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CONTRACT ADMINISTRATORS' PERSPECTIVE ON CLAIM EVENTS UNDER THE JBCC PRINCIPAL BUILDING AGREEMENT IN SOUTH AFRICA

REVIEW ARTICLE¹

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ABSTRACT

The JBCC Principal Building Agreement is widely used as the primary building agreement in South Africa, and claims are frequently encountered in construction projects where this contract is implemented. This study, therefore, set out to determine the perspective of principal agents, who are professional consultants acting as contract administrators within the South African construction industry, regarding the magnitude of claim incidents under the JBCC Principal Building Agreement. The research adopted a quantitative approach, involving the completion of a virtual structured questionnaire by 164 respondents who were practising principal agents in South Africa. The collected data was thereafter analysed by means of descriptive statistics. The following claim events were identified as noteworthy in terms of regularity and severity: adverse weather, the execution of additional work, rectification of physical losses and damages to the works where contractors are not at risk, causes beyond the reasonable control of contractors, and the inability to obtain materials and goods in time. By

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identifying the knowledge void regarding the frequency and impact of claims in South Africa under the JBCC Principal Building Agreement, this study provides contracting parties with updated insights that can assist them in averting and effectively managing such claims, thereby minimising damages to all parties involved. Furthermore, while the study was confined to South Africa, the findings may still hold relevance for users of the contract in other countries.

ABSTRAK

Die JBCC Hoofbouooreenkoms word wyd gebruik as die primêre bouooreenkoms in Suid-Afrika, en eise word gereeld teëgekomp in konstruksieprojekte waar hierdie kontrak geïmplementeer word. Hierdie studie het dus ten doel gehad om die perspektief van hoofagente, wat professionele konsultante is wat as kontrakadministrateurs binne die Suid-Afrikaanse konstruksiebedryf optree, te bepaal met betrekking tot die omvang van eisvoorvalle kragtens die JBCC Hoofbouooreenkoms. Die navorsing het 'n kwantitatiewe benadering gevolg, wat die voltooiing van 'n virtuele gestruktureerde vraelys behels het deur 164 respondente wat as hoofagente in Suid-Afrika praktiseer. Die data is daarna deur middel van beskrywende statistiek ontleed. Die volgende eisgebeurtenisse is geïdentifiseer as noemenswaardig in terme van gereeldheid en erns: ongunstige weer, die uitvoering van bykomende werk, regstelling van fisiese verliese en skade aan die werke waar kontrakteurs nie in gevaar is nie, oorsake buite die redelike beheer van kontrakteurs, en die onvermoë om materiaal en goedere betyds te bekom. Deur die kennisleemte rakende die frekwensie en impak van eise in Suid-Afrika onder die JBCC Hoofbouooreenkoms te identifiseer, verskaf hierdie studie aan kontrakterende partye opgedateerde insigte wat hulle kan help om sulke eise af te weer en effektief te bestuur, om sodoende skade aan alle betrokke partye te minimaliseer. Verder, terwyl die studie tot Suid-Afrika beperk is, kan die bevindinge steeds relevant wees vir gebruikers van die kontrak in ander lande.

1. INTRODUCTION

The South African construction sector operates within a complex project-oriented setting involving various clients, professional consultants, and contractors (Marx, 2014), while the primary construction contract used in this sector is the JBCC Principal Building Agreement (De Klerk, 2021). Contract administrators, therefore, play an important role in the industry, as they are responsible for managing the contract between the employer and the building contractor. This role was historically performed by the architect but can nowadays be undertaken by several other professionals such as construction project managers and quantity surveyors (RICS, 2011).

Prinsloo (2019; 2018) as well as Mukuka, Aigbavboa and Thwala (2015) have highlighted that it is common for construction projects to experience multiple claims for additional time and costs, leading to disputes in the industry. However, a significant concern is the inadequate understanding among project parties regarding the key factors contributing to claims under the JBCC Principal Building Agreement. Moreover, there is limited research conducted in South Africa on the frequency and severity of claims in the South African construction industry, especially on the claim events

of the JBCC Principal Building Agreement (Maritz & Prinsloo, 2016; Le Roux, 2014).

Numerous studies have been done on the JBCC Principal Building Agreement, exploring various aspects such as the management of employers' strategic aims (Richards & Bowen, 2007), the effectiveness of construction and payment guarantees (Maritz, 2008), the agreement's usefulness for contractors (Cumberlege, Buys & Vosloo, 2008), contractors' perspectives on the associated risks (Othman & Harinarain, 2011a; Othman & Harinarain, 2011b; Othman & Harinarain, 2009), compliance of version 6.1 with South African legal requirements (Maritz & Putlitz, 2014), and the agreement's contribution to project management (Du Plessis, 2019; Du Plessis & Oosthuizen, 2018). However, a mere three studies were retrieved that exclusively concentrated on claims, with one focusing on the frequency of claim events and two considering the analysis methods used by professionals to evaluate claims (Deacon & Kajimo-Shakantu, 2023; Maritz & Prinsloo, 2016; Le Roux, 2014). This highlights a notable absence of thorough investigations conducted in South Africa concerning how frequently and severely claims occur within the context of the JBCC Principal Building Agreement.

Given the limited knowledge on claims regarding the JBCC Principal Building Agreement, this study, therefore, aimed to address this gap by exploring the extent of claims under the JBCC Principal Building Agreement from the perspective of contract administrators.

2. LITERATURE REVIEW

To understand the occurrence and impact of claims in South Africa under the JBCC Principal Building Agreement, it is important to introduce the concepts used in this study. These concepts include the role of the contract administrator/principal agent, and emphasis on the occurrences of claims where the JBCC Principal Building Agreement is implemented.

2.1 The role of the contract administrator/principal agent

When performing the role of a principal agent in relation to a construction contract, Damstra (2023), SACPCMP (2019), Le Roux (2018), Putlitz (2018), and Richards (2017) emphasise that the principal agent is appointed by the employer and entrusted with complete authorisation and responsibility under the terms of the agreement. In other words, the principal agent performs a juristic act on behalf of the employer under the building agreement by creating, altering, and discharging legal relations between the employer and a third party, namely the building contractor.

According to Richards and Bowen (2007), while the agent typically operates under the direct commission and explicit instructions of the employer in accordance with South African law, the JBCC Principal Building Agreement deviates somewhat from this norm. It grants the principal agents extensive discretionary powers, enabling them to exercise independent judgment and make decisions at their own discretion.

Damstra (2023) emphasised that principal agents play a crucial role in the coordinated execution and timely completion of works on site, and highlighted that their general responsibilities under the JBCC Principal Building Agreement include the following:

- Monitoring the progress of contractors throughout the different stages of projects.
- Providing contractors with sufficient construction information.
- Conducting meetings with contractors to address technical and coordination issues.
- Creating and reviewing tender documents, as well as evaluating received tenders for the selection of subcontractors.
- Appointing substitute subcontractors in cases where other subcontractors' appointments were terminated (including nominated subcontractors).
- Issuing contract instructions for the performance of additional work.
- Certifying payment certificates and issuing them, along with certificates of practical completion.
- Evaluating claims for extension of time, adjustments to the contract value, and claims for expenses and losses.

2.2 Background on claims

According to Rai, Jagannathan and Delhi (2021), a claim is described as a response from a party who feels aggrieved and seeks redress for a divergence from agreed contractual terms. Hewitt (2011) defined a construction claim as the assertion of rights by a party under contractual obligations, entitling him/her to seek either additional payment or an extension of time for completing the work. McManus Jr. and Blank (2016) similarly defined a construction claim as a request for extra time or payment due to an event or change that has affected the content or schedule of the work and requires compensation. Putlitz (2021), Burr (2018), Nagata *et al.* (2018), and Fertitta, Nedinsky and Gilmore (2016), along with the authors that follow, noted that conventional sources of construction claims include the following factors:

- Delayed provision of construction information: This claim event refers to situations where essential project details or information needed for construction are not provided promptly, causing a delay in project progress (Guévremont & Hammad, 2021; Assaf *et al.*, 2019; Shaikh, Zainun & Khahro, 2019; Oyegoke & Al Kiyumi, 2017).
- Issuance of variations and instructions: This involves claims arising from changes in project plans and designs given to a contractor during construction, which consequently has time and cost impact (Elhag, Eapen & Ballal, 2020; Al-Qershi & Kishore, 2017; Apte & Pathak, 2016).
- Delayed nomination of suppliers and subcontractors: This claim event occurs when the selection and appointment of suppliers or subcontractors take longer than expected, leading to project delays (Bäckstrand & Fredriksson, 2022; Debelo & Weldegebriel, 2022).
- Instruction to suspend the work: Claims may arise when a project is temporarily halted, due to unforeseen circumstances or contractual issues, impacting on the contractor's schedule and costs (Lee, 2018).
- Alteration of material specifications and construction information: Changes made to the specified materials or construction details can result in claims, particularly if these alterations affect a project's cost or timeline (Aigbavboa, Oke & Mohapeloa, 2016; Mahamid, Al-Ghonamy & Aichouni, 2015; Bakhary, Adnan & Ibrahim, 2014).
- Difficulties in procuring necessary materials and supplies: A scarcity of construction materials in the market can result in claims because it significantly hampers project timelines as envisioned (Albert *et al.*, 2021; Aigbavboa *et al.*, 2016).
- Adverse weather conditions: Claims related to adverse weather conditions involve seeking compensation for delays or additional costs incurred, due to extreme weather that disrupts construction activities (Karim & Amin, 2021; Motlathledi & Nel, 2019).
- Unforeseen physical conditions or artificial obstructions on the site, different from what was specified in the contract: Claims can result from unexpected site conditions or obstructions that were not foreseen during a contract's initial planning stages (Agyekum-Mensah & Knight, 2017).
- Items that are described inaccurately in the bills of quantities: Claims may arise when discrepancies or inaccuracies are discovered in the bills of quantities, leading to disputes over payment or project scope (Shen *et al.*, 2017; Baloyi & Bekker, 2011).

- Increased quantities of work compared to what was stated in the contract: Contractors may file a claim when they are required to perform more work than originally specified in the contract, leading to additional costs and potential delays. This, however, depends on the type of contract used (Ansah & Sorooshian, 2018; Famiyeh *et al.*, 2017; Yousefi *et al.*, 2016; Khabisi, Aigbavboa & Thwala, 2016).
- Instruction to accelerate the work to make up for lost time: This claim event relates to instances where contractors are instructed to speed up their work to recover lost time, potentially resulting in increased costs (Keane & Caletka, 2015).
- Amendments to the laws of the country where the project is located: Claims can emerge when changes in local laws or regulations impact on a project's execution or costs, requiring adjustments to the contract terms (Kikwasi, 2021).
- Force majeure: Events that severely disrupt projects by usually resulting in the suspension of works and consequently prolonging or diminishing the expected revenue of project owners, while sometimes even leading to the termination of contracts, usually accompanied with claims and disputes (Alfadil *et al.*, 2022).

Wilson (1998) emphasised that the probability of claims increases with the size and complexity of a project, while Clark (2021) and Hall (2020) emphasised that contract conditions define the specific incidents that entitle contractors to submit claims for time extension, additional payment, or both from employers.

2.3 Claim events under the JBCC Principal Building Agreement

The most recent JBCC Principal Building Agreement, edition 6.2, released in 2018, thoroughly outlines, under clause 23, the events that permit contractors to apply for an adjustment of the contract value or revision of the date for practical completion (JBCC, 2018). Table 1 sets out the claim events under the JBCC Principal Building Agreement. The JBCC Principal Building Agreement gives contractors the right to only a time extension under the listed events in clause 23.1, while all the listed events under clauses 23.2 and 23.3 entitle contractors to both additional payment and an extension of time.

Table 1: Claim events under the JBCC Principal Building Agreement

No.	JBCC PBA Clause	Event	Description
1	23.1.1	Adverse weather	Climatic conditions that inhibit progress towards practical completion.
2	23.1.2	Inability to obtain materials and goods	If delay is caused by the contractor's inability to obtain the materials and goods at such time as it would be possible for him to complete the works by the due date, and he has taken reasonable steps to avoid or reduce such delay.
3	23.1.3	Making good physical loss and repairing damage to works	If delay is caused by the contractor making good any physical loss and repair damage to the works during the construction period that is not due to his or the employer's fault.
4	23.1.4	Late supply of a prime cost amount item	If the contractor complies with instructions and is delayed by the supplier of a prime cost amount item.
5	23.1.5	Exercise of statutory power	If the execution of the works is delayed by the exercise of statutory power by a body of state or public or local authority, through no fault of the contractor.
6	23.1.6	Force majeure	If delay is caused by the occurrence of a supervening circumstance that is unforeseeable and beyond the control of the parties, as per the JBCC definition of force majeure.
7	23.2.1	Delayed possession of the site	If delay is caused by the failure of the employer to give possession of the site on the agreed date, as contained within the contract provisions.
8	23.2.2	Making good physical loss and repairing damage to the works	If the contractor complies with instructions to make good physical loss or damage to the works for which s/he is not at risk (in terms of clause 8.5).
9	23.2.3	Contract instructions	If the principal agent is late to issue an instruction, or fails to issue an instruction, provided that the contractor has requested such instruction in writing.
10	23.2.4	Opening and testing of work, materials, and goods	If delay is caused by an instruction to open work for inspection that has been covered up and/or provide samples of work, materials, and goods to be tested, and the work, materials, and goods are found to conform to the contract.
11	23.2.5	Late or incorrect issue of construction information	If delay is caused by the late or incorrect issue of construction information by the principal agent.
12	23.2.6	Late supply of free issue materials and goods	If delay is caused by the late supply of materials and goods that are issued by the employer.

No.	JBCC PBA Clause	Event	Description
13	23.2.7	Late appointment of a subcontractor	If delay is caused by the late instruction to appoint a nominated or selected subcontractor, provided that the contractor has taken reasonable steps to avoid or reduce such delay.
14	23.2.8	Late acceptance by the principal agent and/or agents of a design undertaken by a selected subcontractor	If delay is caused by the late acceptance of a selected subcontractor's design by the principal agent, provided that the contractor ensured that the subcontractor timeously prepared the subcontract documentation.
15	23.2.9	Act or omission by a nominated subcontractor or a direct contractor	If delay is caused by any default on the part of a nominated subcontractor or disruption by a direct contractor.
16	23.2.10	Insolvency of a nominated subcontractor	If delay is caused by the insolvency of a nominated subcontractor.
17	23.2.11	Suspension or termination by a subcontractor, due to a default by the employer, the principal agent, and/or agents	If delay is caused by the contractor's suspension of the works, due to the failure of the principal agent to issue payment certificates within the provision of the contract or the failure of the employer to provide a payment guarantee.
18	23.2.12	Execution of additional work	If certain work is undermeasured in the bills of quantities or the principal agent issues an instruction for the execution of additional work.
19	23.2.13	Suspension of the works	If delay is caused by the contractor's suspension of the works, due to the listed events in clauses 28.1.1 to 28.1.5.
20	23.3	Any cause beyond the contractor's reasonable control	If delay is caused by any other cause, not applicable to clauses 23.1 and 23.2, and which is beyond the contractor's reasonable control and could not have been anticipated.

Source: JBCC (2018)

Clause 23.1.1: The JBCC Principal Building Agreement acknowledges that rain-related delays have a dual impact by recognising the resulting circumstances. Typically, rain prevents contractors from working during its occurrence and also leaves the construction site muddy and waterlogged, requiring work to halt until it dries out. Other examples of adverse weather conditions include strong winds, which affect work at elevated heights, and extremely cold weather, which hampers the handling and setting of concrete (Maritz, 2020; Segal, 2018). Where the wording of the clause has previously led to disputes on what is considered "adverse", the JBCC clarified that there is no onus to prove the "exceptional" nature of a weather

event. Rather, the contextual usage of the term “adverse weather” refers to any circumstance related to weather that inhibits progress towards practical completion (JBCC, 2020).

Clause 23.1.2: This clause reinforces contractors’ obligations, according to common law, to mitigate damages by taking reasonable steps to prevent or reduce delays caused by the inability to obtain materials and goods. For instance, if there is a known shortage of a specific material, contractors should place their orders well in advance (Maritz, 2020; Segal, 2018). Segal (2018) further argued that “inability” in this context should be understood as the inability to timely acquire goods and materials to such an extent that it prevents the completion of the works by the specified date. In cases where it is impossible to obtain the required goods or materials at all, principal agents should intervene to preserve contracts by issuing contract instructions to replace them with readily available alternatives.

Clause 23.1.3: The contractor is required to rectify any physical losses and address construction-related damages, but if these issues occur unexpectedly and are beyond the contractor’s control, they should not be held accountable or penalised for them. In such cases, the contractor should be granted extra time to complete the project. If the contractor is not responsible for the losses or damages outlined in clause 8.5, they should also receive financial compensation (Maritz, 2020; Segal, 2018).

Clause 23.1.4: A prime cost amount is a sum incorporated into the contract, covering the expenses associated with materials and goods purchased from a supplier, as directed by the principal agent (as outlined in clause 1.1). The contractor is mandated to procure the specified item exclusively from the supplier designated by the principal agent, with no flexibility in this decision. Furthermore, the contractor is obligated to make every reasonable effort to prevent or minimise any delays, including exploring the possibility of obtaining the specified item more swiftly from an alternative source (Maritz, 2020; Segal, 2018).

Clause 23.1.5: In cases where the progress of the construction work is directly impacted by actions taken by a state, public, or local authority under their statutory powers, resulting in a delay to the practical completion date, and this delay is not due to any fault on the part of the contractor, the principal agent is obligated to adjust the practical completion date once the extent of the delay has been determined. Such delays can occur for two reasons. First, if the contractor has based his/her work on incorrect information provided by the principal agent or other agents, or secondly, if the contractor has made an error in the construction that violates building regulations, leading to a directive from the local authority to rectify the mistake. In both scenarios, there would be a delay in achieving practical completion. It is argued that, in the former case, where the delay is due to

faulty information from the principal agent, the contractor should be entitled to a revision of the practical completion date. However, in the latter case, where the delay results from an error made by the contractor, the practical completion date would likely not be revised (Maritz, 2020; Segal, 2018).

Clause 23.1.6: This is a very wide category of supervening circumstances causing delay, all of which must be unforeseeable and beyond the control of contractors. In terms of the JBCC definition, force majeure is an exceptional event of circumstance with three broad requirements, namely: an event that could not have been reasonably foreseen, is beyond the control of both the employer and contractor, and could not reasonably have been avoided or overcome. These events are not limited in any way, but may include anything from acts of war, insurrection, civil commotion, strike, natural catastrophes, and the like. Strikes by the contractors' own employees are usually disregarded under this clause, while strikes by workers not employed by the contractors, which causes delay to practical completion, qualify for additional time under this clause (Maritz, 2020; Segal, 2018).

Clause 23.2.1: The employer must provide the contractor with access to the construction site on the specified date, as outlined in the contract data document (CD). If the employer fails to do so, it will constitute a breach of contract on his/her part, resulting in a delay. This delay would grant the contractor the right to request a modification of the practical completion date along with an adjustment to the contract's value (Maritz, 2020; Segal, 2018).

Clause 23.2.2: If there is physical loss or damage to the construction project, and the contractor is not liable under the terms defined in clause 8.5, the principal agent has the authority to issue a contract instruction to the contractor according to clause 17.1.10. This instruction would direct the contractor to address and repair the extent of the loss or damage, which would be evaluated through collaboration between the principal agent and the contractor (Maritz, 2020; Segal, 2018). The principal agent, in collaboration with the contractor, is responsible for assessing and addressing any damage or loss. Principal agents should, therefore, immediately take steps to limit the damage or loss when contractors have given notice under this clause, which is done through contract instructions to contractors for the necessary corrections. However, contractors are advised to consult the terms and conditions of their contract works insurance when dealing with such loss or damage (Maritz, 2020). Caelers-Avis (2021) further highlighted that the civil unrest that gripped South Africa in 2021 also fell within this definition. Because contractors needed to repair the works, numerous claims were submitted under this clause for a revision of the date for practical completion as well as an adjustment of the contract value.

Clause 23.2.3: This situation is a common trigger for requests to revise the practical completion date. However, not all contract instructions involve changes in the project's scope; many simply require the contractors to fulfil their contractual obligations. The contractors would only be eligible for additional time when the instruction was not due to their own default, and it resulted in a delay in completing the project. Any delay stemming from a late issuance of a contract instruction or even the failure to issue one would also grant the contractors extra time, provided they have formally requested such an instruction in writing (Maritz, 2020; Segal, 2018).

Clause 23.2.4: In exercising their rights to require work that has been covered up to be opened for inspection and to require samples of work, materials, and goods to be tested to ascertain conformity with agreement, principal agents may delay practical completion. If it is found that the work, materials, or goods did not conform to the agreement, contractors are required to bear the consequences, including that of delays, but if the work, materials, or goods are found to conform, contractors are entitled to a revision of the date for practical completion in respect of any delay, as well as an adjustment of the contract value (Maritz, 2020; Segal, 2018).

Clause 23.2.5: This clause grants the contractor the right to request a revision of the practical completion date and a potential adjustment to the contract value from the principal agent under specific conditions. These conditions include instances where the principal agent has provided construction information late or with errors. It is the employer's obligation, under clause 12.1.12, to ensure that the principal agent and agents provide adequate construction information timeously to the contractor. Furthermore, under clause 12.2.11, it is the contractor's obligation to regularly submit to the principal agent a schedule of outstanding construction information, in order to avoid delays to the work. If the contractors have been given incorrect information, they are not held responsible for any inaccuracies in the project's layout, as stated in clause 13.2.3. In such cases, the contractor might be eligible for a revised practical completion date and/or a contract value adjustment. It is important to note that this entitlement is not automatic, and the contractor must adhere to the prescribed procedures (outlined in clauses 23.4.2 and 23.5) and meet the specified time frames, in order to avoid the claim becoming time barred (Maritz, 2020; Segal, 2018).

In situations where construction begins without complete documentation, a contractor should compile a list of outstanding information, along with deadlines for providing this information, which should be issued to the principal agent. These deadlines should align with the contractor's construction schedule, taking into account lead times for material procurement and the manufacturing of elements to be incorporated into

the structure. As long as these information deadlines are realistic and suitable, the principal agent must ensure timely issuance of the information to prevent any delays for the contractor (Maritz, 2020; Segal, 2018).

The scenario, however, differs when the contract is based on provisional bills of quantities. In such cases, the preliminaries stipulate that the contractor and the principal agent must collaborate to identify the requirements for construction information provision and agree upon reasonable dates for the delivery of each outstanding item of anticipated construction information. The contractors would not be entitled to receive any information earlier than the agreed-upon date, nor would they be eligible for a time extension if the lack of information caused a delay, unless it was provided after the agreed-upon date (Maritz, 2020; Segal, 2018).

Clause 23.2.6: Occasionally, employers, due to their ability to acquire materials or goods suitable for the project at a favourable cost, or perhaps even at no cost, might take on the responsibility of providing these materials or goods. If the employers choose to do so, they must ensure timely delivery to prevent any delays. If their actions result in a delay, the contractor will have the right to request a revision of the practical completion date, as outlined in clause 12.1.10 (Maritz, 2020; Segal, 2018).

Clause 23.2.7: If a subcontractor is appointed later than what was initially agreed upon in the project schedule, the contractor is eligible to request a modification of the practical completion date and a potential adjustment to the contract value. However, this entitlement is contingent on the contractor having made reasonable efforts to prevent or minimise this delay. It is suggested that these reasonable measures would involve the contractor appointing the nominated or selected subcontractor, as applicable, promptly upon receiving a contract instruction from the principal agent, as specified in clauses 14.4 and 15.4 (Maritz, 2020; Segal, 2018).

Clause 23.2.8: The contractor bears responsibility for any delays resulting from the selected subcontractor's design preparation for the subcontracted tasks. The principal agents must promptly approve this design, and if they fail to do so within a reasonable time frame, the contractors' responsibility for the delay ends, and they become eligible for additional time. The contractors must ensure that the subcontractor completes the subcontract documentation on time (Maritz, 2020; Segal, 2018).

To fulfil this obligation, the contractor can establish specific deadlines for the subcontractor's tasks and periodically check whether the subcontractor is adhering to the project schedule. There is an interesting inconsistency in this clause: it explicitly addresses delays caused by a design prepared by a selected subcontractor. Consequently, when the design is handled by a

nominated subcontractor, the contractor, who would be entitled to additional time if the nominated subcontractor causes a delay due to slow design preparation, would not be eligible for additional time in case of delays caused by the principal agent's slow approval of the design (Maritz, 2020; Segal, 2018).

Clause 23.2.9: Because the employer has the privilege of nominating specific subcontractors, they assume responsibility for any shortcomings or failures on the part of these nominated subcontractors. Consequently, if the practical completion is delayed due to any default by a nominated subcontractor, the contractor becomes eligible to request a revision of the practical completion date. Such defaults might include not adhering to the contractor's schedule, refusing to comply with a contract instruction that necessitates bringing in other workers to complete the task, insolvency, or behaviour that leads to the termination of the subcontract (Maritz, 2020; Segal, 2018).

A direct contractor is also allowed to work on-site during the construction period while the contractor is still in control of the site (as per clause 16.0). Unless this situation is managed very carefully, it has the potential to cause significant disruption and delays, especially in the final stages of the construction period as the project nears practical completion. The Principal Building Agreement appropriately grants the contractor additional time and the possibility of an adjustment in the contract value if such disruptions occur (Maritz, 2020; Segal, 2018).

Where there are two or more subcontractors (nominated or direct subcontractors) causing a delay, it would be of no significant consequence to the principal agent's adjudication, nor the contractor's entitlement. This scenario should not be mistaken with "concurrency" in delay claims where there are two events, one at the risk of the employer and one at the risk of the contractor. In a scenario where there are delays from multiple nominated or direct subcontractors, the risk for such delays remains that of the employer under clause 23.2.9.

In terms of the clause, the contractor remains entitled to be granted additional time for the delays so caused. Whether the contractor claims for the most dominant of multiple delay events, all delay events or only selected delay events, do not detract from its entitlement. The principal agent is obligated to award an extension based on the actual, total delay as substantiated, regardless of whether it stems from a single source, intermittent or multiple concurrent subcontractor delays.

Clause 23.2.10: The subcontractor's insolvency, on its own, does not automatically result in the termination of the subcontract and the selection of a new nominated subcontractor. However, it can still create significant

delays that were unforeseeable and beyond the contractor's control. In such cases, the contractor has the right to request additional time to account for the delays caused by the insolvency, along with a possible adjustment to the contract value (Maritz, 2020; Segal, 2018).

Clause 23.2.11: The principal agent has a duty to issue payment certificates at regular intervals, as stipulated in clause 25.2, and the employer is obligated to make these payments, as outlined in clause 25.10. In addition, the employer may be required to provide a payment guarantee, according to clause 11.5.1. If either the principal agent or the employer fails to fulfil these responsibilities, it grants the subcontractors the right to halt their work, as per clause 25.14.1. This suspension is likely to result in a delay in achieving practical completion. Since this delay stems from a default on the part of the employer, the contractor is entitled to request additional time, along with a potential adjustment to the contract value (Maritz, 2020; Segal, 2018).

Clause 23.2.12: This clause specifically addresses instructions on a contract for carrying out additional work and includes two main aspects: changes to the scope of work and situations where items in the bills of quantities (BOQ) are not accurately measured (Maritz, 2020; Segal, 2018). The JBCC Principal Building Agreement acknowledges that contractors rely heavily on the BOQ to plan their construction activities. Therefore, the agreement permits contractors to adjust their plans when extra work is requested or when items are found to be unmeasured, allowing them sufficient time to complete the additional tasks (Maritz, 2020; Segal, 2018). Consequently, the occurrence of claims becomes inevitable when modifications are made to the scope of work, as these changes were not originally considered in the contract documentation (Apte & Pathak, 2016).

Elhag *et al.* (2020) as well as Al-Qershi and Kishore (2017) concluded that principal agents typically issue contract instructions for the implementation of additional work that was not originally included in the contract. Furthermore, Ansah and Sorooshian (2018), Famiyeh *et al.* (2017), Yousefi *et al.* (2016), and Khabisi *et al.* (2016) also suggested that contract instructions regarding unmeasured quantities and items in the BOQ also exert a significant influence on projects. It is further crucial to highlight that this claim event is linked to contract instructions, which impact on projects by requiring additional planning, coordination, allocation of resources, and modifications to project schedules and budgets (Gunduz & Elsherbeny, 2020; Bakhary *et al.*, 2014). Considering this, the event is also covered by clause 23.2 of the JBCC Principal Building Agreement, which means that it has implications for both time and cost. Consequently, this claim event naturally has a significant impact on project performance.

Clause 23.2.13: In cases where work was suspended by contractors, due to the events listed in clauses 28.1.1 to 28.1.5, principal agents are compelled to revise the date for practical completion once the work is resumed after the suspension (clause 28.4). Although there is no common law right for a party to suspend performance of its contractual obligations in the event of a breach of contract by the other party, the right has been included in the JBCC Principal Building Agreement to allow contractors to suspend the works where employers or principal agents are in breach (JBCC, 2018).

Clause 23.3: This clause acts as a catch-all provision, encompassing circumstances that are not explicitly addressed in clauses 23.1 and 23.2 (Reyneke & Simelane, 2022). Examples of causes falling under clause 23.3 include delays in employers' provision of water and electricity or disruptions caused by local business forums damaging the works or disrupting sites (Caelers-Avis, 2021). However, Segal (2018) argues that this clause should not be broadly interpreted, suggesting that the causes should generally resemble those listed in clauses 23.1 and 23.2. Caelers-Avis (2021) further emphasised that claims submitted under this clause must be carefully drafted and warranted so that there is no capacity for principal agents to disallow them, while Irish-Qhobosheane (2022) noted that many claims under this clause are associated with the emergence of the South African construction mafia and its subsequent influence.

3. RESEARCH DESIGN

The study employed a quantitative methodology, which refers to a systematic and objective approach for collecting numerical data (Farrell, Sherratt & Richardson, 2017; Abbott & McKinney, 2013). In line with the customary practice of using surveys to gather quantitative data in an observational setting (Zikmund *et al.*, 2013; Dainty, 2008), the survey method was adopted. Surveys involve recording information on various facets of human behaviour from one or more groups of individuals (Leedy & Ormrod, 2016). These surveys typically include questions about attitudes, opinions, experiences, and characteristics, with the responses being subsequently tabulated. The purpose of conducting a survey is to study a whole population by appraising a sample of it (Maree & Pietersen, 2019a), while Creswell and Creswell (2018) similarly stated that the main advantage of quantitative research is that it allows for drawing conclusions about a large population based on a smaller representative sample. Surveys can be administered using two kinds of instruments: questionnaires and interviews (Mukherjee, 2019). In this study, a structured questionnaire was used, consisting of standardised questions arranged in a specific order (Cheung, 2014). This approach is effective in examining the experiences and preferences of participants and facilitates the quantification of data

(Naoum, 2019). The survey aimed to capture the first-hand experiences of South African principal agent practitioners regarding claim events under the JBCC Principal Building Agreement.

3.1 Population, sampling method, and response rate

The study specifically targeted construction professionals acting as contract administrators/principal agents to participate. Architects, construction project managers, and quantity surveyors were selected as participants, as they typically fulfil the role of principal agent within the construction industry (Hauptfleisch, 2019; Ramsden, 2018), where the JBCC Principal Building Agreement is predominantly used. To ensure ethical compliance, permission was obtained from the relevant professional regulatory bodies, namely the South African Council for the Architectural Profession (SACAP), the South African Council for the Project and Construction Management Professions (SACPCMP), and the South African Council for the Quantity Surveying Profession (SACQSP), to survey their registered professional members.

The size of the population for the study was determined based on the total number of professionally registered members of the SACAP, SACPCMP, and SACQSP (Gray, 2021). For the target population, only the professional construction project manager (Pr. CPM) members of SACPCMP were selected for the survey. According to the 2020/2021 annual report of the SACPCMP, there were 1,679 registered members in this category. The annual report of the SACAP for the same period listed 4,261 professionally registered architects (Pr. Arch.), and the SACQSP report for 2020/2021 listed 2,409 professionally registered quantity surveyors (Pr. QS). Therefore, the total population size was determined to be 8,349, as it included all the necessary professionals in South Africa.

The sampling process aimed to achieve a representative and unbiased sample that would provide reliable findings in terms of reflecting the opinions, interests, and views of the population (Fincham, 2008). Voluntary response sampling was considered feasible for this study since the researchers had access to all individuals in the population through the relevant professional councils (Taherdoost, 2016). One important aspect of this technique is that every member of the population has an equal opportunity to be included in the sample, based on their willingness to participate (Maree & Pietersen, 2019b).

A total of 164 participants responded to the survey, which stands favourably and is considered sufficient when compared to similar studies focusing on claims (Sy, Aung & Viet, 2022; Assaf *et al.*, 2019; Mishmish & El-Sayegh, 2018). However, it is probable that the response rate was affected by

certain professionals who deemed the study irrelevant to their work. This includes individuals who do not fulfil principal agent duties or do not use the JBCC Principal Building Agreement, particularly those working solely in the engineering sector of the construction industry. In addition, the response rate may have been influenced by some surveys not reaching all the intended recipients, due to email spam filters being sensitive to the word 'survey' (Lindemann, 2021).

3.2 Data collection

Ethical clearance for the study was obtained from the University of the Free State and the industry councils involved. To facilitate data collection, an online questionnaire was created and distributed using the internet-based program Google Forms. The SACAP, SACPCMP, and SACQSP provided support by sharing the web link of the questionnaire with their respective professional members.

The online survey further consisted of three sections, with primarily closed-type questions. This type of questions was chosen because they require less time and lower skill levels to answer, making them easy for respondents to complete (Maree & Pietersen, 2019a). The first section provided an explanation of the study's purpose, assured participants of anonymity, and included contact information for any survey-related queries. Respondents were then required to give their consent to continue to the next section. The second section gathered background information from participants, such as their profession, years of experience in the construction industry, sector of the industry they work in, and the frequency with which they use the JBCC Principal Building Agreement. The third section focused on the occurrence and effect of claims when using the JBCC Principal Building Agreement. Initially, respondents were asked to rate the frequency of claims for the 20 recognised events under the agreement. This rating was done using a five-point Likert scale, where 1 indicated 'never' and 5 indicated 'very frequent'. The regularity values of the Likert scale implied the following:

1. Very low chance of occurrence and occurs only in exceptional circumstances (<10% chance).
2. Low chance and unlikely to occur in the majority of circumstances (10% to <35% chance).
3. Medium chance and possible to occur in the majority of circumstances (35% to <65% chance).
4. High chance of occurrence and will probably occur in the majority of circumstances (65% to <90% chance).

5. Very high chance of occurrence and almost certain to occur in the majority of circumstances (90% or greater chance).

The respondents were thereafter requested to rate the severity of the same claim events, which was again based on a five-point Likert scale with 1 indicating 'not significant' and 5 indicating 'very significant'. The impact values of the Likert scale implied the following:

1. Negligible consequence that can be handled through routine procedures.
2. Low consequence that could threaten a project element, but normal monitoring and control procedures are sufficient.
3. Moderate consequence that could necessitate project adjustments and thus require monitoring of contributing factors and reassessment of project milestones.
4. Significant consequence that threatens project objectives and, therefore, requires close management to avoid substantial cost increase, time delay, or reduction in technical performance.
5. Extreme consequence that could stop project objectives by causing unacceptable schedule slippage, cost overrun, or project failure.

3.3 Data analysis and interpretation of the findings

Data analysis was conducted using R software version 4.1.1. Descriptive statistics were employed to determine the impact of different events on the frequency and effect of claims (Bhattacharyya & Johnson, 2019; Maree & Pietersen, 2019c). This involved calculating the means, deviations, and distributions to assess the frequency of occurrence and impact upon realisation for each event.

The Cronbach's *alpha* ($C\alpha$) test was used to evaluate the reliability of the questionnaire scale. This test is commonly employed to assess the internal consistency of a scale, with Cronbach's *alpha* values ranging from 0 to 1. A higher value indicates stronger internal consistency, while a lower value indicates weaker consistency (Field, 2017). In this study, a Cronbach's *alpha* of 0.7 or higher was accepted.

Based on Sullivan and Artino Jr. (2013), Table 2 presents how the mean score measurements regarding the regularity and severity of the claim events were interpreted.

Table 2: Interpretation of mean score measurements

<i>Mean score measurement</i>	<i>Regularity</i>	<i>Severity</i>
≥ 1.00 and ≤ 1.80	Very low	Insignificant
≥ 1.81 and ≤ 2.60	Low	Low significance
≥ 2.61 and ≤ 3.40	Medium	Moderate significance
≥ 3.41 and ≤ 4.20	High	Significant
≥ 4.21 and ≤ 5.00	Very high	Very significant

4. RESULTS AND DISCUSSION OF FINDINGS

4.1 Characteristics of respondents

Table 3 presents the characteristics of the participants. The respondents represented a varied professional composition, with 66% being architects, 28% construction project managers, and 6% quantity surveyors. In terms of their knowledge and experience, the majority of the respondents (95%) had worked in the construction industry for six years or longer, indicating a sufficient level of expertise to participate in the study. Considering this, Olanrewaju and Anavhe (2014) emphasised the importance of at least five years' industry experience for effective claim management. The respondents had also been involved in a diverse range of project types, although their work has primarily been in the private sector. This can be attributed to the decline in public sector construction spending since 2016, leading to the private sector surpassing public entities and the general government as the main investor in the South African construction industry (Mahlaka, 2022; Stats SA, 2021; Watermeyer & Phillips, 2020; Olarewaju & Ibrahim, 2020; PWC, 2016). The recent national lockdown imposed due to the COVID-19 pandemic has further exacerbated this imbalance by causing delays in the approval and execution of public sector infrastructure projects (Musonda & Rakolote, 2022; National Treasury, 2021; Arndt *et al.*, 2020). In addition, contractors and consultants have become reluctant to undertake public sector projects, due to the high percentage of outstanding payments (CIDB, 2022; Maritz & Robertson, 2012).

Table 3: Characteristics of respondents

<i>Demographic</i>	<i>Characteristic</i>	<i>Frequency (n=164)</i>	<i>%</i>
Profession	Pr. Architect	108	66
	Pr. Construction project manager	46	28
	Pr. Quantity surveyor	10	6
Place of employment	Public sector (i.e., government)	46	28
	Private consulting firm	114	70
	Academia	4	2

<i>Demographic</i>	<i>Characteristic</i>	<i>Frequency (n=164)</i>	<i>%</i>
Work experience	0 to 5 years	9	5
	6 to 10 years	28	17
	11 to 15 years	29	18
	16 to 20 years	30	19
	21 years or more	68	41
Types of building projects worked on (multiple choice)	Private residential	116	71
	Private commercial	104	63
	Private industrial	57	35
	Public health: government hospitals, clinics, etc.	14	9
	Public works: government schools, libraries, infrastructure, etc.	21	13
	Public human settlements: government low-cost housing	11	7

4.2 Frequency and severity of claims

Table 4 illustrates the regularity of occurrence of the recognised claim events under the JBCC Principal Building Agreement, whereas Table 5 indicates their perceived impact on realisation. The results also revealed a Cronbach's *alpha* of 0.93 for the frequency of claims, which was calculated by summing the responses for each occurrence of claims item across all respondents and dividing it by the total number of items. Moreover, the effect of claims had a Cronbach's *alpha* of 0.96. These high values indicate excellent internal consistency for the questionnaire scales, exceeding the recommended threshold of 0.7, thus confirming the questionnaire's credibility.

Table 4: Regularity of claims occurrence

<i>JBCC PBA Clause</i>	<i>Description</i>	<i>Cronbach's $\alpha = 0.93$ (n=164) $\alpha \geq 0.9 = \text{excellent internal consistency}$</i>		
		<i>Mean</i>	<i>Standard deviation</i>	<i>Rank</i>
23.1.1	Adverse weather	3.59	1.25	1
23.2.12	Execution of additional work	3.53	1.15	2
23.2.2	Making good physical loss and repairing damage to the works	3.43	1.16	3
23.3	Any cause beyond the contractor's reasonable control	3.04	1.21	4
23.1.2	Inability to obtain materials and goods	3.02	1.14	5
23.2.4	Opening and testing of work, materials, and goods	2.88	1.18	6

JBCC PBA Clause	Description	Cronbach's $\alpha = 0.93$ ($n=164$) $\alpha \geq 0.9 = \text{excellent internal consistency}$		
		Mean	Standard deviation	Rank
23.2.13	Suspension of the works	2.68	1.26	7
23.2.6	Late supply of free issue materials and goods	2.65	1.28	8
23.1.4	Late supply of a prime cost amount item	2.58	1.15	9
23.1.3	Making good physical loss and repairing damage to works	2.54	1.17	10
23.1.5	Exercise of statutory power	2.52	1.12	11
23.2.1	Delayed possession of the site	2.48	1.26	12
23.1.6	Force majeure	2.44	1.12	13
23.2.9	Act or omission by a nominated subcontractor or a direct contractor	2.39	1.15	14
23.2.3	Contract instructions	2.39	1.16	15
23.2.8	Late acceptance by the principal agent and/or agents of a design undertaken by a selected subcontractor	2.36	1.11	16
23.2.5	Late or incorrect issue of construction information	2.35	1.11	17
23.2.7	Late appointment of a subcontractor	2.32	1.18	18
23.2.10	Insolvency of a nominated subcontractor	2.19	1.14	19
23.2.11	Suspension or termination by a subcontractor, due to a default by the employer, the principal agent and/or agents	2.19	1.15	20

Table 5: Severity of claims upon realisation

JBCC PBA Clause	Description	Cronbach's $\alpha = 0.96$ ($n=164$) $\alpha \geq 0.9 = \text{excellent internal consistency}$		
		Mean	Standard deviation	Rank
23.2.2	Making good physical loss and repairing damage to the works	3.53	1.25	1
23.2.12	Execution of additional work	3.48	1.30	2
23.1.1	Adverse weather	3.38	1.31	3
23.2.13	Suspension of the works	3.28	1.44	4
23.1.2	Inability to obtain materials and goods	3.25	1.28	5
23.2.4	Opening and testing of work materials and goods	3.19	1.30	6
23.3	Any cause beyond the contractor's reasonable control	3.19	1.30	7
23.1.6	Force majeure	3.00	1.37	8

JBCC PBA Clause	Description	Cronbach's $\alpha = 0.96$ ($n=164$) $\alpha \geq 0.9 = \text{excellent internal consistency}$		
		Mean	Standard deviation	Rank
23.2.1	Delayed possession of the site	2.96	1.44	9
23.2.6	Late supply of free issue materials and goods	2.95	1.25	10
23.2.11	Suspension or termination by a subcontractor, due to a default by the employer, the principal agent, and/or agents	2.81	1.44	11
23.2.10	Insolvency of a nominated subcontractor	2.79	1.42	12
23.1.3	Making good physical loss and repairing damage to works	2.76	1.18	13
23.1.4	Late supply of a prime cost amount item	2.74	1.21	14
23.2.5	Late or incorrect issue of construction information	2.74	1.33	15
23.2.8	Late acceptance by the principal agent and/or agents of a design undertaken by a selected subcontractor	2.73	1.32	16
23.2.9	Act or omission by a nominated subcontractor or a direct contractor	2.71	1.21	17
23.1.5	Exercise of statutory power	2.70	1.22	18
23.2.3	Contract instructions	2.54	1.14	19
23.2.7	Late appointment of a subcontractor	2.53	1.24	20

In relation to the occurrence of claims, three events were identified with a high probability ($MS \geq 3.41$ and ≤ 4.20); five events with a medium probability ($MS \geq 2.61$ and ≤ 3.40), and twelve events with a low probability ($MS \geq 1.81$ and ≤ 2.60). Furthermore, in terms of severity, two events were identified with significant impact ($MS \geq 3.41$ and ≤ 4.20), sixteen events with moderate impact ($MS \geq 2.61$ and ≤ 3.40), and two events with low impact ($MS \geq 1.81$ and ≤ 2.60). The most notable events in terms of occurrence and severity will now be further discussed.

The event of adverse weather (clause 23.1.1) was the most regular claimed event, with a mean score of 3.59. It was further the third most severe claim event, with a mean score of 3.38. The finding corresponds with Karim and Amin (2021) and Motlathledi and Nel (2019), who also indicated that progress towards practical completion is frequently and severely impeded by the occurrence of such unfavourable weather conditions.

The event of executing additional work (clause 23.2.12) was the second most frequent claimed event, with a mean score of 3.53. It was also the second most severe claim event, with a mean score of 3.48. This finding

aligns with Elhag *et al.* (2020) and Al-Qershi and Kishore (2017), who both found that contract administrators commonly provide directives for incorporating extra scope on a project that were not initially part of the original agreement.

The event of making good physical loss and repairing damage to the works where the contractor is not at risk (clause 23.2.2) was the third most claimed event, with a mean score of 3.43. It was also the most severe claim event, with a mean score of 3.53. Bearing in mind the view of Caelers-Avis (2021), it explains why this clause was regarded as the most impactful claim event on project performance, along with occurring regularly, when the extent of damage that was caused by the 2021 civil unrest is considered.

The event of any cause beyond the contractor's reasonable control (clause 23.3) was the fourth most frequent claimed event, with a mean score of 3.04. It further was the seventh most severe claim event, with a mean score of 3.19. The finding highlights the common occurrence of unforeseen circumstances that are not specifically listed in clauses 23.1 and 23.2 yet are beyond contractors' reasonable control. Shen *et al.* (2017), Kadry, Osman and Georgy (2017), as well as Mahamid *et al.* (2015) similarly highlighted that the occurrence of unforeseen circumstances that are beyond contractors' reasonable control are a common source of claims.

The event of inability to obtain materials and goods (clause 23.1.2) was the fifth most claimed event, with a mean score of 3.02. It was also the fifth most severe claim event, with a mean score of 3.25. The finding aligns with Aigbavboa *et al.* (2016) who observed that contractors frequently face challenges in sourcing materials and goods in a timely manner, which are essential for completing the works by the scheduled practical completion date. Albert *et al.* (2021) likewise determined that the shortage of construction materials in the market severely impacts the envisioned completion dates of projects, and consequently the profitability of projects.

Considering other events in terms of severity only, the event of suspension of the works (clause 23.2.13) was the fourth most severe event, with a mean score of 3.28. This indicates that contractors fairly exercise their right to suspend the work because of the continuity of the listed events in clause 28.1. While suspension of work is regarded as a self-help remedy for contractors, especially against non-payment, it usually severely disrupts projects in terms of delayed completion, diminished profitability, and disputes (Lee, 2018).

The event of opening and testing of work, materials, and goods (clause 23.2.4) was the sixth most severe event, with a mean score of 3.19. Hall (2020) stated that contract administrators have the right to check and

approve work and materials before construction can progress further. However, he emphasised that such approvals must not be unreasonably withheld or delayed, otherwise contractors will be entitled to claim for delay, due to an act of a principal agent. Guévremont and Hammad (2021), Shaikh *et al.* (2019) Assaf *et al.* (2019), as well as Oyegoke and Al Kiyumi (2017) comparably identified delayed responses from owner representatives as causes of major claims. Agyekum-Mensah and Knight (2017), Bakhary *et al.* (2014), as well as Baloyi and Bekker (2011) also signified that claims under this type of clause can be severe if contract administrators neglect or fail to fulfil their required contract obligations.

The event of force majeure (clause 23.1.6) was the eighth most severe event, with a mean score of 3. This finding aligns with Alfadil *et al.* (2022), and indicates that supervening events causing delay, which were unpredictable and beyond the control of contractors, do occasionally do materialise.

Based on the findings of this study, the following recommendations are proposed to prevent avoidable claims:

- Principal agents should carefully review contract programmes to avoid setting unrealistic schedules that cannot be realistically met. It is crucial to consider adverse weather conditions during the planning phase, taking into account factors such as wind speeds, precipitation, temperature, and humidity, and incorporating them into the project schedule. Weather data sources can be consulted to determine the expected number of working days that may be, due to such weather conditions, while also considering historical weather patterns.
- To prevent or minimise changes requested by employers during the execution of projects, they are advised to invest additional time during the design phase to ensure that everything is accurately planned and approved before finalising the detailed design. This proactive approach will help achieve the desired project outcomes without unnecessary modifications later.
- Recognising that no set of construction information is entirely error-free, professional teams should conduct thorough reviews of tender documentation. This is essential, in order to identify and eliminate errors and mistakes in specifications, drawings, bills of quantities, and schedules.
- Contractors must be aware of their common law obligation to minimise damages. They should stay vigilant regarding materials or goods that may be in short supply and take practical steps to ensure timely ordering. In cases where it is impossible to obtain the specified items, contractors should notify the employers and

principal agents, prompting principal agents to promptly issue contract instructions for readily available replacement materials or goods.

- Contractors should thoroughly understand the clauses related to the suspension of works within the contract agreement. By having a clear understanding of their rights and obligations, contractors can make informed decisions and take appropriate actions when faced with events that warrant suspending the works. In cases where employers or principal agents are in breach of contract, it is crucial for contractors to carefully document such breaches and communicate them to the relevant parties. This documentation will serve as evidence to support a contractor's decision to suspend the works and can help establish the legitimacy of the action taken.
- While the right to suspend work is provided as a remedy in certain situations, contractors should also consider alternative options before resorting to suspension. Open and transparent communication with the employer or principal agents can help identify potential solutions to address the breach or dispute without completely halting projects. Exploring alternatives can help minimise disruptions and maintain a cooperative working relationship.
- Principal agents should prioritise the timely inspection and testing of work, materials, and goods, as outlined in clause 23.2.4. It is essential to conduct inspections promptly, in order to identify any non-conformities early on and prevent further delays in the construction process. When reviewing work and materials, they should exercise fairness and reasonableness in their approval process. Approvals should not be unreasonably withheld or delayed, which ensures that contractors can progress with their work without unnecessary obstacles.
- Principal agents must generally be diligent in fulfilling their contractual requirements, in order to avoid any lapses that may lead to disputes. They should establish effective communication channels with contractors and promptly address any concerns or queries. Proactive communication can help prevent misunderstandings, facilitate timely approvals, and minimise the likelihood of claims arising due to delayed responses. They should further maintain thorough documentation and records of all inspections, tests, and approvals. This includes recording any non-conformities identified and the actions taken to address them. Comprehensive documentation serves as evidence of due diligence and can be valuable in case of any future claims or disputes.

- Principal agents must ensure that the contract clearly defines force majeure events and their scope. It is important to communicate these definitions to contractors, so that they understand the circumstances that qualify as force majeure. Clear communication will help establish a shared understanding and minimise disputes related to the interpretation of force majeure events. Further, if a force majeure event occurs, principal agents should promptly evaluate the force majeure event and its impact on the project, while meticulously documenting the details of the event. Comprehensive documentation will serve as evidence in potential disputes or claims and support decision-making processes related to the contract's provisions on force majeure.
- Contractors must carefully review the contract and understand the provisions related to force majeure events. Compliance with the contractual requirements, such as providing timely notice of the event and its impact, will strengthen their position in dealing with the consequences of force majeure and any related claims or disputes. They should further maintain comprehensive documentation of such an event, including records of any additional costs incurred, delays experienced, and efforts made to mitigate the impact. Thorough documentation will support potential claims or disputes arising from the event and help demonstrate due diligence in managing the situation.

By implementing these recommendations, principal agents, employers, and contractors can play an active role in reducing the likelihood of avoidable claims and improving overall project outcomes.

5. CONCLUSION

While it may not be feasible to completely eliminate all claims, gaining an understanding of the nature of claims can significantly benefit the parties involved in future construction projects. Therefore, the primary contribution of this study is to shed light on the recurring and severe claim events under the JBCC Principal Building Agreement from the perspective of contract administrators, specifically principal agents. The study identified the occurrence of the following claim events as the most regular: adverse weather (clause 23.1.1), execution of additional work (clause 23.2.12), making good physical loss and repairing damage to the works where the contractor is not at risk (clause 23.2.2), any cause beyond the contractor's reasonable control (clause 23.3), and inability to obtain materials and goods (clause 23.1.2). The most severe claim events were also recognised as making good physical loss and repairing damage to the works where

the contractor is not at risk (clause 23.2.2), execution of additional work (clause 23.2.12), adverse weather (clause 23.1.1), suspension of the works (clause 23.2.13), inability to obtain materials and goods (clause 23.1.2), opening and testing of work, materials, and goods (clause 23.2.4), any cause beyond the contractor's reasonable control (clause 23.3), and force majeure (clause 23.1.6).

The findings offer valuable insights into the management of claims under the JBCC Principal Building Agreement, providing project stakeholders with enhanced understanding. It is crucial for stakeholders to focus on the identified key causes, in order to effectively mitigate or prevent claims in future construction projects where the JBCC Principal Building Agreement is employed.

The findings further indicate that claim events such as late acceptance of subcontractor design or incorrect issuance of construction information, associated with the actions of principal agents, are generally considered less significant in terms of their regularity and impact. These events are beyond the control of contractors, and it is understandable that principal agents may be hesitant to accept responsibility for causing claims. This is, therefore, an inherent limitation of the study and future research should consider gathering the opinions of contractors to provide a more balanced perspective on these specific events.

Although this study primarily focused on the JBCC Principal Building Agreement in South Africa, the insights gained from the findings can also be applicable to agents and employers in neighbouring countries such as Botswana, Lesotho, and Swaziland, as they also use the same agreement (SACQSP, 2014). Furthermore, although this study has provided valuable insights into construction claims, Prinsloo (2016) and Le Roux (2014) noted that claims in the South African building industry often lead to disputes, with employers and/or principal agents either outright rejecting them or offering lower amounts than what contractors believe they are entitled to. Considering this, future research should also focus on claim events under the JBCC Principal Building Agreement that commonly result in disputes. In addition, it is important to acknowledge that this study was limited to South Africa, and there is potential for future studies to investigate the occurrence of claims under the JBCC Principal Building Agreement in other countries.

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DATA AVAILABILITY STATEMENT

The corresponding author can provide the dataset supporting the findings of this study, upon reasonable request.

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