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A Construction Claim Procedure to Safeguard the Contractors' Contractual Entitlements

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Abstract

More claims have emerged due to the challenges the construction industry has faced in recent years. When contractors submit claims in construction projects, they get either unpaid or paid less than the full amount owing to the ineffectiveness of the existing claim procedures. To obtain full compensation, claims have to be accurate. The study focused on developing an effective claim procedure for the construction industry in Sri Lanka. The study adopted a qualitative approach, using expert interviews and document reviews. Data were manually analyzed using content analysis. The strategies for detecting claim situations were identified and new format for presenting claims was developed. In the Sri Lankan construction industry, lack of understanding, awareness, and knowledge in site staff about claims; insufficient time given for claim notification; ambiguous procedures to follow in presenting claims; and the unavailability of records on claim substantiation and claim documentation are critical issues in claim preparation.

Keywords: Keywords: Claim presentation, Claim procedure, Detection strategies, Difficulties, documentation

1. Introduction

In the construction industry, because of the complexity of the designs and the involvement of many stakeholders, both the clients and contractors would face challenges if they were to deliver their projects successfully (Onat & Kucukvar, 2020). While the overall quality of the project delivery depends on the selecting suitable contractor to the project, many factors can lead to cost and time overruns in the project (Heravi & Mohammadian, 2021).

According to Casady and Baxter (2020), due to uncontrollable and unforeseeable factors, contractors may find it difficult to complete the project on time, to the required quality, and at the agreed cost. When the construction contracts and their claim-related provisions have been well prepared, contractors can seek relief when claim events occur. Claims are one of the major concerns in the construction industry, particularly with the growing magnitude of modern day projects' complexity (Walsh & Zehner, 2019), consequences of the pandemic situation and other issues (Hansen, 2020). A claim is a legal demand for compensation (Jalal et al., 2020).

Because claims could cause disputes in construction projects, Shadid (2015) stated that an appropriate claim procedure would

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avoid disputes due to construction claims. Azmi et al. (2018) stated that the conventional claim management framework currently being used can no longer deal with the issues facing the construction claim process today. According to Hossam et al. (2014) and (Ahmed et al., 2019) the traditional claim procedure is not productive and well-structured because the contractor can lose the claim because of the various problems associated with claim preparation. Contractor's inefficiencies and weaknesses can be exposed in the absence of an effective claim's detection strategy (Stamatiou et al., 2019, Enshassi et al., 2009). Many valid and probable claims would be rejected because of the use of ineffective strategies or past strategies, which are no longer applicable to the dynamic construction industry of today (Jalal et al., 2020). Bakhary et al. (2015) concluded that proper claim documentation would increase the probability of winning the claim. Often, the construction professionals directly involved with the stakeholders at construction sites are not sufficiently aware about the documents that are important for claim preparation and record keeping. Dosumu (2018), Yousefi (2017), and Jaeger and Hok (2010) stated that proper claim presentation will assist in getting a claim accepted. The claim presenting format should be logical, coherent and factual, but the it does not require the contractor to provide all the information that require to the engineer to enable him to support the rights claimed and the time and additional compensation required (El-Adaway et al., 2018).

Claims have been discovered to be the most frequently cited fact in the majority of construction projects (Yusuwan & Adnan, 2018). The contractor can maintain his right to claim until an appropriate analysis of the identification, notification, substantiation, documentation, and presentation of the claim have been conducted (Ahmed et al., 2019). Because the number of construction claims submitted is on the increase, the proper preparation of construction claims has become necessary (Yiu, Liu & Kwok, 2018). Increased claim events due to the pandemic situation, material shortages, government regulations and other issues requires contractors to have proper procedure for proving their entitlement (Hansen, 2020), (Ganegoda et al 2021). Although many past studies have been conducted on the preparation of construction claims (Bakhary et al., 2015), (Hackett, 2021) only a few of them have attempted to identify the complications faced in such an exercise (Hai, 2019). None being able to develop a comprehensive claim procedure for the Sri Lankan construction industry by considering current states of the industry that will overcome the complications of the dynamic project environment. By reviewing contemporary literature, construction project documents and analysing experts opinions of Sri Lanka, this study aimed to develop a construction claim procedure that will ensure contractors that they will receive their contractual entitlements.

2. Literature Review

2.1 Construction Claims

Mohamad et al (2021) stated that a claim is always for additional payment, extension of time (EOT), or both, and arise from breach of contract or damages resulting from breach of contract. A claim arises when one party to a contract suffers a loss due to contract for which the other party should compensate that party (Hai, 2019). Awad (2017) explained that a claim is an assertion of the right for a remedy, or relief. Ahmed et al. (2019) found that the main reason for the claim is discrepancies between actual

and contracted work. In situations such as when contractors require more time and incur more costs than what is stated in the contract, they may claim from the employer's compensation for the losses and expenses incurred (Ali et al., 2020). According to Shaikh et al. (2020), claims are significant because they have the potential to jeopardize contractor profitability, cash flow and project success. Al-Qershi and Kishore (2017) reported that simple and fast settling of claims is important for the successful transmission of risks from one party to another when the contractor or client is paying for the insurance of construction disputes.

Khekale and Futane (2015) and Stamatiou et al. (2019) highlighted that claims are vital for contractors to eliminate unnecessary losses that occur due to the faults of their clients. Hackett (2021) and Mishmash and El-Sayegh (2016) found that Contractors should have a claim management department to avoid the ad hoc management of claims, as they are poorly managed by contracting companies. Further, it also appears that a standard and transparent procedure should be established that contractors can follow in order to properly prepare the claim (Ali et al., 2020).

2.2 Claim Provisions in the Conditions of Contract of FIDIC Red Book (1999)

Seneviratne and Michael (2020) mentioned that the contractor has to follow the claim procedure mentioned in the conditions of the contract. Although, the study focuses mainly to introduce effective claim procedure for contractors in Sri Lanka, the author's intention is to provide a base for further research studies on other countries through the study findings. Therefore, the FIDIC Conditions of Contract were chosen to address the claim clause as it is commonly used in different countries including Sri Lanka and in different types of projects. Although FIDIC has published other editions since, edition 1999 is used nationally, globally and widely on all types of projects and is based on thousands of successful projects. Therefore, edition 1999 was considered for the study as the most representative model contract of all the FIDIC standard forms.

According to Ahmed et al. (2019), the notification of the claim according to the contractual provisions is very critical since the contractor's failure in this respect implies the engineer's rejection of the claim. Seppala (2005), Barakat at al. (2020), and Baker et al. (2013) mentioned that according to Sub-clause 20.1 of FIDIC (1999), if the contractor fails to submit the notice of a claim within 28 days of the event or circumstances giving rise to the claim, no time extension for completion will be granted, no additional payment will be paid, and the employer will not be held responsible for the claim. Seppala (2005) and Zaneldin (2020) stated that according to Sub-clause 20.1, the contractor should submit to the engineer, a detailed claim with supporting information within 42 days of the event or situation that triggered the claim or for such other duration as the contractor may suggest and verified by the engineer. By providing supporting information refer to the appropriate clauses, the Contractor has to completely form the entitlement under the contract (Chen et al., 2018). The engineer should respond within 42 days after receiving the claim and the contractor should submit updated interim claims monthly (Adhabi & Anozie, 2017). The contractor should submit the final claims after the claim event has ended.

2.3 Importance of Identifying Claimable Situations

The most important aspect of the claim process is the timely and accurate identification of a construction claim

(Ahmed et al., 2019; Hadikusumo & Tobgay, 2015). Hai, (2019) confirmed that accurate claims detection is an essential part of the construction claims process. Shaikh et al. (2020) mentioned that the key skill required to identify claims is the responsiveness and sensitivity to the claimable situation. According to Yehia et al. (2020) the claim identification initiates with adequate awareness of the scope of work and obligations under the contract terms, when some activity appears to be a change in scope or terms requiring a contract adjustment. A claimable situation should not be an opportunity for the contractor to earn extra revenue from the project (Yiu et al., 2018). The contractor has to be aware of the potential risks associated with claims and be able to manage them (Walsh & Zehner, 2019). When claim situations are not known or not identified, the opportunity to submit claims will be lost (Awad, 2017). Valuable and potential claims would not be possible with an improper identification process (Abouorban et al., 2018). Claim consciousness is the familiarity with and awareness of potential claim situations in a certain project; and structured contract administration are the main requirements for delivering a successful claim (Stamatiou et al., 2019). Even excellent construction claims will be ignored for not identifying claim situations. Such situations will affect project supply chains, contractors' cash flows, and project costs and completion time (Stamatiou et al., 2019). The contractor should detect and identify a claim situation when it first develops and not after it becomes controversial (Parcham et al., 2019), (Mohammadi & Birgonul, 2016).

2.4 Claim Procedure and Claim Preparation

The importance of claim notification has been demonstrated by the numerous examples and illustrations of engineers rejecting claims due to notification errors (Azmi et al., 2018). Ahmed et al. (2019) have mentioned tha the successful winning of a claim obviously depends on more than just timely notice of a claim, even so offers the employer an opportunity to evaluate project situations to regulate whether or not there is an alternative method of dealing with problem situations. The contractor can determine rights and damages by referring to the relevant terms of the contract and making relevant calculations (Shaikh et al., 2020). Substantiation of the claim has to be done from a legal perspective by making a legitimate request for the claim (Jalal et al., 2020). The contractor has to prepare the entitlement by referring to the relevant clauses in the contract (Chen et al., 2018). The establishment of the legal right to submit a claim is a critical step in the claim process (Seo et al., 2021).

Documentary evidence binds the legal framework. Construction claim documentation should contain the sequence of events leading to the submission of the claim. Stamatiou et al. (2019) asserted that Efficient and effective record keeping and documentation increases the chances of winning a claim by providing true proof of claim. Claim submissions should be well-structured, factual, logical and references should be taken from conditions of contracts (Shaikh et al., 2020). The claim should emphasize the violation of contractual obligations (Shrestha & Neupane, 2020). The contractor should explain the harm resulting from the actions of the employer. Although many techniques are available for the assessment of the claim, it is a rational choice to decide the best technique to be used in the claim event, and it is influenced by experiences, practice, the knowledge available and other related factors (Saunders et al., 2018).

The inability of site staff to detect claim situations, inaccessibility to supporting documents required for the claim notice, failure to submit the notice within 28 days of the claim situation are major issues in claim notification (Yehia et al, 2020). According to (Shaikh et al., 2020), some contractors failed to notify and submit claims within the time period stipulated in the contract. Mishmish and El-Sayegh (2016) and Hai, (2019) pointed out that the claimant's right beneath the contract or at law to the compensation is the entitlement and the contractor loos it not having document proof to substantiate. In addition to being familiar with the project itself, contractor require to have a fundamental awareness of the terms and conditions of the contract documents (Demirkesen & Ozorhon, 2017). Reasons for delays and disruptions may be plausible, and it is most important to detail the relationship between cause and impact (Heravi & Mohammadian, 2021). Presentation errors and mistakes made when calculating the claim amount are common (Ali et al., 2018). Because of the inadequacy of supporting evidence, unawareness about the interest on the part of project personnel obliviousness to project personnel's interest, and poor documentation, the contractor may lose the opportunity to recover the incurred damages through the claim (Hackett, 2021). Figure 3 also summarizes the most common difficulties experienced in preparing claims Sri Lanka.

2.5 Requirement for an Effective Claim Procedure for Contractors

Construction claims can be consired as one of the most signifiacnt matters that could cause a detrimental effect in construction organizations. Taofeeq, Adeleke, and Hassan (2019) revealed that if a claim is to be rejected because of the contractors' failure to substantiate his entitlement, it would cost the contractor time and money and could negatively affect the contractor's resource allocations. Yousefi (2017) explained that a claim could neither be completely accepted nor rejected, there is partial acceptance of the claim. Pollalis (2018) accepted that, the claims of the contractor are often under-settled, below a sum that reflects the full entitlement of the contractor. According to the findings of Sibanyama et al. (2012) and Ngala (2018), the Employer always reduces or completely waives the contractor's claim rights in Zambia.

As far as Sri Lanka is concerned, the scenario is almost identical. Nisanasala, (2016) highlighted that claims-based disputes are being arising due to the contractors' failure to obtain compensation. Nimalasena et al., (2021) analysised 2062 claims submitted for consideration and identified claim-based disputes due to the complain of unpaid contractors and trends in claim settlements. Moreover, Sendanayake (2021) stressed that extra time and effort was spent to resolve disputes. Further, the authors mentioned that when contractors unpaid for claims, a significant number of disputes are referred to local arbitration, while some cases are referred to the very expensive international arbitration mechanisms. Oyegoke and Al Kiyumi (2017) highlighted that an effective claim procedure is required to prepare claims to avoid disputes due to construction claims (Awad, 2017). Thus, the conventional claim procedure is ineffective because the claims submitted by contractors often get rejected owing to several issues that arose during the preparation of the claims (Doloi, 2009). Abouorban et al. (2018) verified that a systematic claim process for construction contractors is an urgent requirement in the construction industry. Thus, the analysis of the construction claim process will serve as

a logical basis to tackle the complexities of their changing business situations (Shrestha & Neupane, 2020). If a contractor follows a systematic claim procedure, complaints on claims would be unlikely (Azmi et al., 2018) and It would be possible to avoid wasting time Ahmed et al. (2019). Thus, an effective claim procedure would benefit the contractor.

3. Research Methodology

The study focused on identifying the type of records and documents required for claim preparation, components of claim presentation, and the issues associated with claim preparation and investigating the strategies that would help detect claims and an effective claim procedure for the construction industry in Sri Lanka. Therefore, the literature gathered first and it was from peer-reviewed journals, conference articles, technical papers and books, with grey literature excluded.

According to Basias and Pollalis (2018), a qualitative research approach allows the researcher to examine the actual experiences of people in detail and identify any issues from their point of view. The qualitative method is a tool that a researcher can use to introduce a theory or present an innovative study to the industry (Minayo, 2017). If the literature is insufficient or unknown variables to be studied, Rogers (2018) recommended to use qualitative research approach. Therefore, qualitative data based on the ideas, opinions, and perceptions of experts with experience in the construction industry had to be collected.

Interviews with experts are ideal for exchanging information in both directions (Evans & Lewis, 2018). Interviews are a flexible data collection method, which enables a researcher to explain the questions to the interviewees to make them understand the questions easily while giving them the opportunity to explain the issues based on their knowledge and experience (Adhabi & Anozie, 2017). Participants can strongly and clearly describe their experiences, opinions and feelings on the importance of a topic using semi-structured interviews (Rogers, 2018). A semi-structured interview design was used, with fewer structured questions, allowing certain questions to be asked immediately when needed (Evans & Lewis, 2018). Moreover, Semi-structured interviews help verify literature review findings with interview findings (Rahi, 2017). Thus, the study employed an interpretivist approach using a survey strategy. The semi-structured interviews of the study, that were conducted face-to-face with open-ended questions lasted for 60–75 min. Data saturation was reached after the 12th interview when no new data were forthcoming (Saunders et al., 2018) and the interviews were stopped at that point. Nascimento et al. (2018) confirmed that the criterion for determining the validity of a data set is data saturation for semi structured interviews. Since the purposive sampling is a form of non-probability sampling in which researchers rely on their judgment when choosing members of the population to participate in a study (Rahi, 2017), the purposive sampling method was used to select the experts, who were chosen based on their industry knowledge and experience of more than 10 years, awareness of construction claims, availability for interviewing, and willingness to participate in the interviews. It also can be used for achieving maximum productivity in time and costs to select the experts to be interviewed. According to Natow (2020) combining interviews with documentary analysis was the most common and productive method of combining multiple qualitative

methodologies. Author further detailed that It enhances the validity of findings and help to reflecting more constructivist or critical frameworks of findings. The documents recommended by the experts were reviewed to obtain the required data. According to Jensen (2020), document reviewing is a form of qualitative research in which documents are interpreted by the researcher to give voice and meaning to a topic of interest. The respondents' profiles and reviewed documents were present in table 1.

Mohajan (2018) explained content analysis as a qualitative data analysis technique that can be used to quantify and analyze the meanings and relationships of verbal data, behavioral data, or concepts to identify their patterns, and categorize and tabulate them. According to Assarroudi et al. (2018), content analysis is used for analyzing qualitative data. Manual content analysis was the most appropriate technique to analyze the gathered qualitative data because the study was based on the opinions of the experts expressed at the interviews and on the data gathered from document reviews. Eventually, A critical discussion was carried out to concrete the conclusion by comparing the study findings with the existing literature, while providing the similarities and dissimilarities with earlier synthesised state of the art.

Table 1: Details of the interviewees

Code	Designation	Experience in Years	Documents Reviewed
R1	Director	26	Master Programs, Contract Documents, Drawing Registers, Correspondence Records
R2	Director	21	Contract Documents, Particular Conditions, Site Records, Correspondence Records
R3	Director	18	Engineer's Instructions, Correspondence Records, Contract Documents
R4	Chief Quantity Surveyor	19	Payment Voucher and Purchase Order Records, Contract Documents, Correspondence Records
R5	Chief Quantity Surveyor	18	Change Orders, Resource Allocation Records, Correspondence Records
R6	Senior Quantity Surveyor	16	Meeting Minutes, Specifications, Variation Order Records, Correspondence Records
R7	Chief Quantity Surveyor	11	Particular Conditions, Engineers Instructions, Correspondence Records, Contract Documents
R8	Chief Quantity Surveyor	14	Time Impact Evaluation Records, Master Programs, Contract Documents
R9	Senior Quantity Surveyor	10	Change Orders, Correspondence Records
R10	Senior Quantity Surveyor	13	Engineers Instructions, Contract Documents, Correspondence Records, Labor Records
R11	Project Quantity Surveyor	18	Master Programs, Contract Documents, Drawing Registers, Correspondence Records
R12	Project Quantity Surveyor	19	Payment Voucher and Purchase Order Records, Contract Documents, Meeting Minutes

Table 2: Strategies that will detect claim situations

Item no	Strategy	L	R 1	R 2	R 3	R 4	R 5	R 6	R 7	R 8	R 9	R 10
1	**Project meetings and site visits**	_	✓	✓	✓	✓	✓	✓	✓	_	_	✓
2	Regular review of project documentation	✓	✓	✓	_	✓	_	✓	✓		✓	✓
3	Construction scheduling	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4	Project cost and payment forecasting	✓	✓	✓	_	✓	✓	_	✓	✓	✓	✓
5	**Project timeline tracking**	_	✓	✓	✓	✓	_	✓	✓	✓	_	_

4. Research Findings

The key findings of the study are given below.

4.1 Strategies to Detect Claim Situations

The expert interviewees agreed that by adopting strategies that will detect claim situations, claim identification could be streamlined. Most of the interviewees were concerned about the regular review of project documentation and agreed that as mentioned in the literature, project cost and payment forecasting are the two most significant strategies that will detect claim situations. The interviewees highlighted that quantity surveyors, project managers, and site engineers are key professionals that can be involved in identification. Furthermore, they illustrated that discrepancies between actual cost data and forecast cost data can lead to claims and that quantity surveyors should be tactful in bringing it up with appropriate contractual provisions. According to both the literature and the interviewees, construction scheduling is a strategy that can detect claim situations. Project meetings, site visits, and project timeline tracking were identified by all of the interviewees as strategies that can be adapted to detect claim situations although they were not mentioned in the literature. Three of the strategies identified from the literature were further studied by the interviewees who introduced two more strategies, making the total number of strategies to be five. These strategies are listed in Table 1. The strategies identified by the interviewees are in bold.

4.2 Records and Documents Required for Claim Preparation

The documents provided by interviewees were reviewed and with previous researchers' suggestions, forty-three records and documents related to claims were identified. As suggested by the interviewees, the identified records and documents were grouped under several subcategories coming under six main categories. The subcategories suggested are pre-contract documents, communications, program or progress information, contract documents, site records, and cost information. Figure 1 presents these categories and subcategories. This finding supports in claim substantiation and claim documentation steps to establish proper claim procedure. Interviewees emphasized that due to recent challenges that construction faced, specially the consequences of the pandemic, predefined procedures in contracts for submitting notices cannot be followed. Hence, alternative methods such as email, digital copies, and other electronic methods need to be followed. Additionally, digital signatures are recommended for signing claim documents as it is already used for notification and consent.

4.3 Claim Presentation

According to the interviewees, different formats areavailable for preparing claims and the organization will have their own formats for preparing the claims. The common idea of the respondents was detailed introduction or description of the event, contractual and/or other legal bases of the claim should be the compulsory element in the claim presenting format. Additionally, R2, R3, R5 and R7 presented their previous claims which included the executive summary. According to the R1, R2, R8 and R10, the difference between the contract assertion and the actual condition should be presented in the claim statement. The majority of the respondents elaborated that presenting the impact, the contractor's plan, and quantification helps for the engineer's determinations. There are various ways to prepare a detailed claim. No single format is best in every situation. However, the following format can be considered the best format for presenting the comprehensive claim which can be adjusted for every situation. Hence, the findings supported in claim presentation step in claim procedure. Claim presentation involves ten stages as shown in Figure 2. Five of them were identified from the literature and the other five, indicated in bold and particularly relevant to Sri Lanka, were identified by the interviewees.

4.4 Issues Faced in Preparing Claims

The issues faced during each stage of claims preparation in Sri Lanka were identified at the interviews. Identifiying issues of preparing a correct claim statement and addressing or eliminating them leed to strong cliam proceedure. According to the interviewees, the knowledge and expertise of claim professionals is critical for identifying claim situations in Sri Lanka, but it is unfortunately lacking. Respondents indicated that lack of time and unclear procedures were the key problems encountered by the Sri Lankan construction industry during the claims notification process. Poor record keeping and error-prone documentation in claims documentation and the unavailability of comprehensive claim presentation formats in claim presentation were the main concerns of respondents. Each of the first four stages had five issues, while the last stage had only four issues. Altogether twenty-four issues were identified. Figure 3 presents these issues, all of which are relevant to Sri Lanka according to the interviewees.

Figure 1: Records and documents required for claim preparation

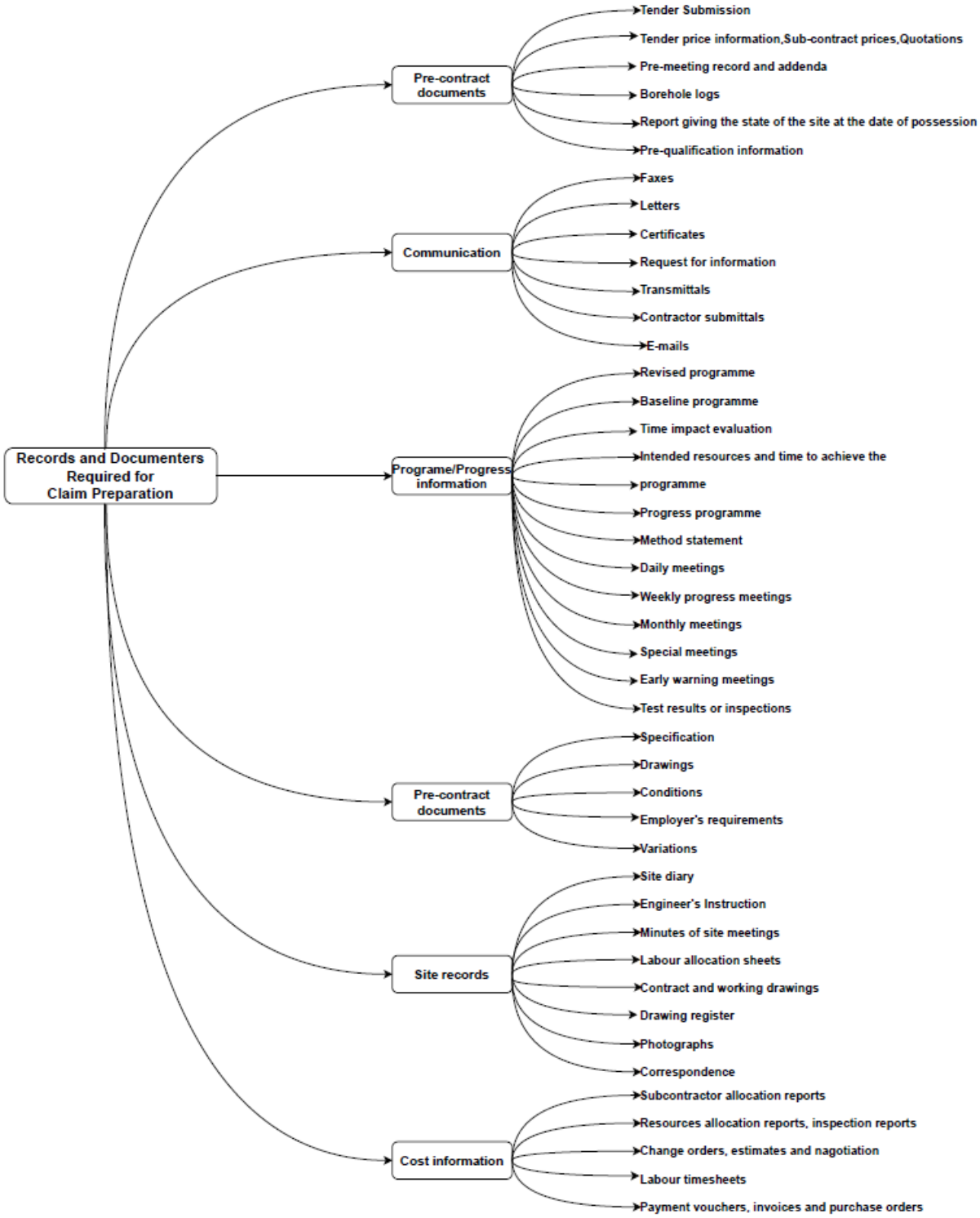


Figure 2: Components of claim preparation

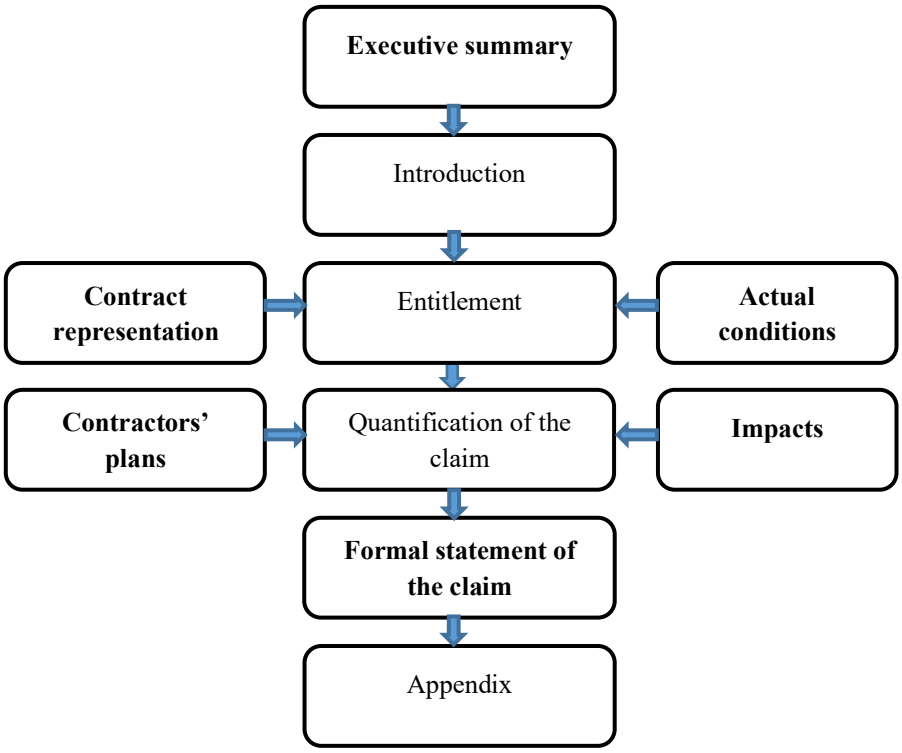
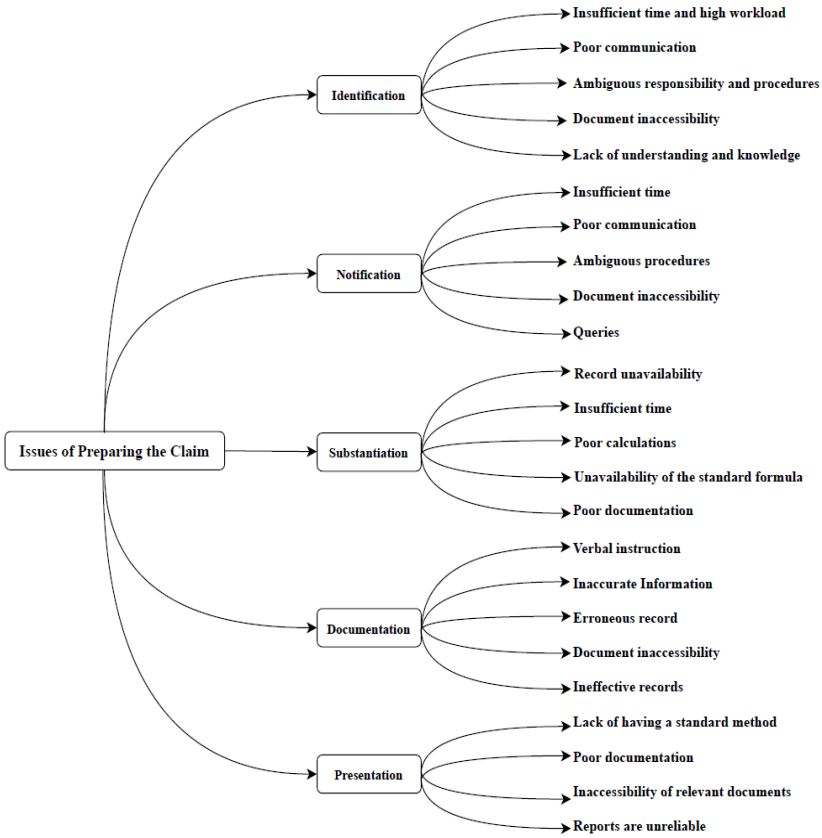


Figure 3: Issues faced in preparing claims



5. Discussion

5.1 Strategies to Detect Claim Situations

Mohamad et al (2021) stated that although regular review of project documentation is the best strategy for detecting claim situations, interviewees confirmed that it is not being properly implemented in the construction industry due to the high workload that workers have. Heravi and Mohammadian (2021), Agyekum and Knight, (2017), Samarah and Bekr (2016), and the interviewees commented that although most of the claims are not clear at first glance and that some of them are not even accurate, the regular review of project documentation can help identify the link between the cause and effect related to time or costs when different causes of delays occur. It was highlighted that the key personnel of contractor must take a proactive; who should be in the best position to evaluate the progress records and documentations of the work and identify any developing problems on the project by the interviews.

The study findings also emphasize the importance of project cost and payment forecasting, recognized by El-adaway et al. (2016) and Ahmed et al. (2019) further explained by interviewees as an effective strategy that can implemented by quantity surveyors for detecting claim situations. Moreover, as revealed by Shash and Qarra, (2018), project cash flow should constantly be updated and revised, and by discovering the reasons for the difference between the actual cash flow and forecasted cash flow, claimable events can be detected. Interviewees pointed out where the contractor recognizes that, it would be subject to unexpected cost, delay, acceleration or interruption based on his forecasting, such considerations should be put in to claim.

According to Chen et al. (2018), while the contractor coordinates and shares the required information among the stakeholders, such as suppliers, sub-contractors, and banks, the causes and parties responsible for the project delays and the stages at which such delays can occur can be identified by a proper evaluation of the project schedule. Yusuwan and Adnan (2018) stated that in the construction industry in Malaysia, when a project schedule is available, the contractor can identify the activities that are lagging and work on the remedies or discover the causes of the delays and make a claim for an extension of time (EOT). The interviewees mentioned that by holding project meetings, especially during pre-bid site visits, the contractor could identify the obstacles and causes of possible delays present at the construction site, and that pilot surveys can help in understanding the logistics and transportation difficulties and detect the claim situation early. Project meetings can review the progress of the construction, changes to the design, and the preparations for any upcoming events at the site, that can lead to claims. According to most of the interviewees, through timeline tracking, which is already being used in the construction industry in Sri Lanka, time allocations for the activities and reasons for the delays can easily be understood.

5.2 Records and Documents Required for Claim Preparation

All of the interviewees agreed that documents and records essential for claim preparation, such as the submitted tender and tender price information record identified by Dosumu (2018), sub-contract prices, quotations, pre-bid meeting records, and addenda mentioned by Shadid (2015) and Stamatiou et al. (2019) can come under the category of pre-contract documents and

records. As the main communication sources, Stamatiou et al. (2019) further considered letters and requests for information (RIF). In addition, the authors stated that e-mail and fax are commonly used communication methods.

Shrestha and Neupane (2020) considered the revised baseline, and progress programs; and test results or inspections listed by Heravi and Mohammadian (2021) and Zarebidaki et al. (2012); and time impact evaluations, method statements; meetings; and minutes listed by Shaikh et al. (2020) under program and progress information because of their importance to EOT claims. Further the authors elaborated that Planning and progress information greatly helps teams be proactive by looking ahead to identify risks and opportunities and develop action plans.

The experts believed that specifications; drawings and conditions; employer's requirements; and variation orders are part of the contract that can be categorized under contract documents as mentioned by Agyekum and Knight (2017) and Rao et al. (2016). The interviewees were resilient about categorizing under site records, site diary, architect's or engineer's instructions, and minutes of site meetings mentioned by Yousefi (2017) correspondence, labor allocation sheets, request for information, working drawings, and the drawing register mentioned by Shrestha and Neupane (2020). Change orders, estimates and negotiations, labor timesheets, payment vouchers, invoices, and purchase orders are cost-related information (Demirkesen & Ozorhon, 2017). Plant daily allocation reports, hire records, and daily inspection reports mentioned by Walsh and Zehner (2019); and Yusuwan and Adnan (2018) can also come under cost information, according to the interviewees.

5.3 Claim Presention

Hewitt (2011) has established and Shaikh et al. (2020) has confirmed that claims are presented in two parts: narratives and the appendix. The information that would help examine the impact (program, daily reports, weather reports) and or quantity of the assertion (estimates, Boq etc.) should be given in the appendix (Mohammadi & Birgonul, 2016) and Ahmed et al. (2019). It was confirmed by all of the interviewees when they mentioned that basic proof, calculation sheets, and essential project records and supports should be included in the appendix to substantiate the claim. Hewitt (2011) also established and Hai, (2019) confirmed that the claim presentation should begin with an introduction describing the contract, current situation, and issues. Hai (2019) further mentioned that the claim introduction should be consistent in line with objectives, the outline of the document, and should be precedent with prior notification.

Although most of the interviewees agreed that the introduction is necessary, they were of the view that it should begin with an executive summary, which should contain an overview of the claim, any issues, the grounds for entitlement, and the time and cost involved in claim event. The claim should be based on the contractual and legal foundation for the right to demand (entitlement), and quantities and incurred cost of the resulting damages (Shaikh et al., 2020). All of the interviewees accepted that the entitlement and quantification of the claim are the most essential components of a claim, confirmed by Yousefi (2017) and Jaeger and Hok (2010). The opinion of the interviewees was, the difference between contract assertation and actual condition should materialize under the entitlement. Oyegoke and Al Kiyumi (2017) emphasized that costs, EOT, or profit should be

highlighted in a claim. The interviewees revealed that the following should be elaborated in the claim: the contract version on the issue, under contract representation; the way the actual facts differ materially from the representations, under actual conditions; anticipated means and methods, schedule and cost estimate, under the contractor's plan; and the impact of the actual conditions on the means and methods of construction, schedule, and cost, under the impacts. Half of the interviewees declared that the formal statement of the claim is significant because it is a formal request for the claim to be considered on the presumption that the actual conditions have not differed from those described in the contract.

5.4 Issues Faced in Preparing Claims

Demirkesen and Ozorhon (2017) identified and Hai, (2019) confirmed that site workers should fully understand the negotiated contractual terms signed by the contracting parties and that their workloads should be such that they can detect claim situations during construction. According to the interviewees and as mentioned by Abouorban et al. (2018), knowledge of and expertise in claims on the part of the staff is vital for identifying claim situations in Sri Lanka. According to the interviewees, insufficient time and ambiguous procedures are key issues encountered during claim notification in the Sri Lankan construction industry, which according to Albogamy et al. (2013), Zarebidaki et al. (2012) are issues faced in Saudi Arabia and Jordan in 2013 but it was encountered in Saudi Arabia in 2019 by Assaf et al. (2019). Shrestha and Neupane (2020) found that construction contractors have to struggle during claim notification because of insufficient time and ambiguous procedures. According to the interviewees, these issues are encountered in the Sri Lankan construction industry also when notifying a claim. The absence of records and a standard formula is a common problem encountered during claim substantiation (Guévremont & Hammad, 2020). Clear identification of the documents used to examine and forecast possible recovery are a serious issue that must be addressed during the substantiation stage (Shaikh et al., 2020). Hackett (2021) advised that claims based on a reasonable substantiation with proper documentation and proof of causation are at the high end of the success probability scale. The opinions expressed by the interviewees on claim documentation in Sri Lanka apply to the global construction industry as well. The interviewees agreed with Hai, (2019) that during claim documentation, inaccuracies in documents and records cause problems. Poor documentation and the absence of a standard method for presenting claims were revealed by Heravi and Mohammadian (2021) are fundamental problems faced in claim presentation. The figure 4 presents the construction claim procedure that will ensure contractors that they will receive their contractual entitlements.

6. Conclusions and Recommendations

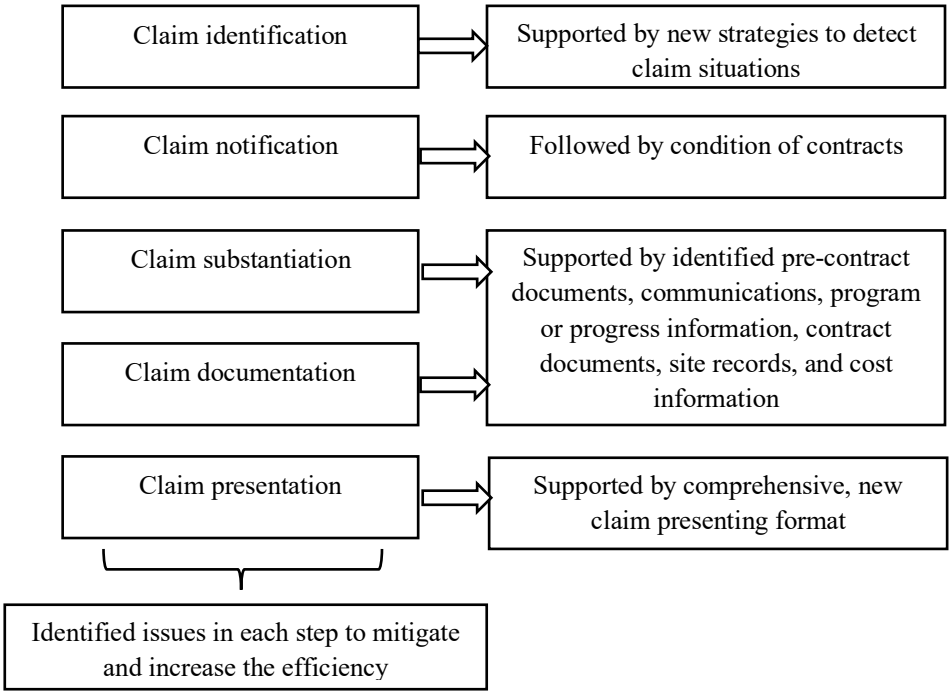
When the contractor has had to spend more time and incurred more costs than those stated in the contract, the contractor will request compensation for the losses or expenses. The increasing number of constructions claims that remain unpaid or paid less than the amount stated indicates the necessity of preparing acceptable claims. Claims can be frequent in large projects and can cause budgetary difficulties to employers. They may cause financial difficulties, restriction of cash flow, and loss of liquidity to contractors. Therefore, the study aimed to determine an effective construction claim procedure that will ensure that the contractor receives his

claim entitlements. Such a procedure has not received due attention in the literature. The objectives of the study were to determine the strategies that will detect claim situations, identify the records and documents required for claim preparation, investigate the steps involved in claim presentation, and identify the issues faced in preparing claims.

Literature findings revealed three strategies that will help detect claim situations. The study recommends several proactive strategies that can be used in Sri Lanka, such as project meetings and site visits and timeline tracking of the project, to detect claim situations. From the literature review, forty-three records and documents required for claim preparation were identified, which were analyzed by the interviewees. The interviewees grouped them under six categories: pre-contract documents, communications, program or progress information, contract documents, site records, and cost information.

By evaluating the formats used for presenting claims and by analyzing the views of the interviewees, a new format for presenting claims was developed, as it provided a common language and comprehensive, safest claim statement to the professionals who are working on claims. The literature review identified five stages involved in claim preparation. The interviewees identified another five stages used in Sri Lanka. The study revealed that contract representation, actual conditions, impacts, contractor's plan, and the formal statement of the claim are important for a comprehensive claim presentation. The most common issues associated with identification, notification, substantiation, documentation, and presentation of claims were identified from the literature and by the interviewees.

Figure 4: Construction claim procedure to ensure contractors' contractual entitlements



As one of the key players in the construction industry, the contractors play an important role in the development of the construction industry. Increasing claimable situation due to the pandemic situation, shortage of materials, government regulations and other issues demand a proper way for contractor to prove their entitlements and ultimately sustain in construction industry. The purpose of the study was to assist contractors to solve some of the on-going problems in the construction industry through acceptable construction claim statements. Issues of preparing proper claim statements should be identified and treated properly or removed. To address these issues, it is necessary to first raise awareness about claims and educate on-site construction professionals. To improve the claims management process, the researchers recommend organizing appropriate training sessions along with management commitment.

Necessary elements and its flow should be maintained properly when presenting a strong claim statement. The study recommends the introduction of proper document management processes. Theoretically, this research explains the concept of construction claims and provides a guideline for an effective claim procedure that can be followed during claim preparation. Construction organizations interested in optimizing their claim preparation procedures can use the study findings to determine the level and the quality of their current claim preparation process. It provided a common platform, comprehensive and safest claim statement that any organization can adhere to. Significantly, the study findings may contribute to restructuring claim policy of the contractor and may act as a benchmark to suggest new implications for prospective construction contracts due to the challengers that construction industry faced recently.

Future researchers can conduct research on the role of quantity surveyors in the preparation of acceptable construction claims and the requirement for a satisfactory documentation system that can be used by quantity surveyors to prepare comprehensive claims. Because claim management has the highest demand in the field of quantity surveying followed by contract administration, in the near future, arbitration, adjudication and mediation are likely to require the quantity surveyors working in the Sri Lankan construction industry to possess higher competencies and skills, the study findings will be useful to engineers and client as well. Furthermore, the study was limited to the Sri Lankan context, which made theoretical generalization difficult even though the study findings can be used as an initial benchmark for studies on other countries.

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