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Factors of Conflict in Construction Industry: A Literature Review

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Abstract

Conflict seems to be very synonym with construction projects and giving the impressions of problems includes in increasing project cost, project delays, reduce productivity, lost of profit or damage in business relationships. The main goal of this paper is to overview the factors of conflict in construction industry. The study highlighted three (3) types of conflict factors which are conflict factors due to behavioral problems, contractual problems and technical problems. Factors of conflict due to behavioral factors includes reluctant to check for constructability, clarity and completeness and poor communication among project team. Meanwhile the factors of conflict which is due to contractual problems are such as late giving of possession, delay interim payment from client and unclear of contractual terms. Whereas, contractor fails to proceed in a competent manner and late instructions from architect or engineer are the factors of conflict which arise due to technical problems. This paper was hoped to be guidance for conflict management in future construction projects.

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1. Introduction

Today's construction projects become more complex in nature. "The complex, relational and lengthy process of designing and building makes construction a process in which disputes are virtually ensured"[1]. Furthermore, the involvement of multidisciplinary in the construction project also leads to

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conflicts among the parties. It seems that conflict and disputes are inevitable to the construction industry especially when most of construction projects are facing with so many uncertainties [2].

A study by Kumaraswamy & Yogeswaran [3] provided a good reference of the common sources of construction disputes that are largely related to contractual matters, including variation, extension of time, payment, quality of technical specification, availability of information, administration and management, unrealistic client expectations and determination. In other research by (Kathleen, 2003a)[4] highlighted conflicts may develop as a result of limited resources such as not enough time, money, labour, materials and/or equipment.

Smith [5] describes conflict and disputes as an endemic problem in the construction industry. Conflict may difficulties communications between individuals, breaks personal and professional relationships and reduces effectiveness. Conflict produces tension and distracts team members from performing the task [6][7]. According to Cheung & Suen [8], if dispute are not properly managed, they may cause project delays, undetermined team spirit, increase project costs and above all, damage continuing business relationships.

Thus it is not surprising that many construction stakeholders still overwhelmingly view conflict as negative and something to be avoided or resolved as soon as possible. However, there are many authors have pointed out conflict is a phenomenon that may give rise not only to functional but also dysfunctional effects on individuals, groups and organizations [9].

As today's claims and disputes keep increasing, the construction industry struggles to find ways to equitably and economically to resolve them [10]. According to Shin [11], managing disputes should become a part of "normal" project management during project operation because disputes in construction projects are common place and the resolution need to occur immediately on the project site.

2. Definition of Conflict

Brown et al. [12] highlighted that conflict is doubt or questioning, opposition, incompatible behavior, controversy or antagonistic interaction and disputes is one of the range of events considered as conflict. According to Kumaraswamy & Yogeswaran [3], "a dispute can be said to exist when a claim or assertion made is made by one party is rejected by the other party and that rejection is not accepted." This shows that disputes is more likely occur when the conflicting parties shows an action or arguments to a controversy.

Referring to Vorster [13], "a dispute is defined as an argument about an issue concerning project operations, usually resulting from a debate over differences in two or more parties' understanding of situation." This statement is supported by another statement by Deutsch [14] that defines conflict as "incompatible activities; conflict occurs when the behavior of one person is interfering or obstructing the actions of another."

There are perhaps as many definitions of conflict as there are occasions for its occurrence. According to Thomas [15] there are three themes among the definitions of conflict. The first, is that whether conflict exists or not is a perception issue. The perceived difference may not be real but conversely if the difference is real but not perceived there is no conflict. The second common theme is that there is interdependence among parties (i.e. each has the potential to interfere with the other). Third, there are issues of blockage, opposition, and scarcity. Resources, for example, money, power and prestige, are

limited. Their scarcity creates blocking behavior. When one party blocks the means to a goal or interest of another, a state of conflict exists [16].

These numerous definitions show that scholars are looking at conflict from different angles but are there a difference between conflict and dispute and if so, should we concern ourselves with the difference? Some authors do not differentiate as Moore [17] manages to mix the two terms in the first paragraph of his Chapter 1. However, most of previous research defines conflict and disputes shares the same definition that is generally involves disagreement regarding interests or ideas and that was adopted for this research. The important issue is both of the terms has “historically been viewed as undesirable, something to be avoided.” [18].

3. Causes of Conflict in Construction Industry

In order to prevent disputes, the first important action is to trace the origins of problems [19]. Many researchers have studied on conflict and disputes that addresses huge numbers of variables regarding the sources or causes of it in the construction industry.

Hohns [20] believes that construction disputes have their instinct nature and characteristics, and thus the sources of disputes will vary from one project to another. In his study, five primary sources of construction disputes were listed that includes existence of errors, defects or omissions in the contract documents, failure of someone to count the cost of an undertaking at the beginning, changed condition, consumer reaction and people involved. Williamson [21] identified three large root causes of conflicts that are behavioral problems, contractual problems and technical problems due to uncertainty and low experience.

Later, a survey by Semple et al. [22] reported that the most common causes of claims that normally lead to disputes are scope changes, weather, and restricted site access. Pelled [23] reported several studies have shown that multicultural teams are inclined to generate more conflict. Diekmann and Girard [24] later identified the factors leading to contract disputes. They identified the effect of different project characteristics, which included people, process and project aspects on the occurrence of contract disputes. The findings of this work was based on logic regression analysis of data on the frequency and severity of disputes on 159 construction projects. The results concluded that all three issues played a role in influencing the likelihood of contract disputes, but the ‘people’ issue held the key to avoiding contract disputes [25].

Kumaraswamy [26] has summarized 20 common causes of construction disputes, including speed of construction, cost and quality control, technological advances, stringent building regulations and economic difficulties that becomes basics for many studies later regarding conflict and disputes in construction industry. Fenn et al. [27] identified causes of construction disputes caused by clients includes failure to respond in timely manner, poor communications amongst members of the team, inadequate tracing mechanisms for request of information, deficient management, supervision and coordination efforts on the part of the project, lowest price mentality in engagement of contractors and designers, the absence of team spirit among the participants, reluctant to check for constructability, clarity and completeness, failure to appoint a project manager and also discrepancies or ambiguities in contract documents. Kumaraswamy & Yogeswaran [3] indicated in their study that the sources of construction disputes are mainly related to contractual matters, including variation, extension of time, payment, quality of technical specifications, availability of information, administration and management, unrealistic client expectation and determination.

Shin [11] reported that disputes can be generated by the people involved that is by the stakeholders including architects, engineers, contractors and other project related professionals. Thompson et. al. [28] mentioned, “disputes arising primarily due to lack of communication, distrust, misinterpretations of contracts, uncertainties of role and responsibilities, and an “us versus them” posture based on an imbalance in risk allocations.” Hall [29] also identified causes of construction disputes caused by consultants that includes failure to understand its responsibilities under the design team contract, over design and underestimating the costs involved, late information delivery and cumbersome approach to request for information’s, design and specification oversights and errors or omissions resulting from uncoordinated civil, structural, architectural, mechanical and electrical designs and incompleteness of drawing and specifications. Study by Cheung et al. [30] explains dispute in a construction project can be identified from the causes of dispute and the characteristics of the project. They identified six common causes of disputes that includes budget overrun, outstanding payment, different percentage of claim submission and certification, number of days behind programmed, liquidated damages and percentage change from original design.

Carmicheal [31] identified causes of construction disputes caused by contractors which include inadequate contractor’s management, supervision and coordination, delay or suspension of works, failure to plan and execute the changes of works, failure to understand and correctly bid or price the works, lack of understanding and agreement in contract procurement, reluctance to seek clarification and inadequate critical path method (CPM) scheduling and update requirements.

According to Chua & Song [32] project schedules developed by various project players often reveal conflicts when they are merged together. This is due to the main challenge of communication among the constructors lies in the implicit interfacial dependencies between the project activities. Another study by Kathleen [4] describes “destructive conflicts develop as a result of limited resources, e.g. not enough time, money, labour, materials and or equipment.”

In a larger scope of study in Sino-Foreign Joint Venture construction projects, Edwin & Henry, [33] identified 20 sources of disputes includes payment, variation, extension of time, quality of work, unfamiliar with local condition, project scope definition, risk allocation, difference in ways of doing things, technical specification, poor communication, administration/management, unrealistic client expectation, availability of information, adversarial approach in handling disputes, lack of knowledge of local legal system, conflict of laws, jurisdictional problems, unclear contractual terms, lack of team spirit and previous working relationships. A study by Cheung et al., [34] describes that the inclusion of special conditions in contract, changes in construction plans and specifications, and the resulting contradictory and error of information in the mass of documents can all contribute to construction disputes. Cheung & Yiu [35] conducted a study on mediation in resolving disputes identified valuable variables on causes of disputes. They divided disputes sources in two different category that is construction related and human behavior related. Sources of conflict related to construction factors are acceleration cost, the assessment of liquidated and ascertained damages against main contractor, clients fail to pay for variation claims, late giving of possession from client, clients take over the site and deny access to main contractor, errors substantial changes in bills of quantities, argument on the prolongation costs, architect/engineer dissatisfies the work progress of main contractor, argument on the measurement and valuation of the contracted work, late instructions from the architect and engineer, main contractor fails to proceed in a competent manner, delay interim payment from client and late release of retention monies to main contractor. It also includes argument on the time extension costs claimed by sub-contractor, changes of scope due to extra work, inadequate site and/or site investigation report, delay works due to utility services organization, non-payment to sub-contractor by main contractor, main contractor ceases work on site, argument on the time extension costs claimed by main contractor, main contractor denies access of

the site for the sub-contractor, subcontractor works delay due to main contractor, consequences of opening for inspection and sub-contractor ceases work on site.

Cheung & Yiu [35] also identified sources of conflict related to human behavior that includes negotiators lacked experience, too many issues brought to table, both parties not prepared for negotiations, both parties want to control over proceedings, both parties are not interested to settle, parties have unrealistic expectations, no leadership within the project teams, no trust between the parties and felt no trust on mediator.

Sambasivan & Soon, [36] stated in their study that factors such as delay in the payments for completed work, frequent owner interference, changing requirements, lack of communication between the various parties, problems with neighbors, and unforeseen site conditions could rise to disputes between the various parties involves.

The causes of conflict as reported in the previous studies describe different variables reflecting to their study. Even though most of the study shares the same variables, the causes still seem too large to be understandable or to be focus on. The categorization or root of causes identified by Williamson [21] will be based on for this study. Conflict causes identified by the researchers are summarized into three (3) categories that are causes due to behavioral, contractual and technical problems.

4. Conflict causes due to behavioral problems

Behavioral problems include human interaction, personality, cultures and professional background among project team. Other issues in human behaviour such as individual's ambition, frustration, dissatisfaction, desire for growth, communication and level of power, fraud and faith are also causes of disputes [13] "It was noted earlier that construction is not a science, it is an art. Construction is really people, and the successful contract administrator, or disputant to a contract interpretation or unfortunate occurrence on a project, is well served to know a little about people involved." [20]. "The herding instinct is very strong in the industry's people. All seek and need that sense of acceptance or approval. They have a need to emulate the leaders or their concept of the leaders of the profession. Words like belonging, imitation, loyalty, recognition, superiority, status are descriptive of the human elements of gregariousness. Try to make the other party feel as if he belongs to the pack. Find out the group the other party feels important. Show him how resolution of the dispute will help him achieve or strengthen his membership in the group" [31].

"It is one thing to loose money in a contract problem, but it is a lot to lose face. All people have an idea of themselves which they feel must be defined" [1]. Disputes can often be more easily resolved when all the egos involved can survive. Not only are people typically quickly to protect their self-image, they all want to extend the position they currently hold or claim is theirs. Thus any message couched in terms of few acquisition, promotion, saving money, or being protected will be heard and every often receive action. Everyone wants space, a better future, and the chance to increase the recognition of one's self-worth. Appeals to ambitions, goal realization, and increase of power help resolve disputes.

According to Camicheal [31] construction disputes and confrontations arise because the people involved have needs. From the contractor's side the needs are usually money or profit related. The designer has the ideas, his building or design which might be his monument to himself, his reputation, his artistic temperament, his money, his insurance premium, and similar needs. The owners have needs as well; political careers, corporate careers, the need to have the space for a certain day. When something

unanticipated or not properly recognized interferes with the fulfillment process, goals and security are jeopardized, communications become strained, and strains seem always to be followed by demands, refusals, other more intense strains, hard, then harder positions, and money losses. These problems arise when there is lack of team spirit and poor communication among the project teams. People are a prime cause of construction disputes, and the only solution to these disputes as well. The rise of society's present attitudes that everyone has rights has led too much of the activity in disputes.

5. Conflict causes due to contractual problems

The participation of different parties in a project is governed by a contract which defines the exchange of construction materials and services for money. "A contract is a promise or the set of promises for the breach of which the law give a remedy or the performance of which the law in some way recognizes as a duty," [37]. Contractual disputes include definition, interpretation and clarification of the contract. Contractual issues cause a significant portion of disputes in many projects [24]. Kumaraswamy & Yogeswaran [3] indicated in their study that the sources of construction disputes are mainly related to contractual matters, including variation, extension of time, payment, quality of technical specifications, availability of information, administration and management, unrealistic client expectation and determination.

In project operation, standard contract documents are guided by industry organization, codes and regulations. This concept of a standard contract to a certain degree guides operations toward standard practices. Therefore standard contract provide enough common ground for contractual definitions, clarifications in construction operations and specific project requirements. "Owners, contractors, designers, and every one involved in construction readily recognize and are quick to admit publicly the very obvious fact that a perfect set of contract documents simply does not exist." [20]. All drawings in the contract documents somewhere have mechanical drafting errors or lack a needed dimension or detail. Many have errors which stem from the human nature of the designer and draftsman. Not only are human errors, but changes always occurring as projects undergo the design and construction process. There are changes in space usage to accommodate revised owners needs, something unforeseen occurs, the documents and work scopes must be adjusted. The more complex the project, the more ramifications a change has. The shorter the period allowed for design, the more addenda's that are required, and the more the opportunity for errors. No one man may know or remember every place a certain detail was shown. "The larger the project, the more the people, the drawings, the thoughts, and the ideas consequently, the larger the project the more errors there are" [29]. Contract documents are one major origin of disputes. Document errors become the fault of the owner when they cost the contractor un-bid or unforeseeable amount of money.

Documents errors become the fault of the designer when the judgment of its peers and the custom of the industry the errors are gross and inexcusable. Document errors become liabilities when someone who has a right to rely on the professional is severely hurt or damaged. Punitive damages are staring to be considered as collectible against a professional when the hearer of the facts finds that the professional's refusal to come to grips with its duties are offensive to any reasonable standards of behavior.

The other contractual cause of conflicts is plan or drawings. "A major source of disputes in the design deficiencies is that categorized as defective plans" [38]. Most people involved with plans have a working idea of the definition of this phrase, but in reality no standard exists locally or nationally that precisely describes how to measure the plans for defects.

Everyone who has worked with plans know that no set of drawings is complete or without error. Somewhere dimensions are missing, wrong scales, a detail is missing, elevations or grades are in error and many others. Not only are these types of errors common, but all who work with plans know that drawings can always be refined and upgraded. Plans can always be made better and can be improved but conflict will be always between it. Thus all plans are to some extent defective and everyone involved in building uses defective plans every day. The question in plan deficiency disputes is when the plans become defective to the point at which undue costs are generated from their use. The usual legal definition is that plans are to be prepared with the normal standard of care found in the profession, but no precise standard exist. The designer has the advantage of its subjective knowledge of the intent of the plans. In some cases pressures from the client will be exerted for degree of performance in excess of the objective intent of the plans. This, plus poorly drawn plans, poorly drawn details, poorly prepared notes on drawings, and poor specifications may reach a point where in the opinion of one's peers, a level of acceptable performance has not been achieved. In the case of errors of omission from a set of plans, the decision of adequacy on the part of the professional is much easier to make than those which bear on methods or performance levels to be met upon completion. The solution generally comes from the people genuinely willing to confront such situations daily and work out the answer. This nice sounding method, how ever, is a hope for method of solution at best. It does not work all the time and is completed by the lack of practice measurement. The liability, however, can be far in excess of the omission or error. The ancillary costs of a construction problem almost always exceed the direct costs. The owner and the contractor have the right to expect the designer to produce a set of drawing plans which will allow the project to be built. The law says the owner warrants to its contractor that the plans, if followed, will produce the desire results and the project is constructible. Thus if the error by the designer prevents the contractor from reaching its ends, the question of ability and assessment of consequential costs exists.

6. Conflict causes due to technical problems

Technical disputes due to uncertainty are considered as the most common issues in project operations. According to Galbraith [39], uncertainty is the difference between the amount of information required to do the task and the amount of information already processed by the organization. The amount of information needed depends on the task complexity that is the number of different factors that have to be coordinated or performance requirements such as time or budget constraints. "The amount of information processed depends on the effectiveness of planning that is the collection and interpretation of information before the task," [19]. The uncertainty may lead to unrealistic client expectation such as unrealistic contract duration, late instructions or information from architect or engineer, overdesign, inadequate site or soil investigation report, error and incomplete technical specifications and many others.

Technical disputes also basically include engineering clarification which is a part of engineering decision making processes. For example, request for information (RFI) is considered an effective vehicle to clarify differences in understanding during project operations. By utilizing those RFI, most unclarified issues are resolved on site before they develop as a technical dispute and solve the problem of inadequate tracing mechanisms for request of information. These disputes can be solved by project personnel with the appropriate expertise. The engineering decision making process is fairly straightforward and reasonably justifiable for each participant. If technical disputes are unresolved, there are ways of resolving those disputes in project management unlike the resolution of contractual disputes during project operations. The design deficiency which leads to a major dispute is generally beyond an error of omission. To be significant the design error usually must alter the means, methods, environment, duration, or the conditions of the construction process. Any number of factors can influence this. The most common place in which design errors are made are in the foundations, in the construction of the frame and the enclosure, in the utilization of spaces such as method and materials and the required end

result are specified, in project duration, and in connection with related performance by others on which the project in question must at some point rely.

“Dispute continually arises because someone failed to count the cost at the beginning when the cost should have been defined” [40]. Few contractors bring claim on projects which come in near or under the construction budgets. Few owners seek liquidated damages when projects are done on time or close to it. If designers are waterproof and the products the designer specified fulfill the sales representative’s claims, disputes are few and far between. Contrary to the opinion of most owners, few contractors are deliberately claim’s conscious. Most supervisory projects personnel who work for the parties on the project have little real knowledge of disputes or what is involved in litigation and arbitration, most of those involved in getting a job done have solved complex problems on a daily basis of face to face confrontation for such a long period of time that they come to believe they know it all. Thus they prefer to argue among themselves and write what they believe are clever letters to establish a record, and most distribute and resent the lawyers. Contractors who have made money on a job usually do not invent claims or pursue spurious claims. Most often, a contractor who is clearly entitled to valid contract adjustment via a claim will ignore the situation if the job has come out well enough to live with.

Contractors like to get the job done and get over with. They fancy themselves builders; claims take long to hold their interest. According to Essex [41] “Disputes arise when the job does not come out well, and too often the reason for this is the failure initially to figure the cost accurately”. The failure to count the cost initially is not confined to just the contractor. It applies to the owner who set out unrealistically to build a building, as well as the designer who sets out the design it for less than it will really cost either in design or construction. In construction, major dollars and work scopes are calculated and committed in short periods of time. It is common that someone fails to count something, and end up with a price that is too low. What is worse is that most of those in the industry simply do not have the money to pay for their errors. The one with the best intentions can not pay for his error. Ironically, too, it would seem to some observers that those with the money to pay for their errors lack the degree of intention needed to dig deep enough to square the account totally.

The hardest part is that the dollar have to be collected after all the delays and difficulties involved in retain age, back charges, punch lists, and the like are resolved. Thus, to the contractor boxed in with retain-age and other cash flow problems there is no room to absorb cost overruns. “Construction pricing methods frequently are not to take into account the erection process that will be ultimately required in sufficient detail” [42]. The modern designer does not want to tell how a job should be done or prescribe or reveal any sequential restrictions not strength related. Thus million of funds of work are priced under severe time pressure using established unit price calculated from the estimators experience and which to some extent many have been proven in ongoing or recent projects. The failure of a contractor to understand and / or correctly bid or price the work initially is a major reason for disputes. It is compounded by the ever present confident overbearing optimism inherent in all contractors that they somehow are charismatic and can overcome the dilemma of an obvious bid.

7. Conclusion

This paper significantly overview the factors of conflict in the construction industry which is hoped to give clearer scenario to all project teams. Mainly, this paper grouped the conflict factors into three main factors which are conflict factors due to behavioral problems, contractual problems and technical problems. Conflict would arise due to behavioral problems such as poor communication among project

team, multicultural team problem and reluctant to check for constructability, clarity and completeness of project. Besides that, conflict also arises due to the factors of contractual problem which includes delay interim payment from client, client fails to respond in timely manner, application of extension of time and improper project schedules. Other than that, contractor's quality of work, error of pricing or costing, late instructions from architect or engineer also considered as the factors of conflict which is due to technical problems. This paper was hoped to be a useful reference to the project team in managing conflicts for future construction projects.

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