	**X**	//
Additional direct labor hours due to lost productivity	//	/	//	/
Increased labor rate	//	/	//	/
Additional material quantity	**X**	//	/	/
Additional material unit price	//	//	/	/

Table1 Types of claim components for various types of claims (Cont.)

Type of Cost Claimed	Type of Claim			
	Delay Claim	**Scope-of-work Claim**	**Acceleration Claim**	**Changing-site-condition Claim**
Additional subcontractor work	X	//	X	/
Additional subcontractor cost	//	/	/	//
Equipment rental cost	/	//	//	//
Cost for owned-equipment use	//	//	/	//
Cost for increased owned-equipment rates	/	X	/	/
Job overhead costs(variable)	/	//	/	//
Job overhead costs(fixed)	//	X	X	/
Company overhead costs (variable)	/	/	/	/
Company overhead costs (fixed)	//	/	X	/
Interest or finance costs	//	/	/	/
Profit	/	//	/	//
Loss of opportunity profit	/	/	/	/

Remarks: // = Normally included in claim; / = Sometimes included; X = Not included.

Negotiation

Kululanga (1989) explained the reason for having negotiation and its advantages. A structured and proper negotiation preparation includes (1) ascertaining that all information is current and complete, (2) minimizing the scope of negotiation beforehand so that insignificant points should not precipitate a violent argument and disrupt progress, (3) knowing one's weakness and trying to utilize weak points by conceding them in return from the other party, (4) foreseeing problems, and (5) anticipating the opposition's next move.

If an agreement cannot be reached and any party believes his position is correct, he should propose an alternative dispute resolution method. If this fails, the choice remaining is to implement the contractor's "disputes" mechanism or take the matter to court.

Dispute Resolution and Settlement

There are many options the employers and the contractors can select for settling any dispute occurring in their project. Murdoch and Hughes (1996) listed the various disputes resolution methods: litigation, arbitration, conciliation, quasi-conciliation, mediation, private inquiry, adjudication, and mini-trial. He also explained that these terms are often used interchangeably and also listed the details of each approach. Each dispute resolution method has particular advantages and disadvantages. Sometimes more than one method of dispute resolutions are implement, as specified in the FIDIC's "The Construction Contract" [10].

4. Thai Contractors' Claim Management Efficiency

In order to assess the efficiency of the contractors' organizations in managing their claims in each sub-process, a questionnaire survey was performed. In the questionnaires, the respondents were asked about:

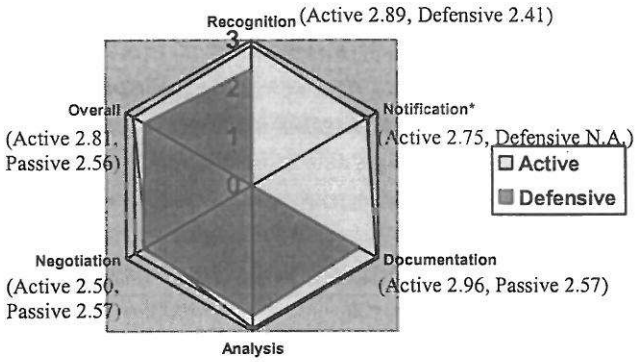
1) Their personal data such as their present positions, their working experiences, and their experienced maximum contract

values. These data will be used in separating the unqualified respondents. The contract value of 20 million baht (approximately 500,000 dollar recommended by the Fédération Internationale des Ingénieurs-Conseils (FIDIC) for separating middle-sized projects and large projects [4]) was used as the dividing point.

2) Their abilities to manage their claims classified into 9 groups by deliberately analyzing the numbers and the similarities of the contractors' tasks for each sub-process and the party (the contractor and the employer) who files the claim: (1) recognition and identification of the contractors' change, (2) notification of the contractors' change, (3) performing systematic and accurate documentation of the contractors' change, (4) performing analysis of time and price the contractors' change, (5) negotiation the contractors' claim, (6) recognition and identification of the employers' change (against the contractors), (7) performing systematic and accurate documentation of the employers' change (against the contractors), (8) performing analysis of time and price the employers' change (against the contractors), (9) negotiation the employers' claim (against the contractors).

After preparing the questionnaires, the 300 claim management staffs from contractor companies were then selected by using the stratified sampling technique [18], taking account of their company locations (Bangkok, Vicinity, Central Part, Northern Part, North Eastern Part, and Southern Part). The criterion used in classifying the locations was adopted from that of the National Statistical Office, which groups the Eastern Part and the Western Part with the Central Part [21].

The Efficiency Indexes, which help presenting the efficiency of the contractor population, can be calculated by averaging all the 32 respondents' five-leveled Likert Scale answer [19], for each question. The contractors' Efficiency Indexes of every task of contractors' claim management sub-processes and of the overall efficiency are shown in Fig.2.



Remark: * Defensive Notification of Change Efficiency Neglected

Fig.2 Contractor Claim Management Efficiency

The efficiency of the contractors in performing defensive notification of the change tasks can not be assessed and was neglected because there is nothing the contractors have to perform in being notified the changes by the employers.

From Fig.2, the active tasks that the contractors, in average, can perform well (better than the overall efficiency index) comprise the (1) recognition and identification of the change, (2) systematic and accurate documentation of the change, (3) analysis of time and cost impacts of the change, while the defensive ones are the systematic and accurate documentation of change, and analysis of time and cost impacts of the change.

On the other hand, the activities that the contractor can not perform well (worse than their average) and should be improved are: (1) active notification of the change, (2) active negotiation of the claim of change, and (3) defensive recognition and identification of the change.

When comparing between the active and the defensive efficiencies, it was found that the contractors seem to be able to perform better in claiming against the employers than defending themselves from being claimed. The probable reason of this finding is that the contractors become aware of the active claims sooner and easier to access the data required in managing these claims. However, the

respondents rated their abilities to negotiate the employers' claims against them better than those against the employers.

5. Conclusion

This research work presented the impacts of construction claims on the project success and the importance of having efficient claim management within the contractors' organizations.

Thai contractors, in average, should improve their inefficient claim management sub-processes - active notification of the change, active negotiation of the claim of change, and defensive recognition and identification of the change - while maintaining their efficient ones (active recognition and identification of the change, systematic and accurate documentation of the change, and analysis of time and cost impacts of the change)

Globalization forces every organization to improve itself in order to be viable in international competition. The result from this research can help the contractors improve their viabilities. In the authors' opinions, this is the time for contractors to improve their organizational potentials not only in their claim management, but also in entirety of their business processes.

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