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Proactive Management of Construction Claims: A Case in Support of the Construction Extension Guide to PMBOK®

BY:

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Course: Project Management (BUQS 7009)

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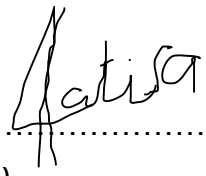
A Research Report Submitted to the Faculty of Engineering and the Built Environment, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Science in Project Management in Construction.

SUBMISSION DATE: September 2017

DECLARATION

I declare that this research report is my own unaided work. It is being submitted for the Degree of Master of Science to the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination to any other University.



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(Signature of Candidate)

September, 2017

DEDICATION

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1. My brilliant supervisor, Dr Oluwayomi Babatunde, for your intellectual and progressive debates and for your generous assistance on this research, you have provided me with a fantastic opportunity to express myself.
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ABSTRACT

Problem Statement

As a background, several studies on construction claims management in the construction industry conducted in recent times highlighted deficiencies in current construction claims management approaches. Most of the research suggests a need for improvement in the efficiency of construction claims management processes. Claims management is an integral part of the entire project management and should be considered inherent in the administrative process of any construction project. Currently, the practice in construction claims management and dispute resolution generally reflects a one size fits all approach. Claims can be planned at tender stage.

Hence, the problem statement is that the lack of efficient construction claims management processes poses risks on a construction project which produces the need to manage it proactively and efficiently.

Aim

The aim of this study was to investigate whether construction administrators such as Project Managers, Contract Managers, Construction Managers and Construction Claims Consultants involved in construction claims management process are aware of the Construction Extension Guide to PMBOK® which presented a proactive administration of construction claims.

Research Methodology

The research approach used in this study was a cross-sectional survey using a structured questionnaire. A combination of both online questionnaire and face to face interviews were conducted. The targeted population consisted of professionals with experience in construction claims management and project management. Out of 84 questionnaires sent out, 42 were returned which amounted to 50% response rate. The 42 respondents comprised of 11 project managers, 2 construction managers, 6

contract managers, 5 construction claims consultants, and 17 others who have not specified their roles.

The research, being a cross-sectional study was carried out only once. Questionnaires were sent out and received within a two-month period and the interviews were conducted in two weeks thereafter. Quantitative data were collected from 42 respondents and from the 42 quantitative data respondents, 9 respondents were interviewed face to face for collecting qualitative data. Quantitative research uses mainly deductive reasoning while qualitative research uses mainly inductive reasoning. This research used both the deductive and inductive reasoning in analysing data. The research used descriptive method of analysis. The descriptive method is a straightforward calculation that shows how the respondents are distributed on all the items of the investigation.

Research Findings

The research findings indicated that project managers, contract managers, construction managers and construction claims consultants, even though they may be aware of the construction extension guide to the PBMOK, rarely make reference to it as a proactive project management tool for construction claims. In addition, the result pointed out that the Construction Extension Guide to the PMBOK® is an important tool in the management of construction claims.

KEY WORDS

Construction Claims, Construction Claims Management, Claims, Project Management, Proactive Project Manager, Construction Extension Guide to PMBOK®

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LIST OF ACRONYMS

PMBOK®: Project Management Body of Knowledge

APM: Association of Project Managers

FIDIC: Federation Internationale des Ingenieurs- Conceil

GCC: General Conditions of Contract

ICC: Infrastructure Conditions Contract

IChemE: The Institution of Chemical Engineers

ISO: International Organization for Standardization

JBCC Series 2000: Joint Building Contracts Committee 2000

JCT: Joint Contracts Tribunal

NEC 3: New Engineering Contract

PMI: Project Management Institute

pp: page(s)

SANS: South African National Standard

UK: United Kingdom

USA: United States of America

CHAPTER 1- INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Introduction

Construction claims are a phenomenon that requires awareness to proactive detection of claims (Enshassi *et al*. 2009). According to Rooke *et al*. (2004) there is a tendency amongst contractors to expend more effort on generating profit from claims. When a major construction project goes into dispute most of the time as a result of unresolved construction claims, the impact is far reaching, manifesting itself in cost overruns, late delivery and in some instances compromising the quality and scope of the project itself (Arcadis, 2015). According to Shakeri *et al*. (2014) the number of construction claims can be reduced if there is a proper understanding of the genesis of construction claims, what successful construction claims assessment requires, and overall better decision making when it comes to construction claims processes within projects.

Claims in construction projects are inevitable due to conflicting priorities between the owners and the contractors ,states Kimmons (1999). According to Koster (2009) proper stakeholder management usually results in peaceful agreements on construction claims. One of the major professional roles in the construction industry is the role of the project manager (Cicmil *et al*., 2006). In line with Koster (2009) this study models a proactive project manager. During any construction project, the project manager and his team have the responsibility to ensure that the project progresses within cost, time and quality. The project manager's approach must be efficient and timely in issuing instructions, responding to requests for information and processing of construction claims for extension of time and additional money.

To be a proactive project manager, it is important to be perceived by the project stakeholders as being: (1) in charge and in control of the project; (2) calm and in self-control; (3) master of the project domain; and (4) confident and trustworthy (Ward-Perkins, 2016). Bakhary *et al*. (2015) in his study on claims problems experienced by Malaysian contractors and consultants indicated that the lack of proactively detecting

claims needs to be addressed within the claims management processes. A proactive project manager always thinks of better ways that project activities can be done and possible risks that might be on the immediate horizon. If and when alternative plans can be made in advance, this gives the project manager an advantage of being prepared for alternative scenario to ensure that project stays on budget, keeps within schedule, and maintains the quality expected in the project objective (Wilson, 2014)

According to Rooke *et al*. (2004) claims can be planned at tender stage and sometimes during the course of the project. Rooke *et al*. (2004) commented on practices employed at tender stage being pricing mechanism and programming of work to avoid delays. Surely these techniques are proactive rather than reactive.
Proactively identifying and addressing cost and schedule issues, minimize risks on construction projects. While project controls are also critical to the project manager's ability to effectively manage a project, the ability of the project manager to anticipate that a contractor is behind schedule, over budget, financially strained, at odds with the key suppliers or otherwise experiencing significant issues also determines completed project manager's effectiveness (Bates, 2013).

1.2 Background

Project Management skills are organized around the ten knowledge areas described in the Project Management Body of Knowledge (Project Management Institute (PMI), 2013). In an endeavour to keep up with the evolving nature of the field of project management, PMI has extended PMBOK® knowledge areas by adding the following additional knowledge areas namely (i) Project Safety Management, (ii) Project Environment Management, (iii) Project Financial Management, and (iv) Project Claims Management (McCarthy, 2010; PMI, 2008). Interestingly, claims management is amongst the extended knowledge areas. This raises the question of whether claims management should be part of the core knowledge areas or an additional or extension knowledge area to the commonly known knowledge areas. The Construction Extension Guide to PMBOK® having introduced four additional knowledge areas provides for 4 processes which if carefully approached will prevent

construction claims or mitigate the effect of those that do occur and to handle construction claims quickly and effectively. These processes will be discussed in Chapter 2, literature review.

Claims management is of particular importance because construction activities involve a large number of parties; thus, an environment conducive to conflicts. Construction claims will, inevitably, arise on any construction project; thus, necessitating the project manager to manage this more proactively. While it is not possible nor realistic to expect that all construction claims can be avoided or will be properly resolved, understanding the nature of these construction claims, what gave rise to them as well as conducting an effective proactive management analysis early on the project will, hopefully, assist parties to a contract to profit and benefit from the construction project (Wilson-Murray, 1997).

1.3 Problem Statement:

Claims management is an integral part of the entire project management and should be considered inherent in the administrative process of any construction project. Construction claims, if not managed effectively, can lead to disputes and end in litigation which only results in wasted resources and disgruntled relations (Russell, 2006). Currently, the practice in construction claims management and dispute resolution generally reflects a one size fits all approach. Project manager must be intentional and proactive in managing construction claims, knowing claims are unavoidable.

To substantiate, several studies on construction claims management in the construction industry conducted in recent times highlighted deficiencies in current construction claims management approaches. Most of the research suggests a need for improvement in the efficiency of construction claims management processes. Contractors are using a strategy of submitting tenders at low prices. Interestingly the ultimate price of the bid will only be known by inflating claims. It begs a question, how can proactive project management approach assist in curbing construction

claims and thus result in savings in costs? This research investigated the current status of construction claims management processes within the construction industry investigate how construction claims management processes are managed and model a proactive stance in dealing with and minimizing the impacts of construction claims on construction projects based on the Construction Extension Guide to PMBOK®.

1.4 Research Aim

The aim of this study was to investigate whether construction administrators involved in construction claims management process are aware of the Construction Extension Guide to PMBOK® which presents a proactive administration of construction claims.

1.5 Specific Objectives

The objectives towards achieving the preceding research aim are namely:

i. To investigate whether there is a relationship between project management and claims management in construction projects;

ii. To investigate the effectiveness of how claims are currently being managed throughout the project stages.

iii. To explore Project Managers' knowledge of claims under construction contracts in order to model a proactive construction project manager in construction claims management

iv. To establish if Project Managers are aware of the Construction Extension Guide to PMBOK® as an additional knowledge area.

1.6 Research Limitations

This research was limited to the views of project managers, contracts managers and claims consultants involved in government and private companies currently engaged in construction work. The respondents were selected based on their willingness to

participate in the survey and were at all material times accessible to answer research questions.

1.7 Assumptions

This research assumed construction project management administrators such as, project managers, contract management, construction management, construction claims consultants are not aware of the Construction Extension Guide to PBMOK.

1.8 Ethical Statement

According to Saunders *et al*. (2009) ethical challenges are found at all stages of the research, either during data collection, when analysing data and also when you report findings. In order to comply with the school of Construction Economics and Management policy and requirements relating to ethics, all ethical challenges were considered. The participants were assured that information provided during the research process will be treated with confidence, anonymity unless permission is sought to publish such confidential information.

1.9 Structure

The research report is structured into the following six chapters;
Chapter 1: This is the current introductory chapter wherein the aim of the study and objectives were presented.
Chapter 2: This explored a review of the existing literature on the topic of interest to identify the gaps existing in claims management within the construction industry.
Chapter 3: This describes an overview on the research design and discusses the data collection techniques selected for this research.
Chapter 4: The discussion of the findings relates the findings of the research to existing findings in the literature and the knowledge gained from the literature review.
Chapter 5: This chapter reiterates the main findings, presents recommendations, concludes and proposes areas for further study.

CHAPTER 2 - LITERATURE REVIEW

2.1 Objectives of literature review

All research needs to be informed by existing knowledge in a subject area. The literature review identifies and organizes the concept in relevant literature areas (Rowley and Slack, 2004). Rowley and Slack (2004) in this instance stated that the objective of literature review is to summarize the state of the art in that subject field. Rowley and Slack (2004) further stated that literature review is important in:

- Supporting the identification of a research topic, question and hypothesis;
- Identifying the literature to which the research will make a contribution and contextualising the research within that empirical sphere,
- Building an understanding of theoretical concept and terminology;
- Facilitating the building of bibliography or list of the sources that has been consulted;
- Suggesting research methodology that may be useful, and
- Analysing and interpreting the results.

Chapter 2 therefore presented an overview of current project management, claims management theory in order to support the research of the title “Proactive Management of Construction Claims: A case in support of the Construction Extension Guide to PMBOK®”.

Trafford and Leshem (2008) believed that reviewing literature leads to a delineation of the conceptual or theoretical framework of the study. According to Rowley and Slack (2004) literature review needs to draw on and evaluate a range of different types of sources including academic and professional journal articles, books, and web-based resources. The literature search helps in the identification and location of relevant documents and other sources. Similarly, according to Saunders *et al*. (2009) literature review defines the parameters of your research question and objectives.

Kothari (2004) suggested that research must at the same time examine all available literature to get acquainted with the selected problem. Two types of literature was

reviewed, the conceptual literature concerning the concepts and theories, and the empirical literature consisting of studies made earlier which are similar to the one proposed.

The main body of the research relates to the relationship between project management and claims management and the growing literature on avoiding claims and disputes in construction projects. The golden thread of this part is drawn together by discussing project management, construction claims management, risk management, the use of construction contracts, proactive project management, and discussed the Construction Extension Guide to PMBOK®, notwithstanding a relatively scarce literature on the topic of proactive project management. The findings of the research serve as an eye opener for the construction industry to improve claim management processes.

2.2 Project Management

Project management is a set of principles, methods and techniques for effective planning of objective work, thereby establishing a sound basis for effective planning, scheduling and controlling the management of programmes and projects (Bakouros and Kelessidis, 2000). Similarly, Kerzner (2009) concurred that project management is the planning, organizing, directing, and controlling of company resources for a relatively short term objective that has been established to complete specific goals and objectives. Essentially, project management is concerned with control and efficiencies to achieve specific goals (Nyarirangwe and Babatunde, 2016).

Project management has emerged as a discipline in recent years and has developed from different fields of application including construction and engineering (Sharma, 2015). According to Sharma (2015) this development should certainly give the notion of proactive project management food for thought and motivation. Project Management is a process by which projects are defined, planned, monitored, controlled and delivered such that the agreed benefits are realised (Association of Project Managers APM, 2014).

This is important for this research in answering the question: how claims are currently being managed through the project stages? Hansen- Addy (2013) argued in a study conducted on analysis of soft conflict resolution approaches in the UK construction industry that the success of a project is often measured by how effective the Project Manager is able to contain possible disagreements and still execute the project as planned.

PMBOK® defines project management under 10 knowledge areas as depicted in table 2.2 and lists them as follows (PMI, 2013):

2.2.1 Project Integration Management

Integration management is required to bring about effective project management (PMI, 2013).

2.2.2 Project Scope Management

According to PMBOK®, scope management is required in order to contribute to effective project management. The construction extension to the PMBOK® adds contract documents as part of scope planning (PMI, 2004).

2.2.3 Project Time Management

Project time management includes the processes required to ensure that the project is completed on time. Time management contributes to effective project management (PMI, 2008)

2.2.4 Project Cost Management

Project cost management includes the processes needed to complete the project within budget. It includes resource planning, cost estimating, cost budgeting, cash-flow and cost control. Cost management contributes to effective project management.

2.2.5 Project Quality Management

According to PMI (2013) Project quality management includes the process required to ensure that the project will satisfy the needs for which it was undertaken. It consists of determining the required condition, quality planning, quality assurance and quality control. Quality contributes to effective project management.

2.2.6 Project Human Resources Management

The project human resource management includes the process that manages the project team. It consists of organisational planning, human resource planning, acquiring a project team, developing a project team and managing a project team (PMI, 2004). Project managers require people skills. Project managers need project management knowledge regarding claims management, to be able to deal with claims management in the construction industry (Macdonald, 2005).

2.2.7 Project Communication Management

Communication is very important to ensure effective project management (Chiocchio, 2007). PMBOK® suggests that in the construction industry a project documentation requirements checklist should be compiled and added to the communications plan, so is documentation relating to claims management (PMI, 2008).

2.2.8 Project Risk Management

Project risk management is the process that has to identify, analyse, plan and respond to project risk. It consists of risk identification, risk quantification and impact, response development and risk control. This is similar to claims management. According to Rahman and Kumaraswamy (2001) risks are inherent in construction projects.

2.2.9 Project Procurement Management

In terms of Construction Extension Guide to PMBOK®, Procurement management is essential to contribute to effective project management (PMI, 2008). The Construction Extension Guide to PMBOK® has four additional knowledge areas for construction projects namely, safety, environmental, financial and claim management. Procurement finds its space within the financial management knowledge area.

2.2.10 Project Stakeholder Management

APM (2014) defined Stakeholder management as the systematic identification, analysis, planning and implementation of actions designed to engage with stakeholders. A more deliberate approach to stakeholder engagement is encouraged. Effective stakeholder engagement requires subtle skills like being proactive.

PMI (2012) further recognized five basic process groups. According to Chang, (2013) essentially there are 47 processes of project management and they are further grouped into five categories as illustrated in table 2.1 namely:

(i) Initiating

According to PMI 2008, the initiating process defines and authorises the project

(ii) Planning

According to Sears *et al*. (2008) planning is the process of devising a workable scheme of operations that, when put into action, will accomplish the intended objective. According to Rahman and Kumuraswamy (2001) not all the risks are foreseeable at the planning stage, so unforeseen risks needs to be managed in an effective manner.

(iii) Executing

During the executing phase people and other resources are integrated to carry out the project plan adopted in the planning phase (PMI, 2008).

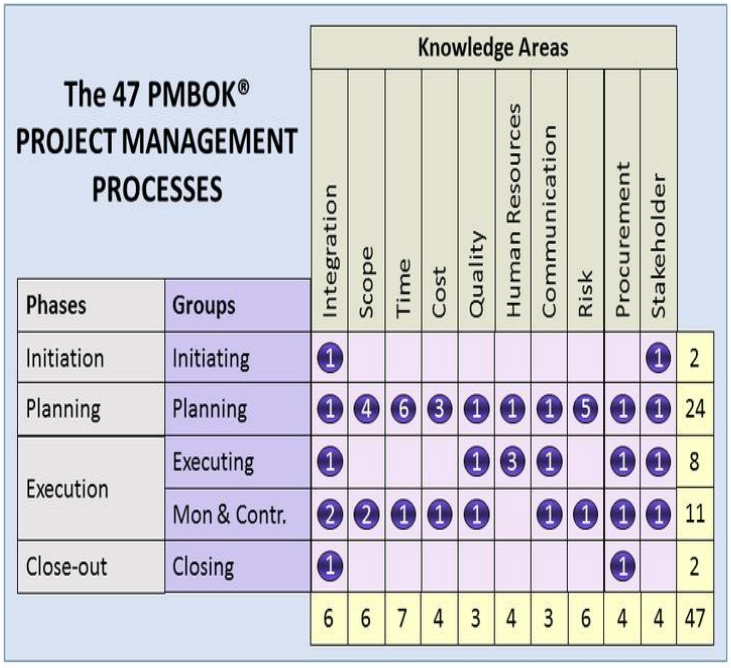
(iv) Monitoring and Controlling,

According to Steyn *et al*. (2010) in project monitoring, pro-activeness and corrective measures are enabled.

(v) Closing.

According to PMI (2008) during the closing Process Group formalises acceptance of the product intended use and bring the project to an end.

Table 2.1: Illustrate 47 Project Management Processes



Source: Chang (2013)

Table 2.2: PMBOK® 10 Knowledge Areas

Project Management Process Group and Knowledge Area Mapping

Knowledge Areas	Project Management Process Groups				
	Initiating	Planning	Executing	Monitoring and Controlling	Closing
Integration Management	Develop Project Charter	Develop Project Management Plan	Direct and Manage Project Work	1. Monitor and Control Project Work 2. Perform Integrated Change Control	Close Project or Phase
Scope Management		1. Plan Scope Management 2. Collect Requirements 3. Define Scope 4. Create WBS		1. Validate Scope 2. Control Scope	
Time Management		1. Plan Schedule Management 2. Define Activities 3. Sequence Activities 4. Estimate Activity Resources 5. Estimate Activity Durations 6. Develop Schedule		Control Schedule	
Cost Management		1. Plan Cost Management 2. Estimate Costs 3. Determine Budget		Control Costs	
Quality Management		Plan Quality Management	Perform Quality Assurance	Control Quality	
Human Resource Management		Plan Human Resource Management	1. Acquire Project Team 2. Develop Project Team 3. Manage Project Team		
Communications Management		Plan Communications Management	Manage Communications	Control Communications	
Risk Management		1. Plan Risk Management 2. Identify Risks 3. Perform Qualitative Risk Analysis 4. Perform Quantitative Risk Analysis 5. Plan Risk Responses		Control Risks	
Procurement Management		Plan Procurement Management	Conduct Procurements	Control Procurements	Close Procurements
Stakeholder Management	Identify Stakeholders	Plan Stakeholder Management	Manage Stakeholder Engagement	Control Stakeholder Engagement	

PMI, (2013)

According to Kerzner (2009) project management cannot succeed unless good project manager is in control. An experienced project manager can spot the warning signs of potential claims and difficulties involving extra work, delay and deficiencies

before they occur (Vogel, 2011). Bakourous (2000) emphasise that it is vital for project managers to adopt a proactive approach to all aspect of construction from the moment of their appointment. Nyarirangwe and Babatunde (2016) stated that project managers must now consider a change in behaviour which includes being flexible and innovative in order to manage complex projects. According to Crawford (2005) the demand for competent Project Managers is growing as they are seen as having a major impact of the performance of the project.

2.3 Claims Management: Historical Perspective and Background.

In employing the rear mirror view, Griffin (1993) points out that construction claims have since mid-70's increased significantly as a result of parties in the construction industry adopting an adversarial process to claims management. Griffin (1993) contends that, to be effective and successful in timely resolution of claims, it is going to require better planning, better management, an attitude of mutual trust and cooperation and the use of pro-active claim avoidance techniques.

Ren *et al*. (2001) in their study on claims in construction highlighted deficiencies in current claims management processes. So it cannot be business as usual in so far as stakeholders carry on project management and in particular claims management. Kululunga (2001) presented principles that underlie construction claim process and gave a generic framework that aims to facilitate measurement of claims process as one of the strategies for improving project management. These principles included (i) emphasis on ensuring that claims management practice is afforded space at tender stage, (ii) Contracts are clear and are agreed to avoid future disputes, (iii) emphasis on document management, (iv) generally, stricter contractual provisions, quality of claims as well as their substantiation.

Scott and Harris (2004) used a novel approach to understand how contract administrators are likely to assess claims. According to Rooke *et al*. (2004) claims can be planned at tender stage and sometimes during the course of the project. Rooke *et al*. (2004) commented on practices employed at tender stage being pricing

mechanism and programming of work to avoid delay. Surely these techniques are proactive rather than reactive. There is a tendency amongst contractors to expend more effort on generating profit from claims

Hassein (2008) looked into the Egyptian industrial sector on status of claims management generally and the result demonstrated that claims management in the Egyptian industrial sector suffers the same syndrome like the rest of the world. Construction companies need to pay more attention to claims management, this is as a result of the evolvement of the construction industry (Bakhary *et al*., 2013).

In a study on claims analysis of construction projects in Oman, Al Mohsin (2012) argued that claims are problems that projects face routinely and may lead to many consequences. Interestingly by the early 20th century, the increasing complexity of the construction process led the industry to promote specialized claims resolutions systems despite resolution procedures such as adjudication, mediation and arbitration (Bruner, 2002).

Yates (2003) in differentiating between a claim and dispute stated broadly that a dispute involves disagreement over issues capable of resolution by negotiation, mediation or third party adjudication. In taking the definition further, Ndekugri and Vidogah (2010) linked the two concepts together and states that a dispute only comes into being after a claim has been made and rejected. McGeorge (2007) argued that there is no definitive meaning of dispute. McGeorge (2007) argued further that we need to accept that disputes and claims can be found in one definition.

Nobari and Dehkordi (2015) is of the view that prevention, detection, and following claims require strong management. Du Preez (2014b) asked pertinent questions whether professionals are applying project management knowledge areas and relaying their significance to the client and whether professionals have identified the potential of cost saving in effective project management.

The construction claims domain is a rigorous process and includes different categories of construction skills which result in a complicated situation due to interaction between, contract, technical and legal base categories (Dief *et al*., 2016). Gibbs *et al*. (2017) in their investigation of trying to understand claims found that the solution in the reduction of claims lies with the proactive management of claims and the retrospective analysis so that claims can be understood better.

To this day, construction claims continue to grow in an alarming rate. The exhausting and expensive process of litigation has not made things easier, as unsettled claims that have developed into disputes can take a very long time to be resolved (Mc George, 2007).

2.4 Claims Management in Project Management

Shakeri *et al*. (2014) confirmed that claims in construction contracts are increasing in a rapid pace. Despite extensive studies and research done on various aspects of claims management, the method used by management to evaluate and measure the effectiveness of claim management processes and how to respond to them; the rate of claims in projects especially civil projects, is increasing (Nobari and Dehkordi, 2015).

According to Vogel (2011), the best experienced project manager can spot the warning signs of potential claims and difficulties involving, extra work, delays and deficiency before they occur. This is in essence the backdrop of the Construction Extension Guide to PMBOK®. However for those disputes that do arise, a quick resolution is extremely important (Bakhary *et al*. 2013).

The occurrence of claims is a commonality perceived in many construction projects and can be attributable to a set of factors which can cause considerable delays in a project. Therefore as ad nauseam articulated in this research, claims are inevitable part of the construction projects. Khekale confirmed this in his study done in the USA, Canada, Thailand which revealed that claims amounts to 50% of the contract

value in those jurisdictions. After all it is not a perfect world but claims management must never be trivialized.

2.4.1 Construction Claims Management

A claim can be defined as a demand for something due or believed to be due, usually as a result of an action or direction on the one hand. In construction usually additional compensation for work claimed to be extra to the contract or an extension of time for completion of both (Nobari and Dehkordi, 2015). On the other hand claims management is the process of implementation and coordination of resources in order to improve claim process, from the identification, the analysis, to the preparation and presenting it, then the attempt to resolve it (Kululunga, 2001).

Du Preez, (2014a) argued that claims management is the process which addresses the mitigation of the negative effect claims has on a project by handling them quickly and effectively. There two types of claims, (1) contractor claims and (2) employer claims (Tochaiwat and Chovichien, 2006). Claims management is an important process in construction projects management (PMI, 2008). According to the Construction Extension Guide to PMBOK® claims management is, in some respect, similar to risk management. Fundamentally, the Construction Extension Guide, and in particular the Claims management knowledge area emphasized the prevention and handling of claims in the construction industry.

The Construction Extension Guide to PMBOK® considers claims management as an important process in construction disputes (PMI, 2008). PMI, (2008) emphasized that the process of claims management seeks to mitigate the effect claims have on projects. Malak *et al*. (2002) canvased a need for an overall step-by-step procedure for the management of claims for achieving timeous resolutions and for preventing claims from developing into disputes, albeit more than a decade ago. This begs the question, what else can be done to avoid unresolved matters from escalating into claims and subsequently disputes.

Bakhary *et al*. (2014) attempted to answer this pertinent question and stated that the concept of construction claims is not new, but what has been lacking is the methodology that can help project managers to assess the level of effectiveness of their projects especially where construction claims processes are concerned. Ndukegri *et al*. (2010) was of the view that a tremendous scope exists for improving claims management practices within the construction industry.

Bakhary *et al*. (2013) argued that the management of claims is similar to risk management. PMI (2008) also considers claims management to be a subset of risk management. Shakeri *et al*. (2014) concurred in that, the general sense for removing and preventing an increase in claims and the management thereof should be similarly a typical risk management practice. The Construction Extension Guide to PMBOK® has essentially developed processes in managing claims. The Guide includes a brief practical guidance of handling this inevitable aspect of construction projects.

2.4.2 Claims Management and its similarity to Risk Management

In order to do justice to claims management, firstly one needs to appreciate that every project involves risks and every risk requires a strategy for dealing with the repercussions presented by such risks (Newton, 2015). Construction projects have become intricate and that brings with it risks. According to Rahman and Kumaraswamy, (2001) the nature of risks keeps changing as projects progress and not all risks are foreseeable at the outset. Since all possible risks are not foresee, a strategy that considers post-contracting is therefore advocated (Rahman and Kumaraswamy, 2001).

Risk management is the total process of identifying, controlling and minimizing the impacts of future events (Bakhary *et al*., 2014). The Construction Extension Guide to PMBOK® specifically mentions that claims are a risk and should be treated like that. Goncalves (2012) brought to the fore some similarities between claims management and risk management and stated that risk management involves the following five steps:

- Risk management planning
- Risk Identification
- Risk analysis
- Risk Response and
- Risk monitoring

At first glance, the risk management process looks similar to claims management processes. However Fewings (2005) saw it differently and stated that risk must be considered as a key supporting process to the other 10 PMBOK® knowledge areas. One of the ways to pre-empt or predict claims is with the use of risk management techniques (Loosemore *et al*. 2006). Rahman and Kumaraswamy (2001) in their study found that there is a need for the construction industry to move towards approaches that can address construction risks effectively.

According to Guerin (2012) not many project managers realizes that managing risks is their primary responsibility. Bakhary *et al*. (2013) relentlessly expressed that the management of claims amounts to the management of risks. Klee, (2015) put it up that claims management is a system for monitoring risks within projects. Du Preez (2014a) supported the notion that claims management equals risk management and pointed out that, all along claims management has been subsumed into all the ten PMBOK® knowledge areas.

2.5 Pro-Active Project Management

Gudermann defined proactive behaviour as the taking of initiatives to improve current situations or creating new ones. It involves changing the status qua rather that settling with the current situation. The universe has never been averse to common sense and being proactive, argued Fangel (2013). Therefore projects being temporary endeavours, they require a specialist thinking from project managers. Project management requires a move beyond tradition (Nyarirangwe and Babatunde, 2016). In future the proactive and effective management of contracts and claims will become more important to the field of project management (Vester, 2005). To avoid disputes, the construction industry requires a proactive approach

and a mind-set ready to implement this approach from day to day of any project. It is for this reason that every project manager must maintain a proactive attitude towards dispute resolution (Tochaiwat and Chovichien, 2004).

According to Dai *et al*. (2006) pro-active project management means in the course of project management, the owner is always in the favourable position before the commencement of the project. During the different phases of the project; from start to the end of the project; the owner is leading the whole process all the way, which means unnecessary disputes can be prevented at source (Dai *et al*., 2004). According to Muir (2005) a project manager should pro-actively manage threats to the projects and look for ways to reduce the probability or impact of the threat or eliminate the threat altogether. Suggestions for a pro-active project management have demonstrated to be an effective way that can defuse the majority of potential problem areas and prevent them from becoming dispute (Bates, 2013).

Fangel (2015) was of the view that proactive management implies that the management effort takes place before the management of the challenge. As a result, project management should shift from being reactive to being proactive. McKechnie (2008) added to the body of knowledge and stated that the success of a project can be attributed to well managed project plans and procedures as well as implementing proactive controls and measures. Therefore proactive project management is of paramount importance in construction industry (Dai *et al*., 2004).
According to Gudermann (2010), the changing nature of work in the 21st centuary requires proactive personality. Proactive still was considered to be a critical element of an organizational success which contributes to efficiency (Gudermann, 2010).

4.3.1 Project Phases

4.3.1.1 Project Planning

This is the first step in every project. According to Abdul *et al*. (2011), the planning, organizing, directing and controlling of project activities are part of project planning.

4.3.1.2 Project Organizing

A project well organized is able to deliver better quality, save costs and desist from claims. (Keizer and Render, 2008).

4.3.1.3 Project Controlling

AlNasseri and Aulin. (2015) stated that control in project management involves amongst others cost control, authority and approving control. Nwachukwu and Emoh (2011) in justifying that the role of the Project Manager is ensuring project success and avoiding ills those inherent in the construction industry need to control and direct the project, in order to curb the propensity of relying on non-project management tools.

2.5.1 Characteristics of a Proactive Project Manager

Egeland (2014) defines a proactive project manager as someone who creates or controls a situation by causing something to happen rather that responding to it after it has happened. The inherent ability to plan ahead is therefore an essential attribute of any proactive project manager. For the purposes of this study the words “proactive” is used interchangeably with “efficient” and are seen to mean one thing. Oxford English dictionary confirms the definition of pro-active as creating or controlling a situation rather than just responding to it. These definitions complements what project management is all about, the planning, organizing, directing, and controlling of company resources (Kerzner, 2009).

Hansen-Addy (2013) in a study analysing soft conflict resolution approaches in the UK construction industry argued that the success of a project is often measured by how effectively the project manager is able to contain possible disagreements and still execute the project as planned. Interestingly, APM (2008) listed cognitive characteristics of a project manager as open, positive, can do attitude, common sense, open minded, adaptability, inventiveness, prudent risk taker, fair and committed (Fewings, 2005).

This observation is congruent with what Fangel (2013) expressed of the concept of proactive management that, well begun is half completed. Kerzner (2009) made an observation that many projects are directed and controlled by using management-by-objective approach (MOA), based upon effective project working relations. Essentially, the philosophy behind the management-by-objective approach is that of proactive approach rather that reactive approach (Kerzner, 2009).

Nwachukwu and Emoh (2010) analysed the role of a Project Manager and came out with profound statements that characterised the role of the Project Manager and listed the following items:

- "*The role can be seen as that of reducing the client's problems and increase his control;*
- *He is the engine that gives the development process its locomotive force and the fulcrum that gives leverage to the success of the entire project.*
- *He may not be a magician, but he possess scientific tools and techniques that can make things work like a magic"*

According to Aibunu (2011), in a study of cooperative behaviour in construction claims processes found that decision making in claims management have a large impact on the administration of claims. Aibunu (2011) suggested that behaviour on project can change by managing claims in a proactive manner and by proper implementation of claims mechanism.

2.6 Standard Forms of Contracts and Claims Management

From the onset whether a project is based on standard contract such as FIDIC or NEC 3 or even a bespoke contract, it is important that the contractual requirements be correctly factored into the project planning and procedures (McKechnie 2008). Iyer *et al*. (2008) undertook a study on understanding time delays in construction contracts and observed that most of the construction projects are executed through contracts which are generally not easy to comprehend even by professionals. They

further went on to state that this gives rise to further ambiguities in the prevailing contract forms eventually making contract forms more complex and difficult and causing adversarial impacts such as increase in number and frequency of claims and disputes besides time and cost overruns.

Daoud and Azzam (1999) contends that this can be attributed to many factors, such as the modifications carried out by project owners on standard contract conditions, lack of understanding of basic contractual issues by the contract parties, the never ending changes in legislation and regulations, poor documentation during contract administration, and the influence of local culture on the performance of the contract parties. According to proponents of the NEC3 standard contract, its great strength is that it adopts a partnering approach whilst also placing a great emphasis upon proactive project management (Gould, 2015).

Most countries in the world have their own standard forms of contracts to be used in their respective construction industry (Ling Zhe Huei and Ting Sim Nee, 2010). According to Maritz and Schutte, (2009) the standard forms of construction contracts commonly used in South Africa and largely globally include:

2.6.1 General Conditions of Contract (GCC)

According to GCC 2010, all claims are subject to compliance with the claims process contemplated in clause 10.1. This clause provides the Contractor to pre-empt an event that can lead to a claim and inform the engineer.

2.6.2 Joint Building Contracts Committee Series 2000 (JBCC 2000)

According to the JBCC 2000, claims are dealt with under clause 29 and provide time bars as to when the entitlement to submitting a claim falls away. This time bar seeks to encourage the claimant to submit their claim timeously to avoid claims coming through in avalanche.

2.6.3 Federation Internationale des Ingenieurs- Conceil (FIDIC)

FIDIC contracts are used extensively on international construction projects mostly funded by World Bank. According to FIDIC, the management and claims process is provided for under sub-clause 20.1, albeit the causes of

claims can emanate from different sub-clauses found throughout the conditions of contract. This sub-clause sets out the requirements that must be followed for parties to institute claims against each other. Therefore compliance with this provision may amount to a good administration of the projects

2.6.4 New Engineering Contract (NEC 3)

The NEC 3 is very popular with civil engineering work. Under the NEC there are two dispute resolution options to select from. The project manager under NEC 3 is the key role player whose function includes administering the contract. According to NEC 3 claims are in the form of compensation events and are therefore dealt with under clause 60.1

2.6.5 Other Engineering Contract

In the UK there are other construction contracts that are being used namely Infrastructure Conditions Contract (ICC), Joint Contracts Tribunal (JCT) and IChemE amongst other. (Thomas and Wright, 2016).

Pickavance (2010) argued otherwise, that none of this standard form provides an express provision setting out a method or a technique on how claims can be managed. The Society of Construction Law (2002) has compiled delay and disruption protocol as an attempt to standardise a process of evaluating delay claims. Unfortunately the protocol to this end is not incorporated into any standard form of contract (Pickavance, 2010). It is thus overt that project management lacks a standard technique or method of managing claims. According to Winter (2009) the delay and disruption protocol is an excellent tool that project managers can use to effectively manage claims.

Haapio (2010) stated that in today's business to decrease costs one may need to invest in resources, tools and technologies that streamline processes. One such process is proactive contracting. That is using legal foresight and proactive legal skills to predict risks associated with claims management. Vidogah & Ndekugri

(2010) advised that to remedy this phenomenon of claims, stricter contractual provisions on claims management should be emphasised.

2.7 Construction Extension Guide to PMBOK®

The purpose of the construction extension guide to PMBOK® is to improve the efficiency and effectiveness of the management of construction projects and to include information that is currently not in the PMBOK® guide (PMI, 2007). Construction extension guide to the PMBOK® describes knowledge and practices that are generally accepted as good practice for most construction projects (PMI, 2008). Accordingly, the purpose of the construction extension guide to PMBOK® is to improve project management on construction projects by emphasizing those methods and techniques that are particularly important to the subset of projects (Guerin, 2012).

The construction extension guide is integrated within PMBOK® for effective and efficient project management (du Preez, 2014a). The construction extension guide provides:

- Unique or unusual aspects of the project environment of which the project management team must be aware of, in order to manage the project more efficiently and effectively;
- Common knowledge and processes that if followed will improve the efficiency of effectiveness of the projects.

The construction extension guide focuses on project management practices that are specific to the construction industry (PMI, 2008). The publication of the construction extension guide to PMBOK® was as a result of PMI's findings that the four added knowledge areas including but not limited to claims management, proposes the application areas to be treated as added knowledge areas.

Construction extension guide to PMBOK® introduced new knowledge areas, albeit it lists them as additional knowledge areas. Claim management forms part of this Construction Extension Guide to PMBOK® (PMI, 2008). The construction extension

guide to PMBOK® listed claims management as an important area in construction. It considered claim management knowledge area to be a facet of risk management. (PMI 2008). Kululunga (2001) insinuated that claims management is similar to risk management claims management and it should follow a process made of the following steps:

- Claim identification

  Proper identification involve not only an interpretation of what the contract requires but also a documented description of the activity viewed to that required by the contract (PMI, 2008). The first step for overcoming this problem is adequate claims classification and identification (Moura and Teixeria, 2007)

- Claim quantification

  Once an activity has been reviewed and a decision made that it is worthy of pursuing as a claim, the next step is to quantify in terms of (usually) of additional compensation or time extension to the contract condition complete other milestone date (PMI 2008). Instead of simply quantifying time and cost of claims, Mc George (2007) notes that an attempt must also be made to unravel the cause and effect (nexus) relationship of claims so that ultimately one can isolate and control the root cause.

- Claim prevention

  The best way to prevent claims is to have no claims to prevent. Thus the emphasis is on how to avoid or prevent claims from arising. The perfect, well scoped and risk allocated contract that is well executed will very likely not provide any claim (PMI, 2008). Haapio (2003) advised that at this stage it is probably useful to consider proactive contracting and include preventative measures in contracts.

- Claim resolution

  It is common knowledge that even with a concerted effort to prevent claims, they may still arise. Ndekugri and Russell (2006) restated that most disputes are as a result of claims being rejected or not being resolved on time. Mc George (2007) appreciates that it is in the interest of both parties to proactively work to prevent claims from escalating to disputes; however protracted timescales does not assist the process.

Zaneldine (2006) noted that the best way and shortest time to deal with claims effectively is to follow the six steps religiously namely:

- claim identification:
- claim notification:
- claim testing:
- claim documentation:
- claim presentation:
- claim resolution:

The above notwithstanding, Nobari and Dehkordi (2015) expressed a view suggesting that in order to assist in effective project management and address every element of project management including claims management, the four processes listed in the construction extension guide to PMBOK® can be reformed and be dealt with under the following heads:

- claim identification
- claim quantification
- claim planning
- claim execution

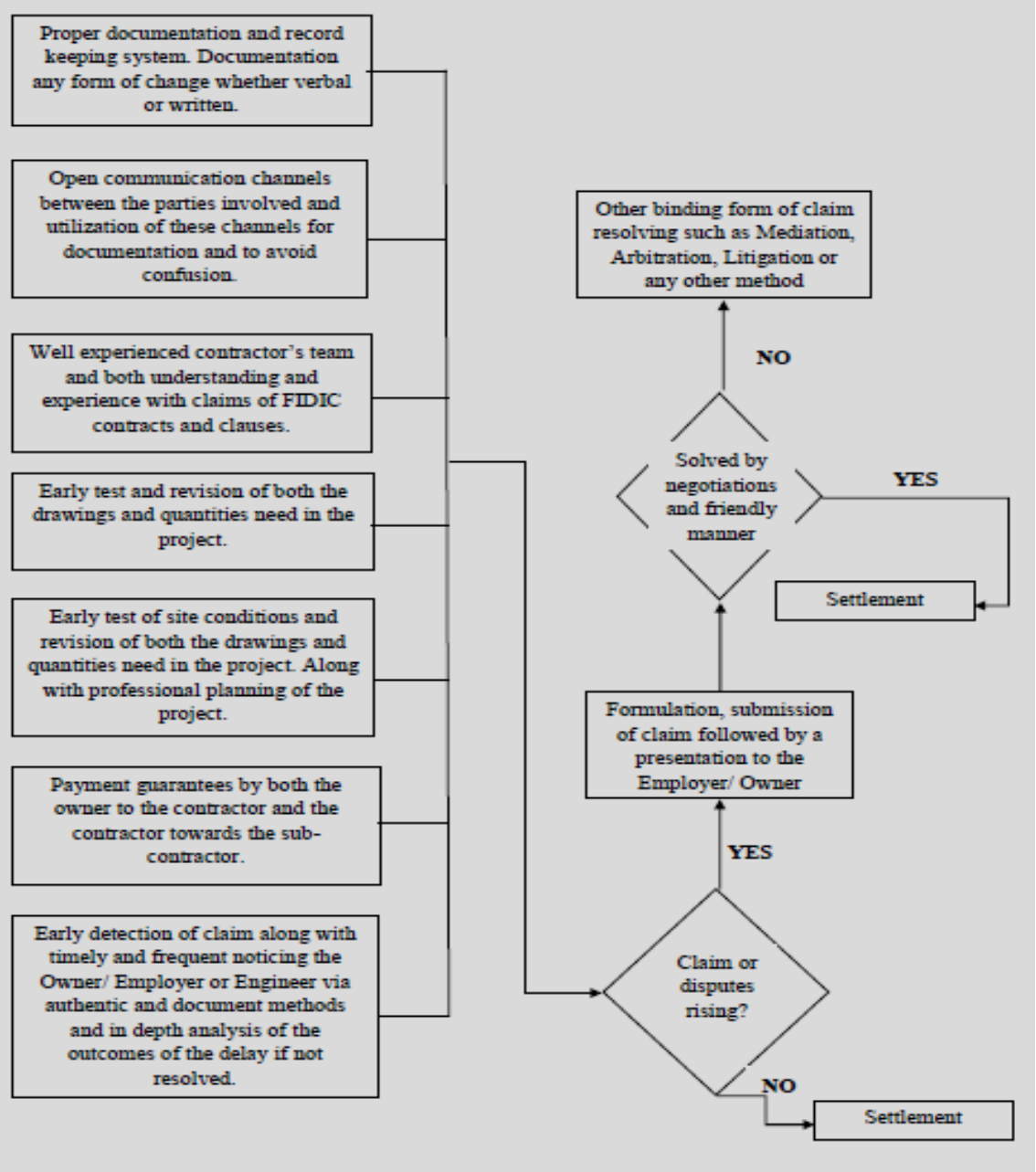
- claim resolution

Claims are a very involved and complex subject that has plagued the construction industry, the question is, should emphasis still be placed on traditional methods of resolving disputes (du Preez, 2014a). In the past the issue of claims management was one of the subjects in project management categorized within other project' management knowledge areas such as stakeholders management and was not accounted that much (Nobari and Dehkordi 2015). Perhaps the time has come to severe claims management knowledge area from all other knowledge areas and it should be treated with the attention it deserves to address how efficiently and effectively claims should be dealt with. This is important to the research as it is indicative of a distinction between claims management knowledge area and other PMBOK® knowledge management areas. This research focuses on claims management in the construction industry

It is against this prelude that it can be concluded that claims management has not fallen far from the tree of risk. Thus risk and claims management are homogenous. The success of claims management lies in the identification of a claim to a timely resolution of the same (du Preez, 2014a). The ensuing Figure 2.3 is an example of a model that if followed claims can be managed effectively and provides a proactive approach to the management of claims. All things considered, Kululunga (2004) confirmed the correct sequence in construction claims management.

According to ISO 9001 organizations needs to demonstrate the ability to consistently provide products which meets customers' requirements. On the other hand SANS 2150 described project management as typically the management of risks which if they occur, will have a negative impact on the overall project. As articulated in paragraph 2.5 above, claims are categorized as a risk that needs to be managed effectively before they turn into disputes

Figure 2.1 An Example of Process Chart to Proactively Resolve Claims



Source: Verster, 2005

CHAPTER 3 - RESEARCH METHODS AND DESIGNS

3.1 The Purpose

The purpose of this chapter is to present a detailed discussion on the research methodology and design selected in studying “The Role of a Project Manager in the Administration of Construction Claims in the Construction Industry. This chapter is therefore concerned primarily with the research philosophy and research approach.

3.2 Introduction

The research was descriptive and explanatory that is intended to investigate the administration of construction claims within construction project management and to model a proactive stance in managing construction claims. A mixed method approach was used to gather data in this study. Chapter 2 provided background study on existing literature on:

- The relationship between claims management and project management
- The role of a project manager in claims management
- Proactive project management
- The use of construction contracts in effectively managing claims
- The awareness and use of the construction extension guide to PMBOK®

A questionnaire based on literature review was designed to collect data and execute this research. A questionnaire was distributed to gauge the level of appreciation project managers, contract managers, construction manager and construction claims managers have on claims management and to identify how effectively proactive claims management can be applied in their daily management of construction claims and to determine whether project managers, construction managers, contract managers and construction claims consultants are aware of the additional claims management knowledge area and if this additional knowledge area can improve the overall management of construction claims. In support of the quantitative data, interviews were conducted with role players involved in construction claims

management within the Construction Industry, to solicit their opinion regarding the claims management as an additional project management knowledge area.

The research applied both quantitative and qualitative approaches in the form of questionnaire and interviews. First a set of questions was distributed to practicing project managers who are currently active in management of Mega Projects constructed around Gauteng, Mpumalanga, Limpopo both public companies and private construction companies. The aim here was to establish if project managers are aware of the Construction Extension Guide to PMBOK® and in particular explore the claims management knowledge area and if they are using the Construction Extension Guide to PMBOK® in the execution of their duties within their construction projects. Secondly, qualitative data was collected in the form of interviews in order to elicit clarity of the opinions expressed by project managers regarding the process and the relationship between construction project management and construction claims management (Saunders *et al*. 2009).

3.3 Methods Selection

Kothari, (2004) stated two basic approaches to research, one being quantitative approach and the other, qualitative approach. Creswell, (2011) concurred that the two basic research types entails quantitative and qualitative research. Creswell (2011) simply puts it that research is a type of inquiry that can be found within qualitative, quantitative and mixed method as a means which the research questions will be answered. According to Saunders *et al*. (2009) research design is more concerned with the overall plan how the researcher is to conduct his research. Saunders *et al*.(2009) went on to state that research design amounts to a general plan of how the researcher will go about answering the research question, writing clear objectives derived from the research question, the sources where data will be collected and the inevitability of constraints along the path including the discussion of ethical issues.

Ketchen and Bergh, (2007) emphasized the importance of integrating research methods and that it is now a trend to integrate qualitative and quantitative research

methods. Saunders *et al*. (2009) confirmed that multiple methods are becoming useful to the extent that they provide a better opportunity for the researcher to answer the research question and furthermore to the extent that they allow the researcher to better evaluate the extent to which the research findings can be trusted and inference made from them.

3.3.1 Qualitative Research

Thomas (2003) defined qualitative research as involving the studied use and collection of variety of empirical materials such as case study, observations and interviews, historical and visual texts. Qualitative method is used predominately as a data collection technique for example, an interview or data analysis procedure such as categorizing data that generates or use non-numerical data (Saunders *et al*., 2009). According to Kothari (2004) qualitative research is concerned with qualitative phenomenon relating to or involving quality or a kind. Qualitative approach is inherently subjective as it is concerned with subjective assessment of attitudes, opinions and behaviour (Kothari, 2004).

Ketchen and Bergh (2007) have observed that the use of qualitative research is mostly in exploratory studies. Creswell (2003) confirms that in qualitative research, the enquiry is more exploratory with a strong emphasis on description and a thematic focus on understanding a central phenomenon exploring just a few cases. Qualitative research is more adequate whether it is focused on process rather than on the outcome or result obtained. As a result, qualitative research was considered appropriate for this research.

3.3.2 Quantitative Research

According to Collis and Hussey (2009) quantitative research emphasis is on collecting and analysing numerical data. Quantitative research concentrates on measuring the scale, range, frequency of the phenomenon. Saunders *et al*. (2009) confirmed that quantitative research is used predominately where any data collection technique such as questionnaire or data analysis procedure such as graphs or statistics generates numerical data. According to Singh and Sakamoto (2006) is of

the view that quantitative method is mainly used to collect or gather primary data. Bakhary *et al*. (2013) confirmed that quantitative method of questionnaires and surveys can be used to gather primary data to discover problems associated with the research question.

3.3.3 Combining Data Collection Techniques

Saunders *et al*. (2009) advised that if a researcher uses questions to explain a quantitative study the respondents may equally be expected to answer some open questions in their own words as opposed to ticking the box. Combining data collection methods is supported by that it may be necessary to follow up questionnaires with interviews to explain ambiguity from the questionnaires (Drake and Heath, 2011).

A major advantage of mixed techniques is that it enables the researcher to simultaneously answer confirmatory and exploratory questions, and therefore verify and generate theory in the same study. (Ketchen and Bergh, 2007). Therefore, this research adopted a combined data collection method. The research used an online survey questionnaire and face-to-face questionnaire to collate data (Creswell and Clark, 2011).

3.4 The Nature of the Research Design

Saunders *et al*. (2009) established the form that the research study may take, may result in either descriptive, explanatory or exploratory answers. A detailed discussion is presented hereunder in order to assist in coming to a method selected for this research.

3.4.1 Exploratory Studies

According to Blessing and Chakrabarti (2009) an exploratory study answers the “what”, “who”, “where” questions and its intention is to develop pertinent hypothesis and propositions for further enquiry in order to help find a research focus. So, exploratory studies are more concerned with qualitative research. According to Creswell (2003) in quantitative research, the researcher asks questions that try to

confirm the hypothesis with a focus on assessing the relationship or association among variables with a large sample.

Exploratory research is often conducted in new areas of inquiry, where the goals of the research are: (1) to scope out the magnitude or extent of a particular phenomenon, problem, or behaviour, (2) to generate some initial ideas about that phenomenon, or (3) to test the feasibility of undertaking a more extensive study regarding that phenomenon (Bhattacherjee, 2012). According to Saunders *et al*. (2009) in conducting exploratory research one must be willing to change the direction of the research as a result of new data that appear with time spent on the research. This research was for a short duration; therefore the willingness to change direction was not an option.

3.4.2 Explanatory Studies

Jonker and Pennik (2010) describes explanatory research as a study that goes beyond description and attempts to explain the reason for the phenomenon that the descriptive study may have only observed. Ketchen and Bergh (2007) argued that most quantitative research is confirmatory using quantitative data and be explanatory. Simply put, explanatory research is all about answering the “how” and “why” questions, i.e. questions that are concerned with operational links needing to be traced overtime rather than mere frequencies or incidences (Blessing and Chakrabarti, 2009).

Explanatory research attempts to clarify why and how there is a relationship between two or more aspects of a situation or phenomenon. Saunders *et al*. (2009) sums it and stated that studies that establish causal relationships between variables are regarded as explanatory. According to Bhattacherjee (2012) explanatory research attempts to connect the dots in research, by identifying causal factors and outcomes of the target phenomenon and search for potential explanations of observed natural or social phenomena.

The findings from explanatory research can be summarised using tabulation as the process of summarizing raw data and displaying the same in compact form for further analysis. Tabulation conserves space and reduces explanatory and descriptive statement to a minimum and provides the basis for various statistical computations. This research followed the explanatory research in establishing the relationship between two variables.

3.4.3 Descriptive Studies

The object of a descriptive research is to portray an accurate profile of persons, events or situations relevant for the study (Saunders *et al*. 2009). Blessing and Chakrabarti (2009) points out that a descriptive study also answers "what" questions but of a type "how many" and "how much" because it is aimed at describing the incidence or precedence of a phenomenon or to be predictive about certain outcomes. According to Bhattacherjee (2012) most academic research belongs to the explanation category, though some amount of exploratory and/or descriptive research may also be needed during initial phases of academic research.

This research followed both explanatory and descriptive approaches in order to gain a better understanding of the status quo in so far as construction claims management is concerned and to establish relationships between different variables with claims management and project management to be able to highlight deficiencies that exist in practice.

3.5 Research Strategies

Saunders *et al*. (2009) outlines main research strategies that can be employed in any research study and state that they differ between qualitative and quantitative research. According to Saunders *et al*. (2009) each of the strategies can be used for exploratory, explanatory and descriptive research. According to Ketchen and Bergh (2007) research strategies are employed where the researcher is filling gaps and cannot solely rely upon qualitative and quantitative research methods to buttress his findings. Different strategies are discussed below.

3.5.1 Case Study

Case study is defined as a strategy for doing research which involves an empirical investigation of a particular phenomenon within its real life context using multiple sources of evidence (Saunders *et al*., 2009) Kothari (2004) points that case study methods usually is concerned with how deep the cause of things or events that interest us using very small samples and very deep probing data gathering services. Case study method may be appropriate because it provides much richer information about peculiarities.

According to Newman and Benz, (1998) case study methods is a helpful procedure when one is interested in things such as diagnostic learning problem and undertaking leading evaluation. Saunders *et al*. (2009) mentioned that case study has the ability to generate answers to the question “why” as well as the “what” question and the “how” question. Bhattacherjee (2012) points that, when using case study research, data collection may take the form of a combination of interviews, personal observations, internal and external documents.

3.5.2 Survey Study

According to Saunders, at al. (2009) survey strategy is usually associated with a deduction approach and further state that exploratory and descriptive research is synonymous with survey strategy. Bhattacherjee (2012) notes that field surveys have their strength in external validity but because they are temporal in nature, their internal validity i.e. cause and effect are difficult to infer as it contains bias from respondents. Kothari (2004) puts is simply that surveys are pure example of field research.

Saunders *et al*. (2009) is of the view that using the survey strategy gives the researcher more control over the research process. According to Kothari (2004) surveys may either take the form of census or sample surveys and argues that whatever form they make take, the data collection method can either be observation, interviews or questionnaires. Blessing and Chakrabarti (2009) confirms that to

conduct a survey, questions are used to address a large number of subjects. This research opted to go with the survey method using an online questionnaire.

3.5.3 Archival Research

Archival research is also known as historical research (Saunders *et al*., 2009). Kothari (2004) defined historical research as the study that uses historical sources like documents, residues to study events or ideas of the past. According to Saunders *et al*. (2009) archival research strategy focuses on the post research question which changes overtime to be answered as exploratory, descriptive or explanatory. Historical or archival research is primarily a document study combines with observations and interviews (Newman and Benz, 1998).

3.6 Data Collection Techniques

This section explains ways in which the research was carried out. The section will also elaborate why certain approaches have been preferred. Creswell and Clark (2011) stated that the purpose of data collection is to solicit answers to the research question. The techniques chosen for this research are considered to be the most effective ways of meeting this research study objectives. Some of these techniques were mentioned under research strategies discussed above. In essence this section provides an overall view of the methods to collect data and provide the rationale behind the choice.

3.6.1 Questionnaire

The primary technique considered for this study is a questionnaire. Questionnaire is considered a positivist approach for data collection (Neuman, 2005). Questionnaire is a research technique of data collection in which persons are asked to respond to a set of questions in a predetermined order (Saunders *et al*., 2009). Bhattacherjee (2012) defined a questionnaire as a research instrument consisting of a set of questions intended to solicit response from respondents. Jonker and Pennik (2010) defined a questionnaire as a document containing any other type of items designed to solicit information appropriate for analysis. Questions used are prepared very

systematically and carefully to enable the effective collection of data (Kothari, 2004). The questionnaire can be used in structured interview or semi- structured interview (Bhattacherjee, 2012).

Questionnaire was sent out using an online survey. According to Saunders *et al*. (2009) questionnaire is usually preferred for descriptive and exploratory research. On the other hand Jonker and Pennik (2010) suggested that questionnaire is primarily from survey research, experiments and other modes of observation. In big enquiries notably this data collection method is common and has been preferred to this end (Kothari, 2004).

3.6.2 Validity and Quality of Questionnaire

How the questionnaire is designed will likely have an impact on the response rate, the reliability and the validity of the data collected (Saunders *et al*., 2009). Kothari (2009) points that to solicit quality responses the researcher should set up the questionnaire sequentially to reduce the chances of respondent misunderstanding the question thereby rendering the questionnaire ineffective. According to Jonker and Pennik (2010) the quality of the questionnaire is its usability and further states that a questionnaire will only be relevant and valid if it achieves the intended purpose at a reasonable cost. So, validity is concerned with the reality of what the researcher is measuring (Saunders *et al*., 2009).

3.6.3 The Design of the Questionnaire

According to Kothari (2004) multiple choice or closed question have the advantage of easy handling, simple to answer, quick and relatively inexpensive to analyse. The questionnaire was piloted in order to conduct a trial run before circulating it to the selected sample, testing the wording of the questions, establishing the length and avoiding ambiguity (Naoum, 2007).

3.6.4 Interviews

The purpose of this method is similar to the questionnaire albeit interviews are ordinarily done on a face to face basis (Blessing and Chakrabarti, 2009). Kothari

(2004) explains that this method of collecting data is largely dependent upon the interviewers' structured way of conducting the interview. Interview is defined as a research strategy to find out from people things that ordinarily one cannot directly see or observe (Newman and Benz, 1998). Blessing and Chakrabarti (2009) asserts that interviews are effective because they address many questions and hypothesis.

3.6.4.1 Structured Interviews

According to Ketchen and Bergh (2007) structured interviews are conducted with the aim to add richness for the interpretation of data collected. As far as Saunders *et al*. (2009) is concerned structured interviews are based on a standard questionnaire which the researcher will use for different typologies. Kothari (2004) concurs that the interviewer in a structured interview collects data through face to face. Structured interviews are formal conversational interviews considered real interviews and they are easier to analyse (Blessing and Chakrabarti, 2009). One of the advantages of using structured interviews is the use of prompt card listing. This kind of questions prompts the respondent to consider all possible responses to the question (Saunders *et al*., 2009).

3.6.4.2 Unstructured Interviews

According to Blessing and Chakrabarti (2009) unstructured interviews are appropriate and primarily used for exploratory interviews. Individual respondents under unstructured interviews contribute different perspective based on their position regarding the phenomenon under research (Newman and Benz, 1998). Ketchen and Bergh (2007) refer to this method as in-depth method of collecting data and is best suited for exploratory research study. Unstructured interviews provide flexibility for the respondent to answer questions (Ketchen and Bergh, 2007). Kothari (2004) confirms that unstructured interviews are a flexible approach to questioning and do not follow a system of predetermined questions and standardized technique of recording information.

3.6.4.3 Semi Structured Interviews

Semi structured interviews, also known as focused interviews are more formal than unstructured in that there are a number of specific topics around which to build the interview (Naoum, 2007). This form uses open and close ended questions but questions not asked in a specific order. According to Saunders *et al*. (2009) semi-structured interviews are more suited for exploratory and explanatory research studies. Semi-structured interviews use standardized questions and delves deeply into the phenomenon (Harrell and Bradley, 2009). According to Newman and Benz (1998) the researcher follows a set of predetermined questions but can also use open ended questions to probe and explore the reasons for the answers more deeply.

This research adopted a combination of structured and semi-structured interview method purely because respondents are able to fill gaps with additional information omitted from the interview and share their experience (Saunders *et al*., 2009)

3.6.5 Limitations of the Interview Approach

Mainly limitations to interviews were high cost of travelling, long, small sample and the difficulty of analyzing the information (Naoum, 2007). Kothari (2004) confirmed that it is a very expensive method especially if the sample is geographically dispersed. According to Kothari (2004) output using structured interview is largely dependent on the ability of the interviewer articulation. Ketchen and Bergh (2007) advised that in order to improve empirical research, the researcher must overcome some limitations attributable to subjectivity and bias. In this research, to the extent possible, all the limitations listed were navigated with circumspect.

3.6.6 Validity and Quality Issue of Data Collected

To guarantee validity and quality of the responses, the questionnaire was properly and systematically structured and sought to record the responses accurately and completely (Kothari, 2004). Newman and Benz (1998) stated that when it comes to

semi-structured interviews validity may be diminished if the researcher demonstrates bias. Personal bias is was entirely eliminated (Newman and Benz, 1998).

3.7 Sample Size and Selection

This research selected sample of participants that are considered appropriate rather than a random sample because of the nature of the study (Naoum, 2007). Thus a non-random purposive sampling was preferred in this study (Naoum, 2007). Wilson, (2010) provides stages to follow when conducting sampling. They are namely:

- Stage 1: Clearly define your target population. To achieve this specific project managers were chosen from specific construction sites within Limpopo and Mpumalanga Mega Project sites (specifically, Majuba, Kusile and Medupi)

- Stage 2: Select sampling frame. This involved listing the actual projects, providing project details.

- Stage 3: Choosing sampling technique

The research adopted a non-probabilistic sampling method because specific projects were selected and in particular snowball sampling. According to Saunders *et al* (2009) snowballing is commonly used when it is difficult to identify members of the desired population. Interviews started with Project Managers at a senior level and they referred other project managers or contract managers at the operational level.

The target population had interest in the research topic and had the willingness to participate whole heartedly to the survey.. Several theoretical and practical reasons were considered in sampling project managers and choosing the specified geographical locations, including:

1. Budgetary limitations
2. Logistics
3. Time restrictions,

The sampling process came to an end when the total amount of respondents appeared sufficient to draw reliable conclusions from their participation with confidence and to some degree time saturation had been reached.

3.8 Analysing Data Collected

The whole aim of conducting this research was to collect and analyse and interpret data collected (Naoum, 2007). According to Sunders *et al*. (2009) until quantitative data is processed and analysed, conveys very little meaning to most people. Saunders *et al*. (2009) advises on two methods of analysing data, the deductive analytical approach and the inductive analytical approach. The nature of this research since data will be collected both quantitatively and qualitatively requires an integrated data analysis method. According to Yin (2003) data analysis can be defined as categorizing, tabulating testing or combining both qualitative and quantitative evidence to address the proposition of the study in question.

3.8.1 Analysis

Quantitative data collected for this research was analysed using descriptive statistic method (Creswell, 2011). The descriptive statistics method is the simplest method of analysis which provides a general overview of the results (Naoum, 2007). It can range from simple counts such as the frequency of occurrences (Saunders *et al*. 2009).

The descriptive method analyses the responses in percentages and contains actual numbers. The frequency is presented in the form of tabulation, a bar chart, a pie chart or graphs. This is referred to as categorical data referring to data whose values cannot be measured numerically but can be either classified into sets according to the characteristics that identify or describe the variable (Naoum, 2007). Quantitative data is analysed through statistical analysis. The Likert scale is used to transform quantitative opinions to qualitative. Then the transformed quantitative findings are presented using numbers in a scientific style

3.9 Conclusion

The research strategy was both quantitative and qualitative. Quantitative research used a questionnaire to collect data. The questionnaire was distributed to group of professionals within the claims management eliciting responses relating to the management of claims. A pilot questionnaire was first sent out to test the quality of the questionnaire before circulating it to the research respondents.

Interviews were held with 9 individuals, 3 per province, involved in claims management processes and with experience in claims in the construction industry. The decision to use multiple research collection tools such questionnaire and interviews was mainly to increase the validity and reliability of the research. The advantage is that where questionnaires are open to misinterpretation, interviews offers an opportunity to the researcher to clarify questions and removes any ambiguity.

The data received in this research was interpreted using objective and deductive reasoning. The findings from the questionnaires, interviews are presented and discussed in Chapter 4.

Chapter 4: RESULTS AND DATA ANALYSIS

4.1 Introduction

The questionnaire consisted of two sections. Section A covered general information and section B covered knowledge related to claims management and project management. Section A consisted of eight questions and section B of eighteen questions. Section A was to determine the respondents' profiles including their roles, where they work and years of working experience in the construction industry, province where project is. The questionnaire was administered in an online survey. The questionnaires were accompanied by an official cover letter. The letter explained the purpose of the study. It further indicated that the research is for the partial fulfilment of an M.Sc. Degree. Furthermore the letter guaranteed the respondents that the collected data would be treated confidentially.

Firstly part 4.2 explains how the the questionnaire sought to achieve. Data collected was analysed using Likert scale even though the questionnaire was not structured in that manner. The questionnaire was structured simple and clear language was used. Secondly, part 4.2.1 looked at the relationship between claims management and project management.

Part 4.2.2 investigated the role of Project Managers in claims management as main role players within project management and how can they help in ensuring that claims are given the attention they deserve. Part 4.2.3 considered that claims should be managed throughout project phases. In particular the research attempted to understand the implication of ineffective management of claims and the knock-on effect it has on project stages.

Part 4.2.4 deliberated on construction contracts used within the construction industry. Literature review has repeatedly made reference to the inevitability of claims within the construction industry. The focus here primarily was how claims are addressed within different forms of construction contracts. In addition, the aim was to investigate if construction contracts intended for claims and to the extent that it is so,

establish whether project managers understand the need to have a basic understanding of construction contracts.

Part 4.2.5 propped the likelihood of parties submitting claims to test the inevitability of claims within the construction industry and whether construction contracts intended claims to arise. Part 4.2.6 sought to establish whether Construction Contracts are inherently proactive in nature.

Part 4.2.7 investigated the relationship between PMBOK® knowledge areas and claims management as an additional knowledge area and further probed if those playing in the realm of claims management are aware of the Construction Extension Guide to PMBOK®. The respondents are probed if in their daily duties they consider principles enshrined in the PMBOK® and in particular with the Construction Extension Guide to PMBOK® which particularly emphasizes the prevention of claims.

The penultimate part of this research, part 4.2.8 knitted it altogether; although peripheral to the research's objectives, it touched on some risks that if not given attention can affect the effective management of claims from a contractual point of view.

Last but not least, part 4.2.9 illustrated interviews that were conducted with claims professionals and project managers working largely on Mega projects in South Africa. The selection was solely based on the experience gained in managing claims in construction projects.

This chapter 4 also presents scientific findings and discussions based data collected. The respondents' responses are analyzed in relation the literature review chapter of this research. Data collected is classified into five main categories identified from the data collected namely, (i) the relationship between project management and claims management in construction projects; (ii) the effectiveness of how claims are currently being managed and through the project stages; (iii) Project Manager's

knowledge of claims under construction contracts; (iv) proactive construction project manager in construction claims management; and (v) awareness of the construction extension guide to PMBOK® and in particular claims management knowledge area as an additional knowledge area.

To validate the statistical findings a standardised instrument, the Likert scale, was used albeit the questionnaire was not structured using the Likert format but rather in a checklist format. In all questions respondents were given a four to five choice option. The frequency distributions are illustrated in a table, bar chart, graph or pie chart, all of which are demonstrated in this chapter.

4.2 Analysis of Survey Questions

The respondents were provided with 4 to 5 possible answers in the order of importance. The Likert scale analysis was used to obtain value of zero to four; zero indicating not important, 1= fairly important, 2 = important, 3 = very important and 4 = critically important. Where a score of 5 appears, 5 = extremely important. All tables in this study are based on this format.

The table has four rows. The first row lists the response categories. The second row contains the number of respondents that answered the question in the questionnaire. The third row is the percentage of the total percentage of respondents that answered the question in that category. The last row contains the average rating showing the weighted average allocated to the question.

4.2.1 The relationship between project management and claims management

This section sought to establish whether there is a relationship between claims management and project management. Approximately 95% of the respondents agreed that claims management and project management are related. This is consistent with Vester (2006) that claims management process as part of the project management knowledge areas.

Figure 4.1: Claims management and project management

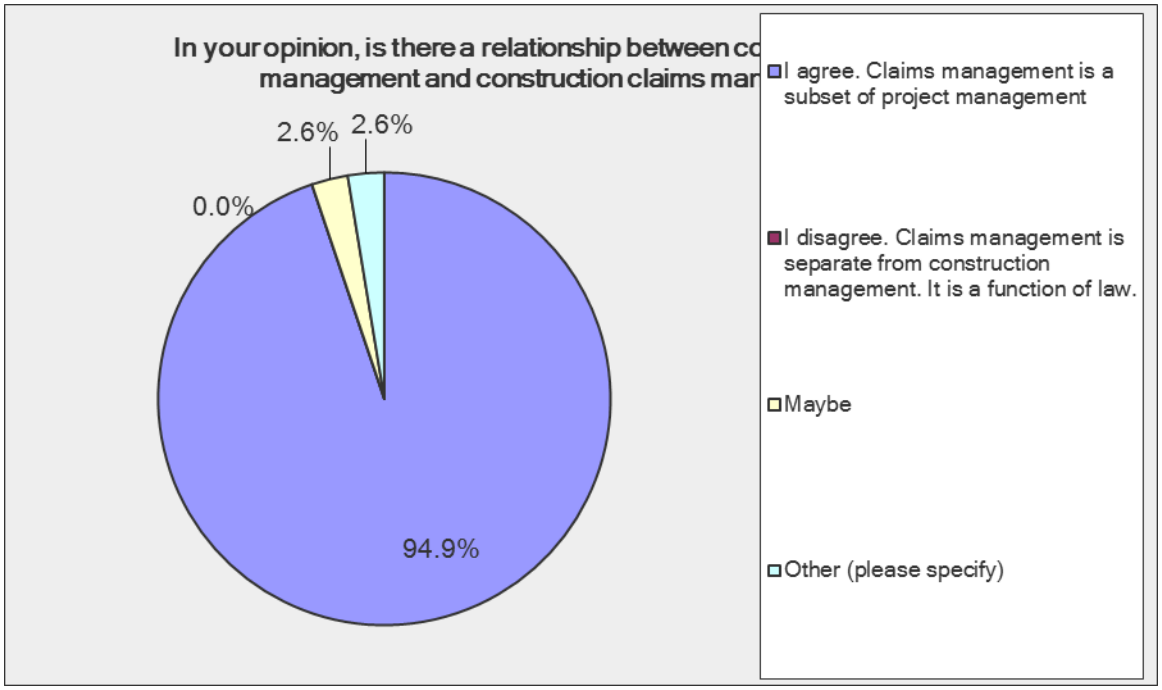


Table 4.1 is the weighted score average which indicate a score of 3.94 and reveals that as much as respondents are of the view that there is a relationship between construction project management and claims management, a silent minority are of the view that claims management is very important. There is a school of thought that suggest that claims management is separate from project management, particularly because claims management are left to claims consultant to deal with and they are often not, part the project team. The weighted average score was calculated as follows:

(1x1 + 2x1 + 3x0 + 4x37)/39 = 3.94 see Table 4.1

Table 4.1: Claims Management and Project Management

Responses	1= not important 4= Critically important					
		1	2	3	4	Total
Number of respondents		1	1	0	37	39
Percentage of total		2.6	2.6	0	94.9	100
Average rating	3.94					

According to Nwachukwu and Emoh (2011) effective project management is important in the construction industry. As it is uncovered during the raw presentation of the findings most of the respondents are of the view that there is a relationship between construction project management and claims management. Nwachukwu and Emoh (2011) states that before we can even go further in projects and claims, what is common between the two is management and this concept needs to be defined first. In literature review Nwachukwu and Emoh (2011) defined management as planning, directing, controlling and coordinating objectives with the aim of achieving a certain set of goals.

The findings illustrated in figure 4.1 depict concurrence with the definition of project management as defined in literature review. The aim of this research was to investigate if there is a relationship between project management and claims management processes in construction projects. The remarkable high proportion of respondents agrees that there is a fit between project management and claims management. This response is before a scientific analysis of the results is performed.

4.2.2 The Role of Project Managers in Claims Management

According to respondents project managers should ensure that claims processes are put in place and that claim are properly managed and that they understand what causes them. According to Fielden and Lindebaum (2010) practitioners need to develop the capacity to foresee potential problems likely to confront the project

Figure 4.2: The Role of Project Managers in Claims Management

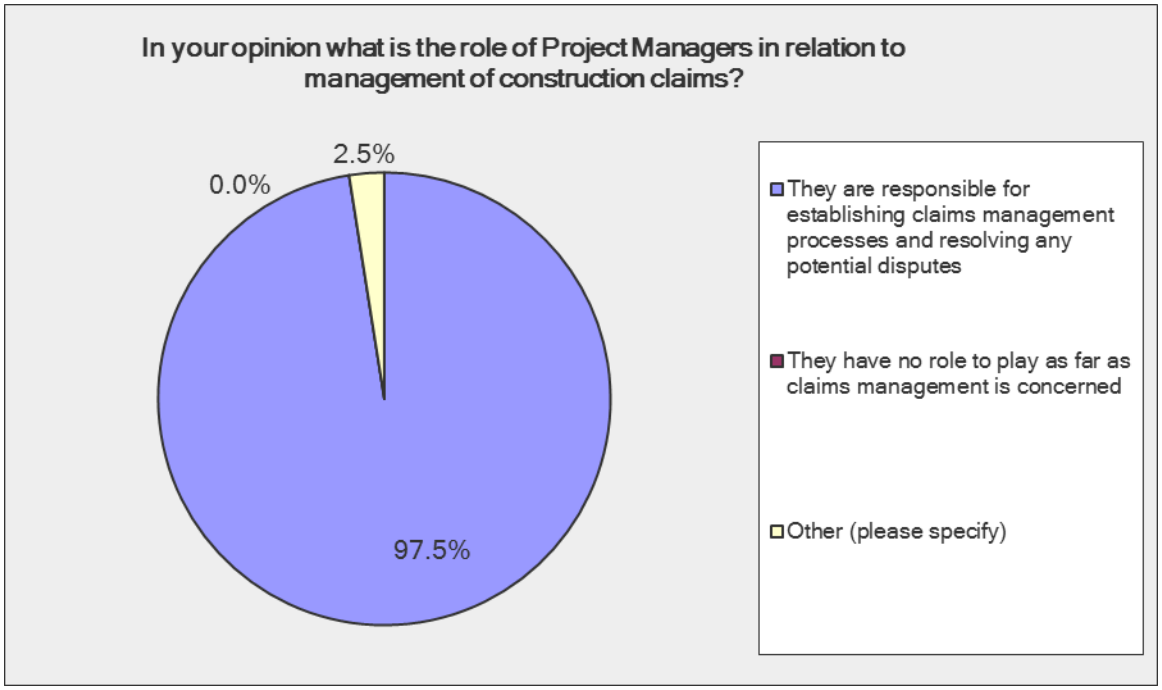


Table 4.2 revealed that almost all respondents indicated that project managers are responsible for establishing effective claims management processes. The weighted average for this variable is 3.1 which indicate that project managers have a role in project management. The respondents were provided with 3 answers in order to solicit the respondent's opinion on whether project managers have the role to play in claims management or not. The weighted average score as depicted in Table 4.2 and was calculated as follows:

(1x1 + 2x3 + 3x39)/40 = 3.1 see Table 4.2

Table 4.2: The Role of Project Managers in Claims Management.

Responses	1= not important 2= Important 3= very important				
		1	2	3		Total
Number of respondents		1	0	39		40
Percentage of total		2.5	2.6	97.5		100
Average rating	3.1					

4.2.3 Management of Claims throughout Project Phases

To provide a realistic view about the importance of the opinions by respondents, the respondents were provided with 4 possible answers to better understand the importance of each type of stance project managers can adopt to effectively manage claims. The weighted average score was calculated as follows:

Therefore responses for the question “can claims be managed better” in Table 4.3 is as follows:

(0x2 + 1x1 + 2x0 +3x36 + 4x6)/45 = 2.95 See Table 4.3

Table 4.3 below indicates the respondents’ opinions regarding the importance of better management of claims. The response indicates that the respondents regard better management of claims in order to avoid claims, important. But the results are leaning towards a view that it is critical that claims have to be pre-empted.

Table 4.3: Proactive Management of Claims

Responses	0= not important 4= critically important					
	0	1	2	3	4	Total
Number of respondents	2	1	0	36	6	45
Percentage of total	4.9	2.4	0	87.8	14.6	100
Average rating	2.95					

The respondents' response is consistent with Fielden and Lindebaum. (2010) that the construction industry needs to develop appropriate techniques and methodologies to predict and resolve claims. This is illustrated by 14% of the respondents expressing a view that claims can be pre-empted. Table 4.3 displays results easy to interpret, 87% of the respondents agree with Khekale *et al*. (2013) who stated that due to a substantial increase in number of construction claims, the implementation of an effective construction claims and dispute management is advised.

4.2.4 The Use of Standard Forms of Contract

According to Shakeri *et al*. (2014) the most important principle in the management of claims is the full understanding of the contract. The questionnaire sought to elicit the respondents exposure to the different forms of standard construction contracts used within the construction industry, whether these contracts have intensions for claims and to what extent has insulation been provided within construction contracts that can assist Project Managers to manage claims proactively, what constitute a claim under construction contracts and what is the likelihood of claims arising from their experience.

4.2.4.1 Standard Forms of Construction Contracts

Under this part, the respondents were provided with different options and an opportunity to choose more than one answer to indicate their familiarity with construction contract in their standard format. Standard forms of contracts provides for pre-emption of claims

Figure 4.3: Different Types of Construction Contracts

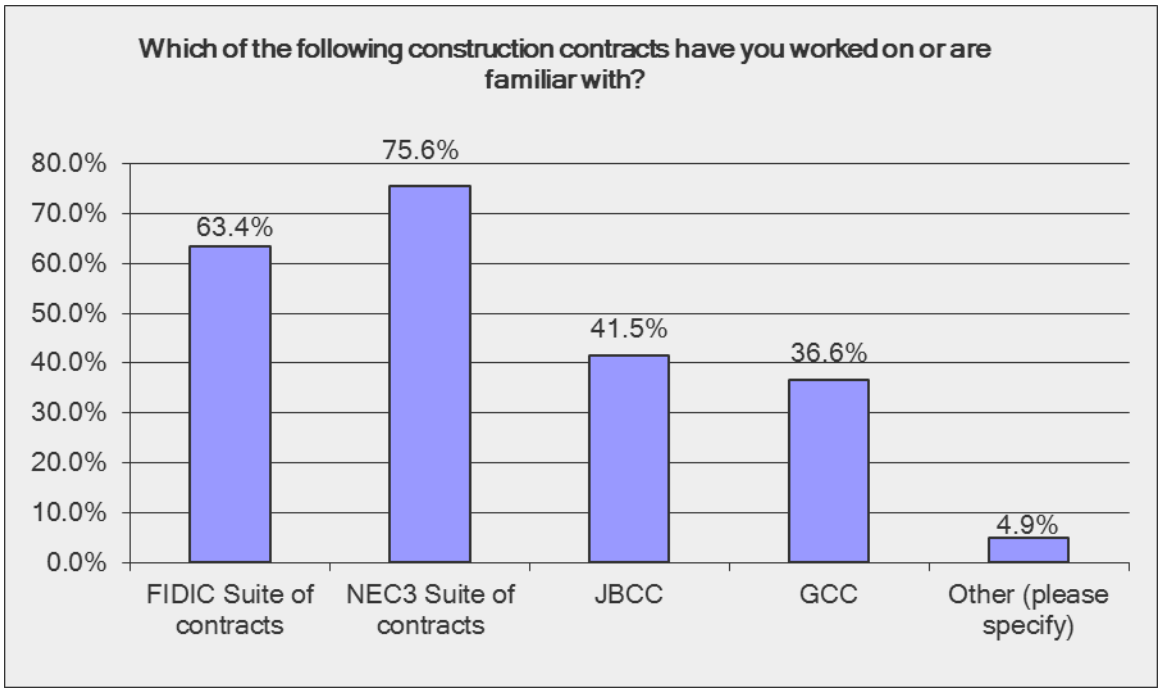


Table 4.4 revealed the most familiar construction contract. Two respondents did not specify which other contract they are familiar with and that has been allocated a score of 0, but 75% rated NEC 3 as the most popularly used contract followed by FIDIC Suits of Contracts at 63.4%. JBCC and GCC came at 41.4% and 36% respectively. The weighted average score is at 2.70 which indicates that despite most respondents being familiar with NEC 3, FIDIC Suits of contracts, averagely most are familiar with construction contracts. The weighted average score was calculated as follows:

(0x2 + 1x15 + 2x17 + 3x31 + 4x26)/91 = 2.70 see Table 4.4

Table 4.4: Findings on Familiarity with Construction Contracts

Responses	0= not used 4= mostly used					
	0	1	2	3	4	Total
Number of respondents	2	15	17	31	26	91
Percentage of total	4.9	36.6	41.4	75.6	63.4	100
Average rating	2.70					

As depicted in Table 4.4, all respondents agrees that the starting point to tackling the issue of effectively managing claims is for both parties to have at least a basic understanding of standard forms of construction contracts. According to Pickavance (2010) the relationship between a contractor and the employer is set up within a construction contract and list clauses both general and specific. However in the ordinary cause of construction when an argument ensues that result in a claim, these clauses are designed to minimize conflict. Therefore it is crucial to understand the contribution that construction contracts have on the whole claims process in construction projects.

The research reveals a fair level of exposure across all construction contracts and in particular for South Africa preferred by CIDB and the National Treasury. Strangely GCC and JBCC which are primarily local contracts ranked lower than NEC 3 and FIDIC which are largely international contracts. The result shows that respondents are to a large degree fairly educated around construction contracts whether international or local forms of contracts. The respondents are highly involved within the construction commercial space, either as project managers or as claims consultants. So it comes as no surprise that the respondents indicate a great measure of the need to have a basic understanding of the contract to be able to manage claims effectively.

4.2.5 The likelihood of claims under construction contracts

Figure 4.4 illustrates that 51% of the respondents are of the view that the occurrences of claims are depended on how a project is managed. An effective claims management process is essential to address this great concern within the construction industry (Khekale *et al*. 2013)

Figure 4.4: The Probability of Claims under Construction Contract

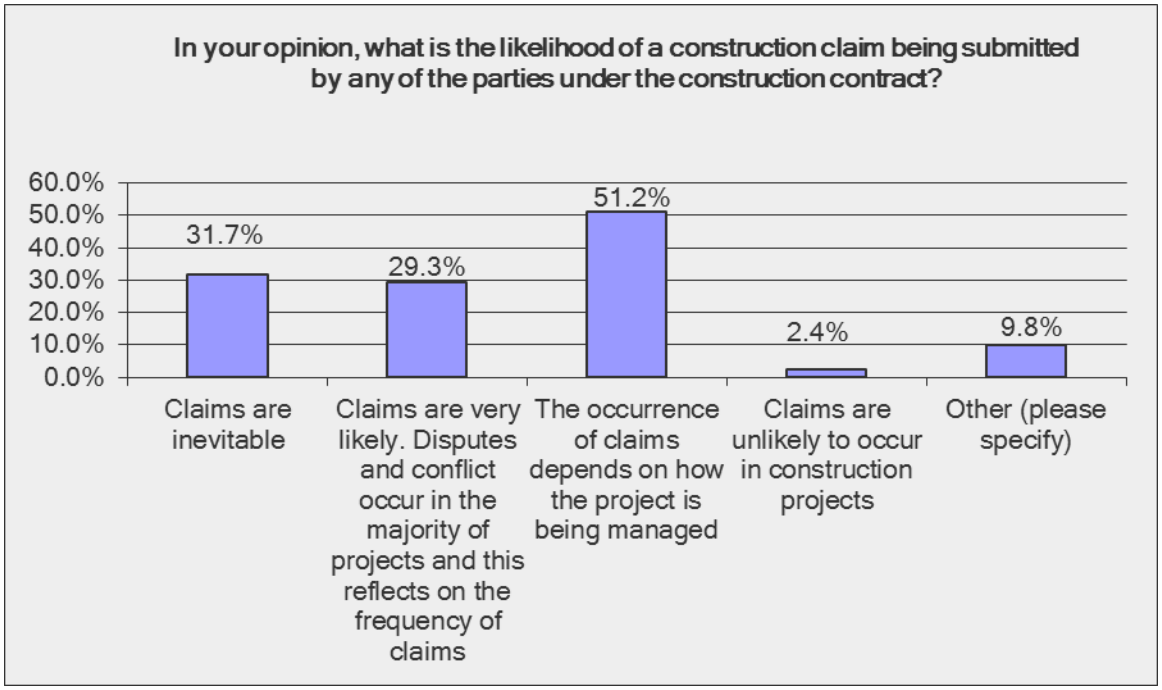


Table 4.5 below is a weighted score of 3.56, which indicated it is very important to manage claim to mitigate the occurrence of thereof. This is consistent with Likert scale Table 4.3 that claims can be managed better to avoid disputes. The weighted average score was calculated as follows

(1x4 + 2x1 + 3x21 + 4x12 + 5x13)/51 = 3.56 see Table 4.5

Table 4.5: The Frequency of Claims in Construction Projects

Responses	1= not important 5= critically important					
	1	2	3	4	5	Total
Number of respondents	4	1	21	12	13	51
Percentage of total	9.8	2.4	51.2	29.3	31.7	100
Average rating	3.56					

The respondents expressed a view that although claims are likely to occur, the manner in which a project is managed has a direct relation to the occurrence of claims. The response is consistent with Shakeri *et al*. (2014) in that claims may occur from any stage of the construction process. Almost 32% of the respondents share the same sentiments that claims are inevitable, so clearly the revelation here is that there is no guarantee that claims can be avoided, however understanding the project and contracts terms and conditions can assist the parties to effectively manage claims. As seen in literature review, all standard forms of contract provide for dispute resolution. Clearly then, construction forms of contracts have been drafted with claims in mind and provided mitigation if such claims occur.

4.2.6 Proactive stance within Construction Contracts

The purpose of this part was to explore Project Manager's knowledge of claims under construction contracts in order to model a proactive construction project manager in construction claims management

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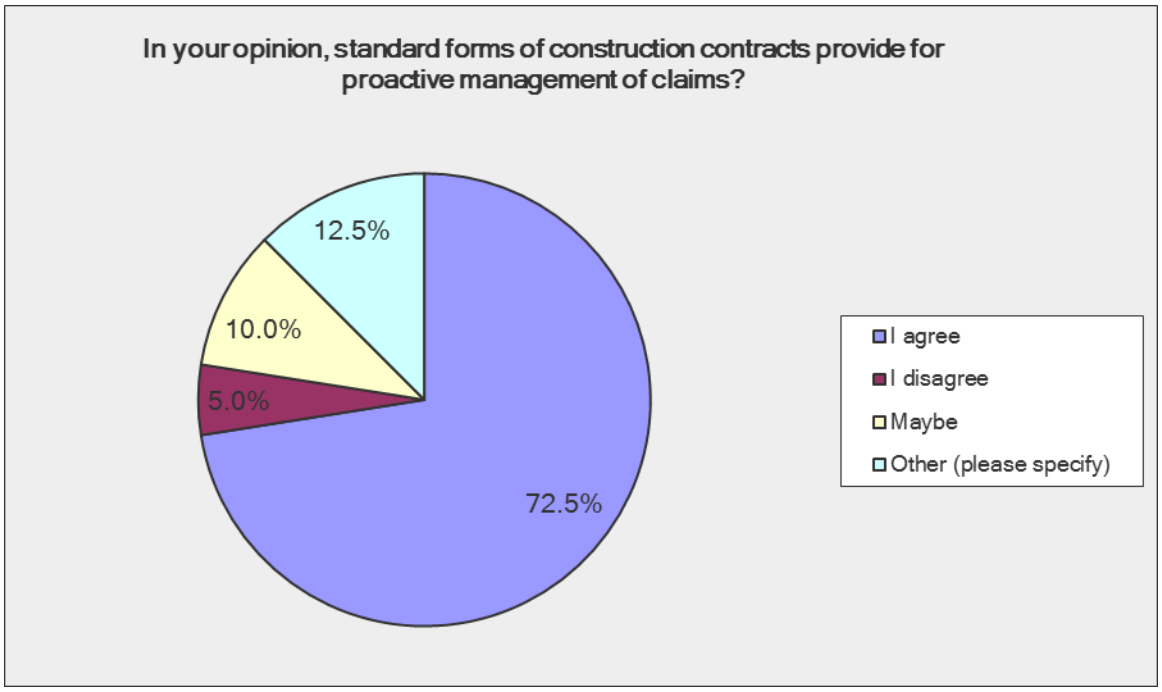
Figure 4.5: Management of Claims Using Construction Contracts



Whether construction contracts provide for proactive claims management was tested. Table 4.6 presents the results to this question. The weighted average is 2.37 which is an indication that is important to note that that construction contracts provide for proactive management of claims. This is inconsistent with Pickavance, (2010) who stated that construction contracts do not provide a mechanism to deal effectively with claim. The weighted average was calculated as follows:

(0x5 + 1x4 + 2x2 + 3x29)/40 = 2.37 see Table 4.6

Table 4.6: Proactive Management of Claims through Construction Contracts

Responses	0= not important 3= Very important					
		0	1	2	3	Total
Number of respondents		5	4	2	29	40
Percentage of total		12.5	10	5	72.5	100
Average rating	2.37					

During a conference in Toronto, Vogel (2011) stated that Project Managers need to start performing autopsy of construction claims in order to be more effective and proactive in dealing with future impacts of construction claims. Part 4.3 of the research questionnaire sought to establish deeper insights of the claims management process in general. In particular with respect to the risks inherent in claims management processes, how project managers manage such risks when they occur at any construction phase and the use of standard forms of contracts in managing claims.

Although majority of the respondents agree that standard forms provide for proactive management of claims, about a quarter of the respondents seem not to agree or disagree completely with this notion.

4.2.7 The Use of PMBOK® and the Awareness to the Construction Extension Guide to PMBOK®

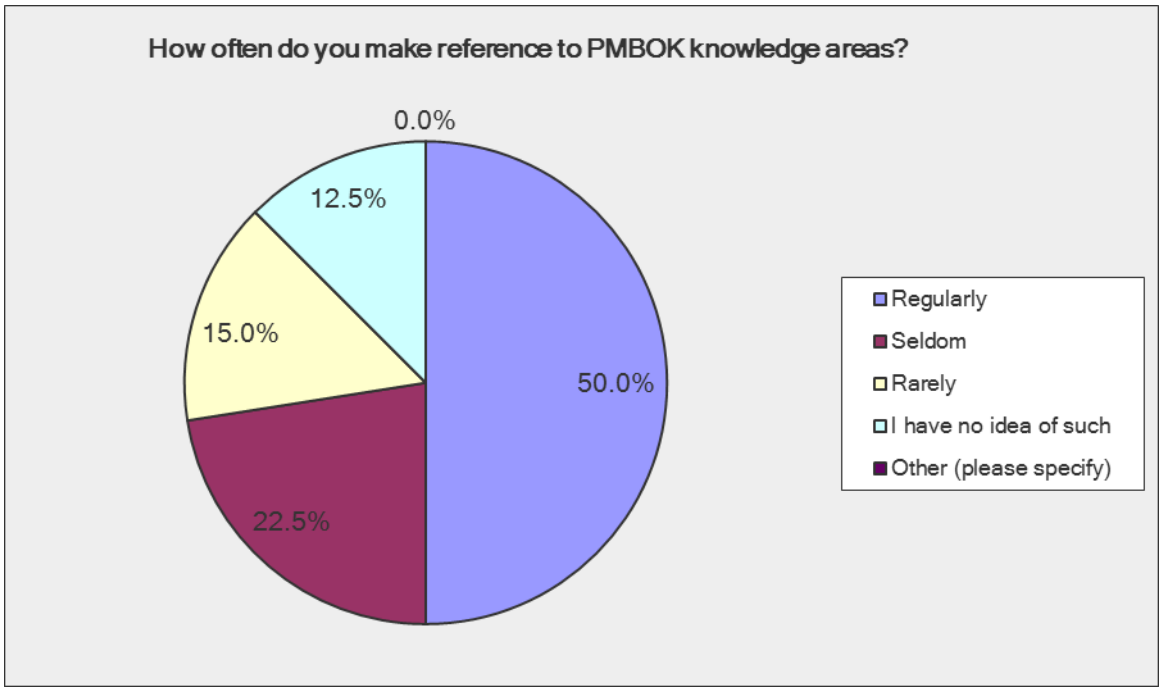
This part sought to raise awareness of construction extension guide to PMBOK® in order to justify that claims management knowledge area should be considered a core knowledge area instead of being an additional knowledge area. According to Du Preez (2014a) PMBOK® addresses claims management through the Construction Extension to the Project Management Body of Knowledge (PMI, 2013).

The use of tools such as the PMBOK® was however unanimously disregarded. This must be attributable to construction contracts used in construction projects. In other words, construction contracts may be so onerous such that any additional tools short of being a contract are avoided.

4.2.7.1 The use of PMBOK® in claims management

In order to establish whether project managers generally refer or apply PMBOK® knowledge areas in practice, this question was included in the questionnaire to measure the value PMBOK® may add to claim management processes. Only half of the respondents indicated that they regularly make reference to PMBOK® as a tool in claims management. The remaining half of the respondents are of the opinion that, although PMBOK® is readily available, it continues to enjoy less use and gathers dust in drawers of project managers.

Figure 4.6: The Application of PMBOK® Knowledge Areas



From Figure 4.6 and Table 4.7 it can be concluded that even though the large percentage suggest that project managers makes reference to PMBOK® they rarely make use of it. The weighted average score is 3.1 which indicate that it is very

important to consider tools like PMBOK® is managing claims. The weighted average score was calculated as follows:

(0x0 + 1x5 + 2x6 + 3x9 + 4x20)/40 = 2.95 see Table 4.7

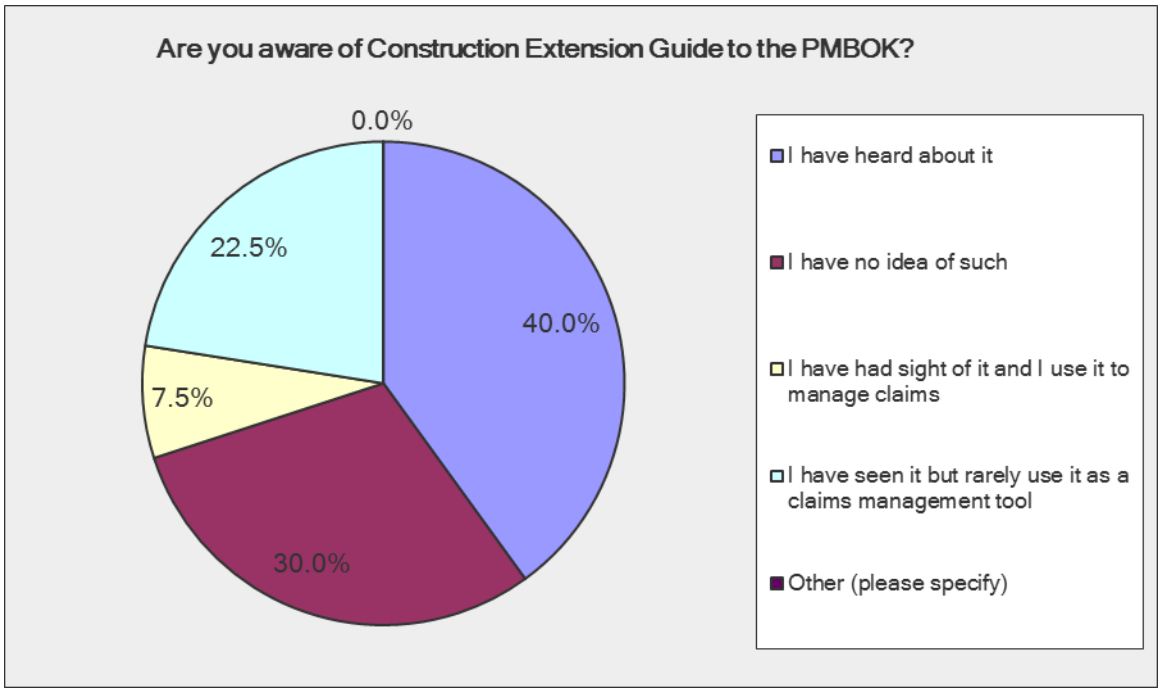
Table 4.7: PMBOK® and Construction Claims Management

Responses	1= not important 4= Critically important					
	0	1	2	3	4	Total
Number of respondents	0	5	6	9	20	40
Percentage of total		12.5	15	22.5	50	100
Average rating	3.1					

4.2.7.2 The awareness to Construction Extension Guide to PMBOK®

This part of the questionnaire is an important part of this research work. The question has been included to establish awareness of the Construction Extension to the PMBOK® as a tool for creating an environment which promotes and places emphasis on claims management and in particular methods to be applied in the effective management of claims. According to Table 4.6, 70% of the respondents are aware of the Construction Extension to the PMBOK® and the general view is that the guide is rarely used

Figure 4.7: The Level of Respondents' Awareness to Construction Extension Guide to PMBOK®



The guide expressly confers procedures for preventing or even removing claims and to a large extent, the management of claims. In the preamble of the guide specific reference is made to prevention, identification and tracking of claims. Table 4.8 has a weighted average of 2.87 and revealed that a handful of respondents have had sight of the guide. A sizable number of respondents have no idea of such a document. This is consistent with Table 4.7 above which revealed that PMBOK® is rarely used as a tool to guide in the management of tools. It is no surprise that if PMBOK® is not used, the next truth would be that the construction extension guide is a document that respondents have had no sight of. The weighted average score was calculated as follows:

(0x0 + 1x9 + 2x3 + 3x12 + 4x16)/40 = 2.87 see Table 4.8

Table 4.8: The Construction Extension Guide to PMBOK®

Responses	0= not important 4= critically important					
	0	1	2	3	4	Total
Number of respondents	0	9	3	12	16	40
Percentage of total	0	22.5	7.5	30	40	100
Average rating	2.87					

The response evenly indicates that the respondents firmly believe that the use of the Construction Extension Guide to PMBOK® can assist in the effective management of claims and may add value to the claim management process. The response is congruent with the research conducted by Du Preez (2014a) which found that PMBOK® is popular in most countries but the implementation of principles enshrined in PMBOK® and in particular claim management is somewhat lacking

The PMBOK® has introduced four new knowledge areas, albeit through the construction extension guide to the PMBOK®. The areas as discussed in literature review include amongst others claims management. It flows from the respondents' answers relating to the awareness to the construction extension guide to PMBOK® that somewhat it is not primarily considered in the management of claims. A general sense is that the inclusion of the guide will assist project management with removing or preventing an increase in claims and the management of such when they occur. Therefore the point of departure is that all construction claims are to be managed in terms set out in the construction extension guide to PMBOK®. Of concern is the inclusion of this guide as an addition to the PMBOK®. The guide's peripheral positioning, may create a propensity amongst practitioners to consult with the guide from a non-mandatory point of view. To treat this guide as such suggests

imponderable area of reference as a result practitioner's resort to practices that are not recognized as good practices.

4.2.7.3 How to bring awareness of the Construction Extension Guide to PMBOK® in Projects

The respondents rated the need to incorporate the construction extension guide to PMBOK® by indicating that it is very important that the principles enshrined in the guide needs to be incorporated in various contracts. Table 4.9 present a weighted average score in support of how important respondents expressed their preference. This view has gathered a weighted average score of 3.02. The weighted average cost was calculated as follows:

(0x0 + 1x4 + 2x10 + 3x15 +4x19)/48 = 3.02 see Table 4.9

Table 4.9: Broadening Applicability of the Construction Extension Guide to PMBOK®

Responses	0= not important 4= critically important					
	0	1	2	3	4	Total
Number of respondents	0	4	10	15	19	48
Percentage of total	0	10.3	25.6	38.5	48.7	100
Average rating	3.02					

It is interesting to note that despite different views on how the guide can be taken more serious, all the respondents have a common goal, which is to see claims being managed effectively. Therefore the construction extension guide to PMBOK® cannot be thwarted to a peripheral guide.

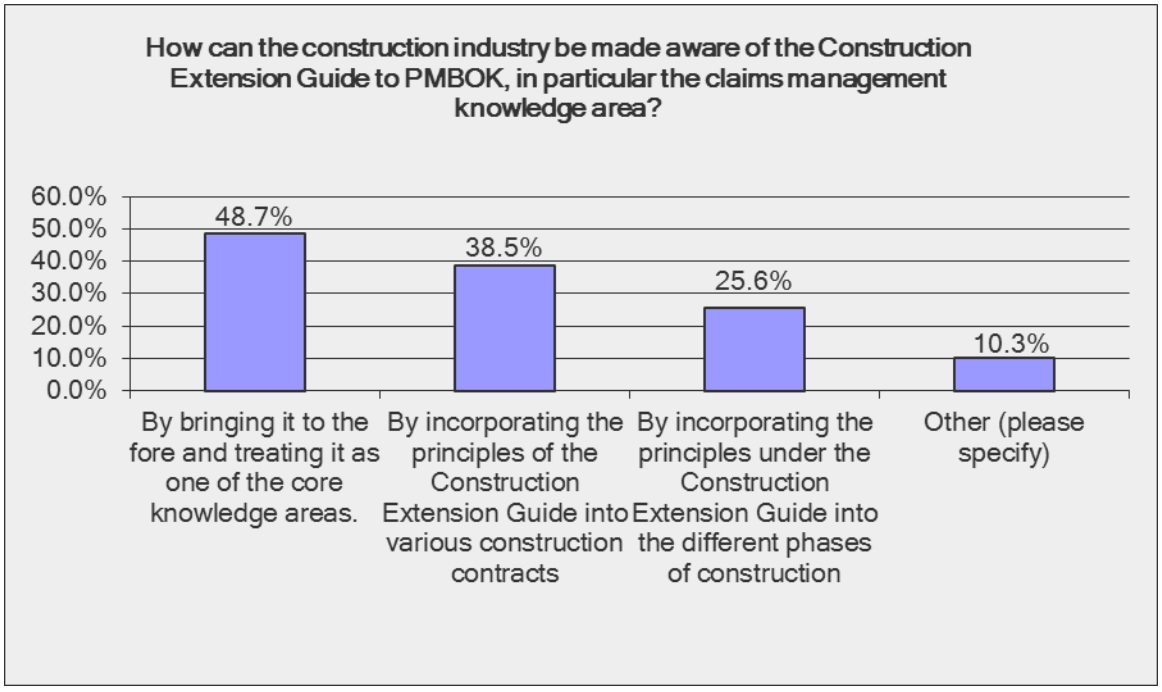
It comes as no surprise that the research reveals that the respondents are keen in reducing the occurrence of the claims. After all, leaving claims in the periphery is allowing the cancer to spread with impunity. Majority of the respondents are of the

view that claims management must be treated independently like all the other 10 PMBOK® knowledge areas, the other respondents jointly note that including the principles enshrined in the guide in either construction contracts will be mandatory and will assist at all construction phases.

The data in Table 4.9 as displayed in graphical format illustrates how the respondent's view incorporating the guide or bringing it to the fore as a crucial step that PMBOK® can take.

Figure 4.8 indicates that approximately 49% of the respondents are proponents of bringing claims management to the fore as an independent knowledge area like the other 10 PMBOK® knowledge areas. And approximately 64% are proponents of its inclusion in construction contracts, while about 10% did not indicate their preference.

Figure 4.8: Incorporating the Construction Extension Guide to PMBOK® with other Construction Tools.



4.2.8 Substantive Factors to be considered in managing claims effectively

According to Zaneldine (2005), construction projects are subjected to more claims that any other time in history and they seem to hinder completion of construction

projects. Table 4.10, illustrates that nearly 82,9% of the respondents agree that claims have an effect on the cash flow, which confirms Fielden and Lindebaum. (2010) that claims in the construction projects is one of the important risk factors that may have significant influence on project cash flow if project managers ignore the risk.

Table 4.10 depicts that exactly half of the respondents pointed out that the most efficient way to managing claims is respecting the process laid down in the contract. This is illustrated by almost 53% of the respondents denying an automatic right to additional payment without the necessary documentation to support such claims. In a research study conducted by Klee (2015) it was revealed that project managers requires a team of claims management specialist if the scourge is to be defeated, who would coordinate claims management process.

This question was included as part of the questionnaire in order to test if project managers have an appreciation of claim management processes contemplated within construction contracts. According to the results of Table 4.10 a unanimous 97% of respondents agree with Braimah (2013) who articulated that, timely submission of claims and quick assessment by employers or their representatives is recommended as good practice. The longer the assessment takes, the more likely that the claim will escalate into a dispute. The results shown in Table 4.10 indicate that the lack of proper substantiation hinders timeous assessments of the claims.

A unanimous number of respondents stated that the notification is the most important part of effective claims management. This is illustrated by a whopping 97, 5% of the respondents stating that if parties can stick to notice provision as part of claims procedure. Respondents may have optimistically answered this question as it is the proper thing to do but not what their experience is within their organization

Table 4.10: Other Factors Affecting Claims Management

In your opinion, can proper management of construction claims significantly affect the projected budget?		
Answer Options	**Response Percent**	**Response Count**
I agree	82.9%	34
I disagree	9.8%	4
Maybe	2.4%	1
Other (please specify)	4.9%	2

In your opinion, the parties inability to provide substantiation will not necessarily deprive it of the right to some reimbursement for loss and expenses and some reasonable estimate must be made.		
Answer Options	**Response Percent**	**Response Count**
I agree	28.2%	11
I disagree	53.8%	21
Maybe	10.3%	4
Other (please specify)	7.7%	3

In your opinion, a claim that does not contain substantiation of statements within the claim, may lead the claim assessment going through iterative revisions before the matter is concluded, which wastes time for both parties.		
Answer Options	**Response Percent**	**Response Count**
I agree	97.5%	39
I disagree	0.0%	0
Maybe	0.0%	0
Other (please specify)	2.5%	1

Which of the following construction contracts have you worked on or are familiar with?		
Answer Options	**Response Count**	**Response Percent**
FIDIC Suite of contracts	26	63.4%
NEC3 Suite of contracts	31	75.6%
JBCC	17	41.5%
GCC	15	36.6%
Other (please specify)	2	4.9%

In your opinion, to tackle the problem of claims effectively, it is necessary for both parties to have a basic understanding construction contracts?		
Answer Options	**Response Count**	**Response Percent**
I agree	39	100.0%
I disagree	0	0.0%
Maybe	0	0.0%
Other (please specify)	0	0.0%

In your opinion, standard forms of construction contracts provide for proactive management of claims?		
Answer Options	**Response Count**	**Response Percent**
I agree	29	72.5%
I disagree	2	5.0%
Maybe	4	10.0%
Other (please specify)	5	12.5%

When is the best time for parties to notify the other party of the intention to submit a claim		
Answer Options	**Response Count**	**Response Percent**
In accordance with the notice provision	39	97.5%
Within a reasonable time after the project is completed	1	2.5%
Notice is not necessary	0	0.0%
Other (please specify)	2	5.0%

4.2.9 Face-to-Face Interviews

The face to face interviews sought to obtain clarity where some of the questions were not adequately answered on the research questionnaire. The analysis followed a content analysis method which sought to establish patterns, themes and biases through human contact. (Leedy and Ormod, 2014) According to Leedy and Ormod (2014) content analysis is used to interpret communication that in interactive, face to face conversation to ascertain a common understanding of variables.

Three objectives were the subject matter of the face to face interactions with 9 respondents from 3 various provinces, working on different Mega construction contracts. The first objective was to investigate whether there is a relationship between project management and claims management in construction projects. All the respondents which represent 100% of the interviewed respondents were of the opinion that the two are not independent of each other. They stated that as soon as a project starts they expect that the contractor will submit claims because that is how they recoup some of the losses they incur along the way. What came out strong was that respondents are of the view that contractors tender at a very low tender prices,

knowing very well that they will make their profits of claims and Preliminaries &Generals for any delay. Rooke *et al*, (2004) hinted that contractors are using a strategy of submitting tenders at prices which reflect the ultimate price of the bid will be inflated by claims.

The second objectives to be put to the test was whether the respondents aware of the construction extension guide to PMBOK® in order to justify why claims management knowledge area should be considered a core knowledge area instead of being an additional knowledge area. Out of the 9 respondents interviewed only 3 which equates 33.3% of the respondents were aware of the guide. All the other 6, which represents 66.6% of the interviewees did not even know about the guide. When asked about whether they refer to PMBOK® at all when the deal with claims, all the respondents in this case, which represent 100% of the respondents that they hardly ever refer to PMBOK® but rather they rely on their experience gained in working on construction projects

When asked how to ensure that project managers and their teams are aware of the construction extension guide to PMBOK®, 7 respondents out of 9 which represent approximately 78% of the respondents, indicated that the knowledge areas in the construction extension guide must be given the same status as all the other ten knowledge areas. The 2 respondents were of the view that it is a training matter; projects have put training as peripheral issue and concentrating on the three constraints of time, cost and quality.

The third objective was gain to an understanding of how respondents manage claims using construction contracts. When asked about how they managed claims currently, all respondents stated that they try and resolve claims early using the recommended practice that the project would have adopted. However they also indicated that more often than not, these practices are hardly adhered to. All 9 respondents stated that although construction contracts provide for mechanism to manage claims, they are onerous on both contractors and employer and as a result the parties ended up

employing external consultants who come to manage claims and that leads to claims being treated as secondary on projects.

In summary, a significant degree of respondents agree that claims if managed differently than they are currently managed, will reduce cost, reduce delay and reduce defect and thus securing quality. Respondents indicated the lack of knowledge of the contents of the construction extension guide to PMBOK®. This tool if properly utilized will create an environment which encourages proactive management of claims.

The following Table 4.11 lists nine respondents which were interviewed face to face and their respective positions and the province they are currently situated. Four of the respondents are claims consultants and five are project managers. All the nine respondents are involved in project management and in particular claims management. The nine respondents are answered the online questionnaire and were followed up with face to face interaction.

Table 4.11: Face to Face Interviews

INTERVIEWEE	**POSITION**	**PROVINCE**	No of Respondents
1	Project Manager	Mpumalanga	2
2	Claims Consultant	Mpumalanga	1
3	Project Manager	Limpopo	1
4	Claims Consultant	Limpopo	2
6	Claims Consultant	Gauteng	1
7	Project Manager	Gauteng	2

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter summarized the findings, the implication, limitations, provided conclusion and recommendations for further areas of research. To the extent possible the whole research maintained a structure that is consistent with research questions and objectives. In the questionnaire, some of the questions have been included in order to assist in answering the main research question of the role of a project manager in the administration of construction contracts within the construction industry.

The finding discussed how the four objectives were addressed in the course of the research from literature review to data collected from all the respondents.
The first objective set the wheels on motion and assisted in shaping out the whole research. Literature review demonstrated that there is a relationship between claims management and project management. This relationship was used as a basis for approaching project managers and other construction project administrators to participate in the research.

The second objective was to investigate how construction project managers are currently managing claims from planning to close-out of the project. Literature review revealed that claims are inevitable as a result they need to be pre-empted at every stage of the construction from tender stage to planning to close out.

The third objective explored the use of construction contracts in construction claims management processes. It was established that the task of administrating the contract needs project administrators to have the basic of understanding the contract. The understanding and proper administration of the contract has a significant bearing on the overall project cost and schedule (Loosemore, 2003)

The fourth objective was to raise awareness towards the construction extension guide to PMBOK®. The purpose of the construction extension guide to PMBOK® is to improve project management on construction projects by emphasising those techniques and methods that are particularly unique to construction projects. So the

research revealed that project administrations have heard of the construction extension guide to PMBOK® but rarely make use of it in the management of claims. The research suggested that integrating the construction extension additional knowledge areas with the other 10 PMBOK® knowledge areas as core knowledge areas will raise its awareness and is important for effective construction claims management

5.1.1 The Relationship between Project Management and Claims Management Processes.

The research identified the overlap between project management and claims management, more like a marriage of convenience. As literature review has clearly articulated that claims management is an important subset of project management. The eloquence and clarity of literature used in this research indicates the importance of an effective claims management. The feedback obtained in this research suggests that proper project management will resolve claims timely and avoid claims escalating to disputes.

In literature review under chapter 2, it was established that claims have a significant impact on the overall performance of the project (Abdul-Malak *et al*. 2002). This may be attributable to an overlap between the two concepts, project management and claims management. It can be seen from literature review and confirmed by findings from data collection that claims management is a subset of project management. Therefore projects managers needs to start appreciating claims management as a function of construction projects rather than both having distinct objectives. In other words the objectives of both claims management and project management are intertwined and thus homogenous

The research also attempted to establish that the objectives of project management are similar to the objective of claims management. It was clear from the literature review that in project management, best practices generally includes the use of guidelines and international standards in an endeavor to improve project management. Similarly, the inclusion of the Construction extension guide to

PMBOK® is believed to be a tool that contains effective techniques, methods and processes that are considered best practice.

In conclusion, effective claims management can only be attained through proactive project management. The success of both project management and claims management is intertwined. Thus for a project to be a success, project managers need to also improve how claim management processes are embarked upon.

5.1.2 Risks that Project Managers have to manage in claims management throughout project stages.

To summarize this part of the research, the findings confirm that claims are inevitable. Worst case scenario, claims are a fertile seed bed for disputes. To run a successful claims management, one has to understand risk, the source and to a large extent, the construction process. In other words how construction process evolves and what risks along the way that may result in claims. In this research, the concept of claims management is introduced purely from how claims have assumed a normal space within the construction projects. This phenomenon is of a great concern. The study revealed that in order to manage claims effectively, project managers should establish good claims management processes.

Some of the major risks in claims management are the ability of the parties to identify claims. The risk has a knock-on-effect in that parties in the later stages of the construction process are unable to notify claims timeously and that leads to poor substantiation later in the life of a claim. In literature review and findings, notification and substantiation were regarded as very important and required to ensure that claims are dealt with timeously.

The findings also indicated that construction contracts have been designed to proactively detect claims. In order to implement effective claims management project managers involved need to have at least basic understanding of standard forms of contracts. Construction contracts have been equipped with the required contractual administrative tools that offer effective solutions to claims management practices within construction industry.

In conclusion, since claims cannot be entirely avoided, the response received from data collected found that in order to minimize delays and cost overruns in construction projects, claims have to be dealt with promptly immediately by following claims procedures the organization has put in place. Claims are seen as one of those risks that have significant influence on project costs. Project Managers cannot ignore claims anymore. From the responses, there is a palpable positive attitude towards ensuring that claims are dealt with effectively.

5.1.3 Construction Extension Guide to PMBOK®

According to PMI (2008), the primary purpose of the guide to the PMBOK® is to identify that subset of the body of knowledge that is recognized as good practice. The purpose of the Construction Extension Guide to PMBOK®, therefore is to improve the efficiency and effectiveness of the management of claims in construction projects. The drafters of the guide intended that the users of this guide will among others be Construction Managers, Contractors etc. The guide appreciates the different PMBOK® knowledge areas, however in order to provide for construction specific issues; the guide has now emphasized activities that are important to the construction industry. Claims Management has been listed amongst the other four additional knowledge areas.

This research has identified that to contribute meaningfully to the whole construction claims process, resulting in effective and efficient management of claims; the guide must form part of our standard forms of contracts. In other words when contracts are drafted the guide can be imported as an appendix to the contract.

In conclusion, proactive claims management will result in effective project management. Literature review supports the hypothesis that if claims are preempted early in the life of the project, disputes can be eliminated. This conclusion is consistent with Chapter 16 of the guide where it describes the process required to prevent construction claims and if claims occurs how to expedite the management of such to avoid the brewing of disputes.

5.2 The Theoretical and Practical Implication of the Research

Most literature explored the causes of claims and the assessment thereto instead of exploring tactics, methods and techniques to minimise claims through effective project management. Literature took a view that claims are natural and inevitable thus negating that claims are a subset of project management and therefore project managers should adopt new methods to manage claims effectively. Project management need to view claims as an opportunity to innovate.

5.3 Limitations

The Construction extension guide to PMBOK® is a perfect tool to prevent and manage claims effectively. The following were identified as red tapes for the project management fraternity to have this tool used as a standard practice across all construction projects:

Projects are now more about bottom line, so the funding of training project administrators to start using the Construction Extension Guide to PMBOK® on construction claims many not be available given the current economic climate. Construction contracts are the competency of lawyers. Lawyers' services are expensive and so to incorporate the construction extension guide onto construction contracts requires construction projects to have huge financial capacity.

5.4 Recommendations

The research reasonably characterized claims managements as an area that needs reform in order to improve the management of claims. The findings of the research will assist Project Managers in managing claims differently from the status quo. It is recommended that project managers develop a proactive stance in managing claims in order to expedite the resolution of claims before they escalate into disputes.

Construction contracts provides for efficient management of claims. The results of this research indicate that project managers and contracts managers agree that it is important to have basic knowledge of construction contracts before even thinking of running a project.

To improve claims management, the research findings suggests the following:

- Developing project managers through contracts training, this training should apply to contracts managers, project managers, claims consultants and generally everyone involved in claims management processes.
- All role players within claims management process must learn to timeously resolve claims in order to avoid increased budgetary costs in projects.
- It is also suggested that if the construction extension guide to PMBOK® can form part of construction contracts it will go a long way in eliminating some of the unnecessary claims we have seen coming onto our projects.
- Project Managers need to start using the Construction extension guide to PMBOK® and be aware of what is provided to them to manage claims effectively.
- that the timely resolution of disputes is going to take more that the use of traditional methods such as ADR procedures.
- Show-stoppers or critical claims posing a risk to the project must be identified during the planning phase and be dealt with from that point. Without rehashing, Bakhary, (2013) concludes by saying, the management of claims amounts to the management of risk.
- Claims management should consider utilizing technology such as BIM to manage claims.

The study on construction contract administration and claim management depends on managerial control, preventative action diagnostics and problem solving. Therefore, the contracting parties must adopt a proactive approach and file claims in a timely manner.

5.5 Conclusion

Disputes will, inevitably, arise on any construction project; thus, necessitating project managers to manage this more proactively. While it is not possible nor realistic to expect that all claims can be avoided or will be properly resolved, understanding the nature of these claims, what gave rise to them as well as conducting an effective

proactive management analysis early on the project will, hopefully, assist parties to a contract to profit and benefit from the construction project.

Claims start right at the beginning of a project. If intuitive risk management is good enough for private lives, what is so special about risk management in professional practices, especially the people-oriented and conflict-laden construction activity? For a start, it is not prudent to treat life so casually. Therefore, construction parties cannot go about claims management with the mantra of business as usual.

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APPENDICES

APPENDIX A: QUESTIONNAIRE

INFORMATION DOCUMENT

Study title: Proactive Management of Construction Claims: A case in support of the Construction Extension Guide to PMBOK®

Greetings:

Introduction:

I, Kgabo Maitisa, I am doing a research on Proactive Management of Construction Claims: A case in support of the Construction Extension Guide to PMBOK® Research is just the process to answer to a question/ hypothesis. In this study I want to establish whether construction project managers or construction project management are aware of the Construction Extension Guide to PMBOK® and in particular claims management as an extended knowledge area. More so, if this tool can be used to management claims processes more efficiently and proactively.

Invitation to participate: I am asking / inviting you to take part in this research.

What is involved in the study – The research will be conducted in the form of a questionnaire and face to face semi structured interview. You will be requested to answer questions not more 20 multiple choice questions. The study targets construction project managers and/or construction contracts managers who are involved in claims management processes in their organizations. The questionnaire should not take you more than 30 minutes to complete.

Benefits – As soon as data is collected and analysed, the research aims to benefit construction project managers and construction contract managers who are involved in the claims management process to effectively and proactively manage claims.

The participant will be given pertinent information on the study while involved in the project and after the results are available.

Participation is voluntary, that refusal to participate will involve no penalty or loss of benefits to which the participant is otherwise entitled, and that the subject may discontinue participation at any time without penalty loss of benefits to which the participant is otherwise entitled.

Confidentiality: Efforts will be made to keep personal information confidential. Absolute confidentiality cannot be guaranteed. Personal information may be disclosed if required by law. Organizations that may inspect and/or copy the research records for quality assurance and data analysis include groups such as the Research Ethics Committee and the Medicines Control Council (where appropriate).
If results are published, may lead to individual / cohort identification.

Contact details of researcher/s – for further information please contact Kgabo Maitisa on 082 441 7549 or his supervisor, Dr Oluwayomi Babatunde on 078 993 1496 to any adverse or prejudicial events related to the study.
Contact details of REC administrator and chair – Please contact Mantiseng Sithole on 011 717 7000 for reporting of complaints / problems related to this research.

The Questionnaire

SECTION A: Respondent Profile

Questions

1. What is your job title?

- Project Director
- Project Manager
- Construction Manager
- Commercial Manager
- Claims Consultant
- Contract Administrator

Other (please specify)

2. Which description best fits the organization where you work?

- Client
- Project Management Consultancy
- Contractor
- Academic institution
- Other (please specify)

3. Where are you located?

- Gauteng
- Limpopo
- Mpumalanga
- Other (please specify)

4. How long have you been working, teaching or conducting research in the construction industry?

- 5 years or less
- 6 to 15 years
- 16 to 25 years
- More than 25 years

SECTION B

The Relationship between Claim Management and Project Management

5. In your opinion, is there a relationship between construction project management and claims management?

- I agree, claims management is a subset of project management
- I disagree, claims management is separate from construction project management
- Maybe.

Please elaborate

6. In your opinion what role do Project Managers have in relation to the management of claims.

- Responsible for claims management procedures and resolving any potential dispute
- Pay more attention to having an effective claims management system
- Have no role to play as far as claims are concerned.
- Other (please specify)

7. In your opinion, can claims be managed better on construction projects than they are currently managed

- Claims can be pre-empted
- It is possibe to manage claim better to avoid disputes
- It is possibe to manage claim better to avoid disputes
- Given the complexity of construction industry claims cannot be managed better than current
- Other (please specify)

8. In your opinion what is claim?

- A legitimate act of recovering lost time and expenses
- A useful tool. However, it is sometimes exploited to mitigate failures of stakeholders in achieving their targets
- A tool that can be of use but is often used to cover up failure of stakeholders in achieving their targets by laying the blame on others
- Claims are an inconvenience and mirror the level of mischief that exists in the construction industry
- Other (please specify)

9. In your opinion, what is the likelihood of a claim being submitted by any of the parties during a construction project?

- It is inevitable. Claims are bound to happen given the complexity of the construction process
- It is very likely. Dispute and conflict occur in the majority of projects and this reflects on the frequency of claims
- It is possible. The occurrence of claims depends on the circumstances of the project.
- Claims are unlikely to occur in construction projects

10. Claims are often viewed negatively within the industry, in your opinion do you think there is certainly a distinct lack of understanding of why and how a claim should be submitted ?

- Yes, the industry lacks the know how to submit a proper claim
- No, the industry is well aware why and how to submit a proper claim
- The industry has an idea of compiling a claim submission but not a persuasive argument or detailed substantiation which will help the claim to succeed
- Other (please specify)

11. Failure to identify claims and deal with them correctly can affect the both parties ability to complete on time and to the required quality.

- I agree
- I disagree
- Maybe.
- Other (please specify)

12. If claims are not managed effectively, there is a probability that matters will escalate to costly and time consuming disputes.

- I agree
- I disagree
- Maybe.
- Other (please specify)

Construction Contracts and the management of claims

13. Which of the following construction contracts have you worked on or are familiar with?

- FIDIC Suite of contracts
- NEC3 Suite of contracts
- JBCC
- GCC
- Other (please specify)

14. In your opinion, to tackle the problem of claims effectively, it is necessary for both parties to have a basic understanding construction contracts?

- I agree
- I disagree
- Maybe.
- Other (please specify)

15. In your opinion, standard forms of construction contracts provide for proactive management of claims?

- I agree
- I disagree
- Maybe. (Please elaborate)

16. When is the best time for parties to notify the other party of the intention to submit a claim

- In accordance with the notice provision
- Within a reasonable time after the project is completed
- Notice is not necessary
- Other (please specify)

Awareness of the Construction Extension Guide to the PMBOK®

17. How often do you make reference to PMBOK® knowledge areas?

- Regularly
- Seldom
- Rarely
- I have no idea of such
- Other (please specify)

18. Are you aware of the Construction Extension Guide to PMBOK®?

- I have heard about it
- I have no idea of such
- I have seen it and I use it to manage claims
- I have seen it but rarely I use it as a claims management tool
- Other (please specify)

19. How can the construction industry be aware of the Construction Extension Guide to PMBOK® and in particular claims management knowledge area?

- The Construction industry is aware of the Construction Extension Guide to PMBOK®
- By bringing it to the fore and treating it as core knowledge area
- Construction industry can do without the extension guide to PMBOK®

Other (please specify)

Other factor in managing claims effectively

20. In your opinion can proper management of construction claims significantly affect the bottom line of construction projects?

- I agree
- I disagree
- Maybe

Other (please specify)

21. In your opinion, the Contractor's inability to provide substantiation will not necessarily deprive it of the right to some reimbursement for loss and expense and some reasonable estimate must be made?

- I agree
- I disagree
- Maybe.

Other (please specify)

22. In your opinion, a claim that does not contain substantiation of statements made within the claim, may lead the claim assessment going through myriad revisions before the matter is concluded, which wastes time for both the Employer and the Contractor and prevents the matter from being resolved for several months.

- I agree
- I disagree
- Maybe.

Other (please specify)

23. Thank you for completing this questionnaire. If you have any comments, please enter them below.



24. Please leave your email address if you wish to receive feedback on the results of the study.

APPENDIX B: RESULTS OF QUESTIONNAIRE

Question 1

What is your job role?		
Answer Options	**Response Percent**	**Response Count**
Project Director	4.0%	1
Project Manager	44.0%	11
Construction Manager	8.0%	2
Commercial Manager	0.0%	0
Claims Manager / Consultant / Expert	20.0%	5
Contracts Manager	24.0%	6
Other (please specify)		17

Question 2

Which description best fits the organisation where you work?		
Answer Options	**Response Percent**	**Response Count**
Client	40.0%	16
Project Management Consultancy	30.0%	12
Claims Management Consultancy	10.0%	4
Contractor	2.5%	1
Other (please specify)	17.5%	7

Question 3

Where are you located?		
Answer Options	**Response Percent**	**Response Count**
Gauteng (South Africa)	43.9%	18
Limpopo (South Africa)	26.8%	11
Mpumalanga (South Africa)	12.2%	5
Other (please specify)	17.1%	7

Question 4

How long have you been working in the construction industry?		
Answer Options	**Response Percent**	**Response Count**
5 years or less	15.0%	6
6 to 15 years	62.5%	25
16 to 25 years	15.0%	6
more than 25 years	7.5%	3

Question 5

In your opinion, is there a relationship between construction project management and construction claims management?		
Answer Options	**Response Percent**	**Response Count**
I agree. Claims management is a subset of project management	94.9%	37
I disagree. Claims management is separate from construction management. It is a function of law.	0.0%	0
Maybe	2.6%	1
Other (please specify)	2.6%	1

Question 6

In your opinion what is the role of Project Managers in relation to management of construction claims?		
Answer Options	**Response Percent**	**Response Count**
They are responsible for establishing claims management processes and resolving any potential disputes	97.5%	39
They have no role to play as far as claims management is concerned	0.0%	0
Other (please specify)	2.5%	1

Question 7

In your opinion, can claims be managed better on construction projects than they are being currently managed		
Answer Options	**Response Percent**	**Response Count**
Claims can be pre-empted	14.6%	6
It is possible to manage claim better to avoid disputes	87.8%	36
Given the complexity of construction industry claims cannot be managed better than current	0.0%	0
Maybe	2.4%	1
Other (please specify)	4.9%	2

Question 8

In your opinion what is a claim under construction contracts?		
Answer Options	**Response Percent**	**Response Count**
A legitimate act of recovering lost time and money	82.5%	33
Mitigation of failures by stakeholders in achieving targets	5.0%	2
A useful tool that can be used but often exploited to cover up failures and blaming others	20.0%	8
A mirror of the level of mischief that exits in the construction industry	2.5%	1
Other (please specify)	7.5%	3

Question 9

In your opinion, what is the likelihood of a construction claim being submitted by any of the parties under the construction contract?		
Answer Options	**Response Percent**	**Response Count**
Claims are inevitable	31.7%	13
Claims are very likely. Disputes and conflict occur in the majority of projects and this reflects on the frequency of claims	29.3%	12
The occurrence of claims depends on how the project is being managed	51.2%	21
Claims are unlikely to occur in construction projects	2.4%	1
Other (please specify)	9.8%	4

Question 10

Claims are often viewed negatively within the construction industry, in your opinion do you think there is a distinct lack of understanding of why and how a claim should be submitted?		
Answer Options	**Response Percent**	**Response Count**
Yes, the industry lacks the know how to submit a proper construction claim.	34.1%	14
No, the industry is well aware why and how to submit a proper claim	19.5%	8
The industry has an idea of compiling construction claim submission, but not a persuasive argument.	26.8%	11
Role players do not keep proper and detailed substantiation which will help the claim to succeed.	41.5%	17
Other (please specify)	4.9%	2

Question 11

Failure to identify claims and deal with them appropriately can affect both parties ability to complete on time and to the required quality.		
Answer Options	**Response Percent**	**Response Count**
I agree	87.5%	35
I disagree	0.0%	0
Maybe	10.0%	4
Other (please specify)	2.5%	1

Question 12

If claims are not managed effectively, there is a probability that matters will escalate to costly and time consuming disputes.		
Answer Options	**Response Percent**	**Response Count**
I agree	92.3%	36
I disagree	2.6%	1
Maybe	2.6%	1
Other (please specify)	2.6%	1

Question 13

Which of the following construction contracts have you worked on or are familiar with?		
Answer Options	**Response Percent**	**Response Count**
FIDIC Suite of contracts	63.4%	26
NEC3 Suite of contracts	75.6%	31
JBCC	41.5%	17
GCC	36.6%	15
Other (please specify)	4.9%	2

Question 14

In your opinion, to tackle the problem of claims effectively, it is necessary for both parties to have a basic understanding construction contracts?		
Answer Options	**Response Percent**	**Response Count**
I agree	100.0%	39
I disagree	0.0%	0
Maybe	0.0%	0
Other (please specify)	0.0%	0

Question 15

In your opinion, standard forms of construction contracts provide for proactive management of claims?		
Answer Options	**Response Percent**	**Response Count**
I agree	72.5%	29
I disagree	5.0%	2
Maybe	10.0%	4
Other (please specify)	12.5%	5

Question 16

When is the best time for parties to notify the other party of the intention to submit a claim		
Answer Options	**Response Percent**	**Response Count**
In accordance with the notice provision	97.5%	39
Within a reasonable time after the project is completed	2.5%	1
Notice is not necessary	0.0%	0
Other (please specify)	5.0%	2

Question 17

How often do you make reference to PMBOK® knowledge areas?		
Answer Options	**Response Percent**	**Response Count**
Regularly	50.0%	20
Seldom	22.5%	9
Rarely	15.0%	6
I have no idea of such	12.5%	5
Other (please specify)	0.0%	0

Question 18

Are you aware of Construction Extension Guide to the PMBOK®?		
Answer Options	**Response Percent**	**Response Count**
I have heard about it	40.0%	16
I have no idea of such	30.0%	12
I have had sight of it and I use it to manage claims	7.5%	3
I have seen it but rarely use it as a claims management tool	22.5%	9
Other (please specify)	0.0%	0

Question 19

How can the construction industry be made aware of the Construction Extension Guide to PMBOK®, in particular the claims management knowledge area?		
Answer Options	**Response Percent**	**Response Count**
By bringing it to the fore and treating it as one of the core knowledge areas.	48.7%	19
By incorporating the principles of the Construction Extension Guide into various construction contracts	38.5%	15
By incorporating the principles under the Construction Extension Guide into the different phases of construction	25.6%	10
Other (please specify)	10.3%	4

Question 20

In your opinion, can proper management of construction claims significantly affect the projected budget?		
Answer Options	**Response Percent**	**Response Count**
I agree	82.9%	34
I disagree	9.8%	4
Maybe	2.4%	1
Other (please specify)	4.9%	2

Question 21

In your opinion, the parties inability to provide substantiation will not necessarily deprive it of the right to some reimbursement for loss and expenses and some reasonable estimate must be made.		
Answer Options	**Response Percent**	**Response Count**
I agree	28.2%	11
I disagree	53.8%	21
Maybe	10.3%	4
Other (please specify)	7.7%	3

Question 22

In your opinion, a claim that does not contain substantiation of statements within the claim, may lead the claim assessment going through iterative revisions before the matter is concluded, which wastes time for both parties.		
Answer Options	**Response Percent**	**Response Count**
I agree	97.5%	39
I disagree	0.0%	0
Maybe	0.0%	0
Other (please specify)	2.5%	1

Question 23

Thanks for completing this questionnaire. If you have any further comments please enter them below.	
Answer Options	Response Count
	6

Question 24

Please leave your email address if you wish to receive feedback on the result of the study.	
Answer Options	Response Count
	18

ANNEXURES

Annexure 1: Signed Formal Declaration (Section 7.4)

ANNEXURE 2: ETHICS COMMITTEE CLEARANCE CERTIFICATE

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ANNEXURE 3: SUBMISSION FORM