MAJ
Malaysia Architectural Journal

The Significant Factors on the Improving of Management Claims

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Received: 28th[t] May 2021 *Final version received: 23[rd] July 2021*

Abstract: The percentage of disagreeing the construction contract claims are increasing day by day. This is due to insufficient knowledge on handling the claims. The problem will raise continuously even with the experience of understanding the construction contract specification and the impartial risk-allocation system. In this paper, several issues will be discussed regarding construction claims. The method of this research was aimed at analyzing the weaknesses and causes of claims-management practice. All included are an all-inclusive review of information on the subject, a survey of postal inquiry, consulting with contractors and consultants, and case studies regarding claims and projects. Based on research, claims management can not be acted as a management function on the identical position such as estimating, planning, scheduling and cost control. This is due to the poor resourced and acted in an impromptu manner. Regarding the issues regarding claims are often to be suspected until the completion of the project, although the essential source from the recognized functions is released. The most critical obstacles such as issues, documents and information have been analyzed. It must be knuckle down in a few aspects, including decision making, training and redesigning relevant company information systems, and management strategies must be modified.

Keywords: Claims, Construction, Practice, Strategies

1. INTRODUCTION

Construction claims can be defined as a positive statement of demand either due to additional time or payment due to an action [i]. It will occur in all types of construction projects. In order to increase the benefits of contractors, subcontractors and clients, there are trying to achieve their own goals and expectations, causing the consequence of construction claims. However, few reasons lead to the consequences, such as poor project planning, an adjustment in scope, orders, errors and omissions (Khuong, 2020). Therefore, claims are becoming a new trend of life (Barrie ad Paulson 1992; Latham 1995) as they are a natural and basic part of modern contract systems. Proportionately to this consciousness, courses and publications in several aspects of claims management are becoming more well-known that they are almost an industry in their own right (Scott, 1992).

Therefore, a contractor performing a poor performance on this issue might bump into a high-cost claims issue. Thus, few situations are causing high-cost claims based on the contractor's perspective. For instance, faulty site investigation before bidding, bidding below costs and over-optimism, slow mobilization, poor planning and use of wrong equipment, faulty of cost and schedule control systems and performing defective work will lead to the existence of it (Khuong, 2020). Thus, it is also lead to the reason why the delay of construction claims happens. Therefore, the delay analysis method is included as well. Contractors do not allow the changes of dates and schedule of the construction progress to prevent delay. To prevent the cases happen, there are few methods of analysis to prevent the causes of delay of construction claims. The methods are including Impacted As-Planned Analysis, Time Impact Analysis, Time Slice Windows Analysis, As-Planned versus As-Built Windows Analysis, Retrospective Longest Path Analysis and Collapsed As-Built Analysis.

However, to proceed to construction claims requires costs to carry on this process. Therefore, few costs are involved in construction claims, and it can be claimed. It can be categorized into several groups. First of all, the extended stay at the side due to the delays or disruptions can be claimed, the changes of orders and variations can be claimed, and unpredictable physical conditions and rising costs can be claimed on account of ordered or constructive acceleration. Moreover, some responsibility will need to be taken note of and some preparation to be carried out while qualifying the claims. For instance, the contractor may need to analyze contractual documents to get the claims and identify problems regarding claims; some specific documents need to be reviewed, prepare tables and graphs for process purposes, establish a delay analysis, and calculate the collisions changed on schedule.

By the same token, time taken to preparing claims are important as well as causes and effects of the extension of time in preparing claims also need to regard as important. Therefore, there is some reason bring consequences to the issue. For example, delay analysis is an important part of any claim under the extension of time. They will be a programme to measure the effects of a delay as it is essential to refer within the claim and came out with an explanation. The possibility of having two delays occur at the same time is possible as there are several reasons and ways to solve this problem. An explanation of the adopted method and the programmed use is required to show the entitlement has been developed.

2. RESEARCH METHODOLOGY

The basic issues of construction contract claims are begun to identify a comprehensive review of the claims-management literature and case law and the conflict that is issuing from them. This is the beginning of the nature of responsibility of proof which the claimant needs to be completed to reach success and a fair standard of presentation and documentation regarding the claims. Based on research, there are ways to identify the practical management problems which have the common interest or pursuit with the preparation, assessment of claims and justification. Therefore, the postal questionnaire survey was carried out to identify the practical management problems. There are four main areas of claims that are necessitated to the investigation, including the aspects of preparation claims prohibiting the contractor, contractor's management setup from the responsibilities for the claims-management function, issues with claims documentation, and the aspects of the amount to the results in disputes.

3. CONTRACTORS RESPONSE

There are about 200 questionnaires that have been sent out to U.K. contractors, whereas there are only 69 replies out of the 200 questionnaires that have been sent out. Only 61 of them had completed properly; the response rate is about 32%. The specialization and sum of business, which is the breakdown from the broad categories of respondents, are specifically shown in Tables 1 and 2. The smaller construction companies with the sum of business lower than U.S. $15,000,000 were least represented. Moreover, there are more than 80% of the replied was from the firms which can be categorized as medium to large. In this category, contractors are tend to be involved in larger complex projects which also bring some supporting evidence for the commonly held view

which claims are one of the problem on such projects.

4. METHOD OF ANALYSIS

Based on the experiences of the construction professionals, the topic of claims management and the issues this research aims to resolve are carried out, and it is preferred to be subjective in some respects. The statistical tests selected must, of essentiality, evaluate the significance of the answers from a different perspective without assuming the population parameters. In this state, statistical tests besides the parametric ones are more applicable. The Kendall Concordance Test is carried out in the postal survey. The test aims to generate the scores and estimate the level of agreement between ranks, referred to as the coefficient of concordance (W). The greater or substantial value of W signifies greatly that the order of ranks achieved from the respondent's scores represents a wide group of professionals.

Table 1. Categories of Responding Contractors

Category of Contractor (1)	Respondents (%) (2)
Building only	47
Civil engineering only	17
Building and civil engineering	34
Others	2

Table 2. Grouping of Respondents by Annual Turnover

Annual turnover (millions of U.S. $) (1)	Respondents (%) (2)
Less than 7.5	2.2
7.5-15	2.2
15-30	13.3
30-75	31.2
75-150	24.4
More than 150	26.7

5. BASIC CONCEPTS AND PRINCIPLES OF CONSTRUCTION CLAIMS

Construction claims can be defined as a declaration of the right ambition of additional time or payment. These can be due to the consequence of an action. Therefore, the possibility of facing construction claims can happen in all construction projects. Therefore, the issue of construction claims happened due to the communication between clients, contractors and subcontractors, and they are trying to achieve their target and expectations in the direction of expanding their benefits. It may lead to the issue of having conflicts with each other due to this diversified target and expectations of parties. It can be started by a few common reasons such as faulty project planning, changing the scope, and change the orders, errors, and omissions. Thus, it may bring up the conflict to the project, which will affect the completion of construction projects (Khuong, 2020).

On the grounds, claim management is a compulsory process in every construction project management. Therefore, it must have an effective management practice to be conducted all the same on the entire life cycle of a project. There are four phases under claim management: claim prevention, claim mitigation, pursuing claims, and claim resolution. First of all, the progress of Claim Prevention happened at the phase of Pre-tender and Contract Formulation of a project. Thus, all the conditions related to the projects, such as contract documents, project plans and scope of work, should be included because the opportunity to prevent claims is reached the end after the award of the contract (Khuong, 2020). Next, in the sector of Claim Mitigation, construction activities are commonly carried out in a highly sensitive and outdoor environment. Therefore, it is preferred to decrease. There is a way to minimize the possibility of claims take place as well as it has a straightforward scope, risks and responsibilities. Additionally, in the phase of claim mitigation, risk management plans

are one of the important strategies (Khuong, 2020).

Besides, Pursuing Claims is also called Claim Identification and Quantification. It can be accomplished by evaluating both scope of work and the arrangement of the contract. The scope of work, contract terms, explanation of extra work and explanation of extra time requested belongs to the inputs of the claim identification process. For example, an additional payment or time extension to the contract completion or other occasion dates will be quantified if an activity is identified as a claim. In this stage, in order to calculate the delay of the project, a schedule and critical path analysis should be carried out to prevent the delay of a project. Moreover, additional costs such as direct and indirect costs originating from the claimed activity should be calculated (Khuong, 2020).

More than that, claim resolution is a process that requires a progressive process to fix the claim issue. The claim can become a change order because an agreement is reached between parties, then the claim is concluded. Instead, the contract claim might proceed to negotiation, mediation, litigation and adjudication if the agreement is not reached before it is completely concluded (Khuong, 2020). Furthermore, it will affect the projects as the huge value claims may ruin the growth of a project or causing the construction to become more challenging through disappointment between owner and contractor. Alternately, the owner might face a serious problem if a sizable claim is well-founded. It leads to several consequences such as required new financing, losing the income from commercial property and facility, and needing to provide more funds to the working staff, which is more than expected from the plan. Therefore, most owners tend to include contingency funds in their projects budget to cover the cost of claims.

Nonetheless, there are limitations to contingency funds. Suppose the cost of unfunded keeps on increasing; it may need to carry out emergency actions such as short-lived interruption to the construction. In that case, special appropriations and financing are requested through additional borrowing. Hence, time is money. The more time is lost, the more money it cost. The contractor may encounter a financial issue that is critically unstable due to the non-receipt payment not being conceived in the contract price. Therefore, financial issues occur because contractors cannot pay their subcontractors and suppliers, which may indirectly cause the project to collapse due to inadequate resources and money (Khuong, 2020).

Last but not least, several situations may cause high-cost claims. From contractors perspective, poor site investigation before bidding is often happening between contractors as they tend to bid work without providing an acceptable site investigation in several areas. Contractors tend to over-optimism and bid below costs because this action is considered a conscious underbid, more likely to justify breaking into a new geographic market or new line of work. Slow mobilization, inadequate planning, and use of wrong equipment may cause the contractor to get into trouble. Contractors performing a damaged work will affect the payments, and poor cost and schedule control systems are often identified as poor management planning and control (Khuong, 2020).

6. FACTORS IMPROVING MANAGEMENT CLAIMS

Costs of Claims Involved in Construction Contracts

In the construction industry, contractors' financial achievement does not meet the expectation as most projects are completed with a certain condition, and the time is decided on conditions in the contract. Nevertheless, most of the construction contract has guaranteed the recovery for extra time and cost, but it seems less realized (Teacher, 2019). Construction claims can be classified into four groups: extended stay at the side because of delays or disruptions can be claimed, changing orders and variations, unpredictable physical conditions and increasing the costs on account of ordered or constructive acceleration can be claimed as well (Teacher, 2019).

Claims from an extended stay at the site because of delays or disruptions will occur due to the extra indirect cost on account of an extended stay at the side will be added by the contractor. The more time spent at the site by contractor, the

related costs will be increased as well. However, few factors lead to cost increases, such as manpower costs, equipment costs, power & fuel costs, and insurance & financing costs (Teacher, 2019). Manpower costs are including indirect manpower committed in work life such as working staff, watch and ward staff, stores and plant crew. Equipment costs are a cost that is claimed for an increasing period of time, charged of hiring if the equipment is rent out from other parties. Power and fuel costs, including the normal services, colonies and camps. Insurance & Financing costs would be acquired for the sake of the extension of Bonds, guarantees & insurances as long delays or disruption of construction progress will cause the shortage of general cash flow (Teacher, 2019).

What is more, changing order claims and variation claims include one of the assessment's significant aspects. It takes a lot of time and motion study to prepare the varied or extra work with selected stresses on labour productivity, equipment, and uses or wastage of materials in work. The advantage of this action is maximizing the alteration by indirectly forcing the client to accept the most beneficial rule to the contractor (Teacher, 2019). More than that, the contractor determines the cost of unpredictable physical conditions of claims as the steps taken to respond to the condition. The contractor may suggest adding equipment or manpower to solve this problem. For example, they may suggest bringing out new work items or producing a new methodology to carry out the work. In this situation, direct cost is important in accounting for changes in applicable rates or increased costs. In addition, it will cause indirect costs if the project is delayed (Teacher, 2019).

The additional costs on account of ordered or constructive acceleration will be claimed. This claim is combined with the primary of extra resources that have been used for acceleration. To qualify this claim, contractors will need to provide a frame of reference as this would generally be one of the Construction Programme and methodology needed to be submitted together with the tender. Most of the tender offers the contractor to assert the manpower and equipment to anticipate at the tender stage (Teacher, 2019).

In conclusion, costs can be differentiated into direct cost, indirect costs and preliminary & enabling costs. From a direct cost, it can be further divided into direct material cost, direct labour cost, direct power and fuel cost and direct subcontract cost. Whereas indirect costs including costs on labour costs, material costs, equipment costs, wages of managers, staff, site running costs, insurance costs, financial costs and revenue costs. The preliminary and enabling expenses are the expenses spent on-site installations like plant foundations, housing or hutting, water and power lines so on and so forth. These costs normally coincide in the project as the preliminary expenses are occupied 90% of project completion (Teacher, 2019).

Responsibility and Preparation of Claims

In the construction claim industry, a contractor may need to prepare and assess with some general skill and effort. The possibility of success or failure of a claim can be decided by the experiences and skills commonly applied to claims management. It is significant as it can be defined as specifically assigned or carried out ad hoc (Preparation and evaluation of claims, 2017). Few details need to be prepared to seize the claims. First of all, the contractor may need to analyze the contractual documents. Then, project documents need to be reviewed, such as changes of orders, drawings, correspondence and schedules, so on and so forth. They may also need to come across to identify the problems. Then, the validity of claims from the relevant documents needs to be justified.

Moreover, preparing the tables and graphs is required and building up an exact and structured report. Developing a completed delay analysis is compulsory. The contractor may also know the calculation of collision changes on the schedule and came to conclusions and quantified damages. (Preparation and evaluation of claims, 2017). Alternatively, preparing claim services may benefit the client by helping the client undertake the duty of managing claims from different aspects such as guaranteed to concentrate on other productive activities like customer and supplier services. The discussion of the application of specific insurance clauses is contributed from industry-leading technical support as it is particularly under Construction or Erection

policies. It also achieves quick, effective and lively destruction of claims. It also benefits by searching to reach the technical certification for the protection on the coverage agreements. Searching to inhibit the legal proceeds from providing the client with exceptional cases and technical assistance. It benefits the client as it also amends the compensation in life with the policy coverage and expands the accuracy in working with insurance companies to achieve their agreement and make partial payments as interim amounts (Jose, 2018).

Time Involved and Causes and Effects of Extension of time in Preparing Claims

Over and above, it takes time to prepare claims. The condition of claims preparation that is delayed or slow down the process must be analyzed to design appropriate therapeutic strategies as the contractor tends to leave the claims until the project completion. This action is taken to reduce the problem brought up by contractors. The best way to carry out the event itself is often presenting the details through a journal. The journal is designed to describe the events that happened and when it happened and provide an approval of the events by referencing the project records. Journal should be split into different sections that are carried out with cause and effect to make it clear to parties. The journal will determine the cause of the event. The effect is more subjective and often required more work to show. The effect section that is stated should include what activities were affected and when the delay started and finished. Facts of the matter are well established to show that the delay event or events are delayed at the time for completion and by how much. An analysis can be created using the information above, showing the consequences on the date (Hewitt, 2018).

Moreover, the delay analysis is an important part of any claim under the extension of time. It is evidence of the delay event to prove that it affects the time for completion. Thus, The Society of Construction Law's Delay and Disruption Protocol is recommended (Hewitt, 2018). A programme to measure the effects of a delay must be carried out as it is essential to refer within the claim and explain how it comes about. Substantiation must be included as the purpose is to show the approval by the Engineer and contain the programme within the appendix. Delay will not lead to an extension of time automatically. Instead, the delay event may use up all the available float, causing the activity part of the critical path and leading to the changes of completion date (Hewitt, 2018).

In addition, when two delays happen in the meanwhile, one of the delays is the contractor's duty, and the other is regarding the Employer. The privilege of a contractor to an extension of time is not annihilated. On the contrary, it will affect the costs instead of time (Hewitt, 2018). In the same way, one of the methods often used for delay analysis impacts the delay into the ongoing programme. A suitable logic link must be introduced if this method is chosen. It will bring results to the as-planned programme as it will show the effects regarding the delay event on the critical path and completion date. Any method is used for delay analysis is significant to explain that it is an applicable method. In another incident, the respondent will only receive one method to be used. It is suitable to deal with expected responses from a reviewer when compiling a claim. Reviewer within the claim and adequately close it up compared to wait for responses (Hewitt, 2018).

The historical part to justify the method of delay analysis could be discussed in the section, which provides the detailed part of the extension of time claim. However, it also depends on the position of necessary explanation toward the case to clarify the basis of the delay analysis. This explanation is stated in the claim; although it is not principally important, it must provide a detailed explanation to the reviewer (Hewitt, 2018). It is also required to having this explanation of the adopted method and the way of programmed used to show the entitlement has been developed. Claim narrative will often happen when one person brings it up and other parties bring up the analysis programme. There is also a case that having a tiny interrelationship in two documents or sometimes contradictory. It is logical to an experienced planner and a possibility that the claim document will not be an expert by the reviewer. Therefore, a clear and well-planned explanation is required in the claim document, and the resulting programme must be added to the appendices. Therefore, the reviewer will not guess the logic, why it is used, and the development of the programme (Hewitt, 2018).

7. THE REASON FOR CONSTRUCTION CLAIMS DELAY AND DELAY ANALYSIS METHOD

The delay of construction claims must affect the fault-finding path. Construction contractors always banned adjusting to the dates or schedule of the construction progress (Khuong, 2020). This concept is logical with industry practice as it is written in a book as it stated that the extension of time should be allowed if they are the express plan to the opposite in the contract If the Employer Delay is concluded to decrease to zero, the total float on the critical path. In another hand, time extension entitlement is banned for contractors (Khuong, 2020).

There are few methods to execute delay analysis. Firstly, The Society of Construction Law (SCL) Protocol 2nd Edition lists six common methods. It is shown in figure 1 below.

Method of Analysis	Analysis Type	Critical Path Determined	Delay Impact Determined	Requires
Impacted As-Planned Analysis	Cause & Effect	Prospectively	Prospectively	• Logic linked baseline programme. • A selection of delay events to be modelled.
Time Impact Analysis	Cause & Effect	Contemporaneously	Prospectively	• Logic linked baseline programme. • Update programmes or progress information with which to update the baseline programme. • A selection of delay events to be modelled.
Time Slice Windows Analysis	Effect & Cause	Contemporaneously	Retrospectively	• Logic linked baseline programme. • Update programmes or progress information with which to update the baseline programme.
As-Planned versus As-Built Windows Analysis	Effect & Cause	Contemporaneously	Retrospectively	• Baseline programme. • As-built data.
Retrospective Longest Path Analysis	Effect & Cause	Retrospectively	Retrospectively	• Baseline programme. • As-built programme.
Collapsed As-Built Analysis	Cause & Effect	Retrospectively	Retrospectively	• Logic linked as-built programme. • A selection of delay events to be modelled.

Figure 1. Delay Analysis methods according to SCL Delay & Disruption Protocol

Followed by AACE International's Recommended Practice No.29R-03 for Forensic Schedule Analysis (RP 29R-03) had listed nine different methods. It is shown in figure 2 below.

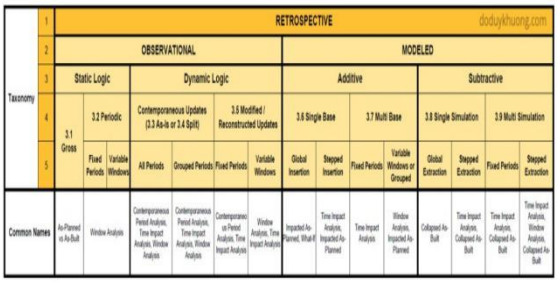

Figure 2. Delay Analysis methods according to AACE International's Recommended Practice No.29R-03

Typical Delay Analysis Methods can be categorized into few concepts. Time Slice Windows Analysis is an experimental, windows-based procedure that mostly focuses on analyzing as-planned, updated and as-built project schedules to determine and evaluate delays to the project's critical path. This procedure is conducted as it is a reflective analysis that used the project schedule to update the slippage through the critical path in a selected time. The origins and causes of delays will be determined when the critical path activity delays have been evaluated (Khuong, 2020). Time Impact Analysis can be defined as a schedule delay analysis technique that brings up more delays or changes to the schedule that need to be updated before the delay occurred. This is because it can be determined whether the project's completion date is held or going on to the same result of the delays. It also shows the entitlement of time extension of a contractor. Moreover, it also shows an expedition of a potential schedule as well as the authorization of owners to receive damages (Khuong, 2020).

Likewise, Collapsed As-Built Analysis is also a reflective schedule delay analysis technique that regulates the earliest date of the completion date of a project. It is designed to repay the extension of time to concurrent delay situations. The Collapsed As-Built Analysis, which extracts from the contractor-caused delays, determines the time period between a certain completion date and the Collapsed As-Built completion date for evaluation by owners (Khuong, 2020).

8. CONCLUSION

In conclusion, claims is an orbit for the claimant to fulfil their dissatisfaction. It can be

characterized as a failure to accomplish the agreement under construction law. There are basic principles of construction claims that have to take note of. For instance, claim management is one of the principles that have to be involved in every construction project management. Secondly is Claim Mitigation. It is one of the construction activities often carried out in a highly sensitive and outdoor environment. Pursuing Claims can be achieved by evaluating both scope of work and the agreement of the contract. Few situations are causing the issue of high-cost claims based on the contractor's perspective. However, the contractor may bring effects on the issue by performing damaged work.

High-cost claims can be caused by several situations, such as poor site investigation by contractors. Contractors do not provide a better site investigation in areas when bidding works in few areas. The contractor will get affected by payments through performing bad work. In construction claims, several costs need to be claimed in construction progress. Construction claims can be categorized into four groups. Furthermore, There can be categorized into direct cost, indirect costs and preliminary and enabling costs. Each cost has a different target and reason. These costs often coincide with construction projects. Extended days to stay at the side due to delays or disruption, changes of orders and variations, unpredictable physical conditions, and increasing costs based on ordered or constructive acceleration are involved in construction claims. This is because not every issue can be claimed under construction claims.

The responsibilities to carry the claims are important as it is all regarding money. Relevance parties will not be willing to pay the irrelevant cost to a third party. Therefore, contractors are requested to be familiar with the preparation of claims. Documents, tables and analysis are the main points of preparing claims. Claim services aim to help the client attempt the duty of managing claims from a different perspective, which also improves clients' confidence at the same time. Prevent the legal proceeds to give the client notable cases and technical assistance will bring goods to the client and improve the trust issue between both sides. It can also attain the agreements and make payments as interim amounts. Contractors must have some general skill and effort to solve the issue to maximize the benefits of both parties.

Time involved in preparing construction claims has to be valued. The contractor may need to spend a lot of time preparing a claim. It also can be costed in construction claims as well. Furthermore, there are also reasons and effects of extending the time of preparation claims. This is because the claims are normally brought up by one party, and another party often brings up the analysis programme. Explanation on adopted method and how is it programmed is to show the license has been developed. Furthermore, having a small interrelationship in two documents will happen sometimes. Therefore, the contractor may need to know the planning methods of the possibility of claim document to reviewer to reduce the harm between each party. Contractors may need to balance the benefits from both parties by providing a win-win solution to both parties.

The delays of construction claims will happen because of the dates and schedule of the construction progress. Thus, there are reasons why this issue is happening and methods to settle the issue to benefit contractors and other parties. However, the delays of construction claims may bring dissatisfaction to contractors and other parties as the issue is better to settle it effectively instead of delaying. There are also few methods to solve the cases. Methods of analysis are including Impacted As-Planned Analysis, Time Impact Analysis, Time Slice Windows Analysis, As-Planned versus As-Built Windows Analysis, Retrospective Longest Path Analysis and Collapse As-Built Analysis.

In a nutshell, factors to improve management claims must be valued. First, it could improve the relationship between contractors and third parties. The contractor should take note of preventing the claims occurred in every construction project. Related authorities should teach and improve the knowledge of construction claims to every parties to reduce the cases of claims that happen in every construction project and maximize the relationship between each other to create a peaceful community. Claims are aimed to bring benefits to both parties as it also might destroy the relationship between each other, and it will cause side effects to the community. Therefore, authorities should reduce the cases of construction

claims that happen in every construction project in the future.

9. SUMMARY

In summary, there are several factors to improve management claims. In this globalization, contractors are required to be familiar with construction claims. Claims can be categorized into different groups. Construction claims issues will happen in every construction project. It is important as it has to be equitable to every party. Basic concepts and principles will be discussed at the beginning of the topic. It is preliminary knowledge regarding construction claims in construction projects. Failure of planning in construction progress will lead to delays in the completion date of construction projects. The reasons for construction claims delays will be discussed in the manner that some general reasons lead to the issue and methods to resolve the issue. Moreover, there are few costs of claims involved in construction contracts. Selected costs can be claimed in construction projects. The contractor may need to get familiar with the responsibility of handling claims. Relevant documents and analysis are required in the preparation of claims. Last but not least, the time involved to prepare a claim is important, as well as the causes and effect of extension of time used in preparing claims could cost a lot. Time is money. The more time is extended in construction projects, the higher it will be costed. In consequence, a claim is developed to bring benefits and be fair to both parties.

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