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RELATIONSHIP QUALITY AND SERVICE QUALITY BETWEEN CONTRACTOR AND CONSTRUCTION CLIENT

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A FINAL RESEARCH REPORT SUBMITTED TO THE DEPARTMENT OF CONSTRUCTION ECONOMICS AND MANAGEMENT IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN CONSTRUCTION PROJECT MANAGEMENT (MSC BUILDING)

JOHANNESBURG 2017

DECLARATION

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

_____

E. Singh (The above declaration is acknowledged)

(Signature of Candidate)

15th Day of September 2017

ABSTRACT

Purpose

Existing studies demonstrate that contractors have not fully embraced the idea of forming relationships with their clients and providing superior service quality through improved project performance. Performance on projects has been poor and client contractor relationships have become adversarial as a result of the short term, profit orientated approach adopted by many construction firms. To improve client value and construction business sustainability, it is necessary that construction firms adopt a client- orientated approach to managing projects and this can be achieved through understanding the client's needs closely. In line with the foregoing, the aim of the current research is to investigate South African public sector construction client's perspectives on relationship quality between contractors and construction clients and their perceived shortcomings in service quality. Having this understanding will help contractors improve their service quality and their relationship with clients. This is likely to improve the competitiveness of contracting firms, thereby improving business sustainability.

Methodology/ Approach

A survey research design was adopted for this study. Adopting a semi-structured mailed questionnaire survey, 45 different construction client representatives, from 11 public sector organisations in South Africa were approached, out of which 10 client representatives of different roles and responsibilities responded (22% response rate). Public sector clients targeted were those who have mainly worked with contractors undertaking medium to large scale construction projects. The respondents incorporated project managers/ leaders and middle and senior management who have experience on construction projects. Initial contact was made telephonically and this was followed by the distribution of survey questionnaires through email.

Findings

Based on the responses from client representatives, the primary factors influencing relationship quality between client and contractor was found to be open and honest communication, followed by trust and fairness. The primary shortcoming in service quality was found to be competency, followed by a lack of open and honest communication. Competency related shortcomings incorporated the contractor's inability to manage resources, time and cost on projects. The findings have also revealed that a small percentage of public sector clients are aware of the problems in service quality and have started to consider alternative procurement approaches to offset performance related risks and consequently, improve contractor client relationship quality and service quality. However, some public sector clients still support traditional procurement approaches and others are not knowledgeable on how ongoing challenges in relationship quality and service quality may be mitigated though adopting appropriate procurement strategies.

Practical Implications

Client contractor relationships are likely to improve when there is open and honest communication at all times and where there is a level of trust between contractors and clients. Service quality is likely to improve if contractor competence issues are addressed to effect better service quality through improved project delivery. Contractors engaging in open and honest communication with their clients is also likely to improve the service quality of contractors. To effect change it is necessary for clients to consider alternative procurement approaches to achieve better service quality and client contractor relationships. The consultant's role becomes pivotal in ensuring quality service delivery and harmonious client contractor relationships.

Originality

This research adds to the limited studies in South Africa on the client's perspectives on relationship quality and service quality. It bridges a gap in the previous studies, which have not investigated public sector clients' views on relationship quality and service quality.

Keywords: Construction Industry, Construction Projects, Contractor Performance, Relationships, Service quality

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CHAPTER 1: INTRODUCTION

The increasing competitiveness of the construction industry demands that contractors start adopting a long-term client orientated approach toward managing projects (Dulaimi, 2005). The approach adopted by contractors has predominantly been driven by short term profits and there has been minimal focus on client orientation (Emuze and Smallwood, 2014).

As a result of the short term outlook adopted by many contractors, project performance and client contractor relationships have been compromised (Phua and Rowlinson, 2003; Sawhney, Agnihotri and Paul, 2014). Time and cost overruns have been frequent and the overall service quality of contractors has been poor (Olanrewaju and Anavhe, 2014, Dada, 2014). Many authors have criticised the wide use of traditional procurement systems and have attributed the ongoing poor quality of service and adversarial client contractor relationships to its wide usage (Yong and Mustaffa, 2012; Ren, Kwaw and Yang, 2012). There is a need for contractors to move away from traditional procurement approaches toward an approach which will improve client value, transform adversarial relationships and improve client value through better service quality (Baiden Price and Dainty, 2006; Dada, 2014).

Authors in Africa and South Africa have researched specific areas of service quality such as time and cost overruns in Africa (Kaliba, Muya and Mumba, 2009), poor performance in South Africa arising from low levels of efficiency (Emuze, Smallwood and Han, 2014), poor project performance arising from low levels of collaboration (Emuze and Smallwood, 2014) and the effect of contractor's financial capability on project performance (Tucker, Windapo and Catell, 2015). Among the South African studies reviewed, few authors have extensively investigated relationship quality between contractors and construction clients. Also, few studies have adopted a holistic view of the shortcomings in contractor's service quality, and the influence of contractor behaviour on project performance. Based on this shortcoming, this report investigates

the factors influencing relationship quality between contractors and public sector construction clients in South Africa and the shortcomings in the service quality of contractors. This report also seeks to find out whether South African public sector clients have started to consider using alternative procurement approaches to effect better client contractor relationships and service quality.

1.1 Problem Statement

The ongoing need for construction projects together with the appointment of contractors who have a short term profit orientated outlook has resulted in poor service quality, incorporating poor project performance and poor quality of relationships between construction clients and contractors. Both the challenges and its causes need to be understood from the perspective of clients to improve the quality of client contractor relationships and to achieve improved client value through improved service quality.

1.1.1 Problem Justification

From some of the key literature identified (Kärnä, Sorvala and Junnonen, 2009; Dulaimi,2005) it can be concluded that construction client's perspectives on the factors influencing relationship quality and the shortcomings in service quality have not been explored extensively. Furthermore, few studies (eg. Mezher and Tawil, 1998; Odeh and Battaineh, 2002; Veenswijk, Marrewijk and Boersma, 2010) have focussed on public sector clients. This study thus aims to close this gap in knowledge.

Jiang, Henneberg, Naudè (2011) affirmed that adversarial client contractor relationships are prevalent and have been influenced by the short term outlook adopted by many contractors. It can be reasoned from some of the literature surveyed

(Olaniran, 2015; Vennstöm and Eriksson, 2010) that contractors generally have a short-term approach to managing projects, which is primarily based on the attainment of short term profits as opposed to delivering long term client value through superior service and building relationships.

Wood, McDermott and Swan (2002) affirmed that the contractors have been known for poor service quality, poor project delivery, lack of ethics, lack of commitment and adversarial relationships. Brown and Loosemore (2015) support Wood *et al.'s* (2002) position that there is a general lack of ethics and transparency in the construction industry. Gustavsson and Gohary (2012) asserted that the processes within construction projects have been rigid and service quality has generally been poor. Dada (2014) also concluded that relationships on a project, which influence project performance, have generally been poor. Olanrewaju and Anavhe (2014) support Dada's (2014) position and commented that service quality has been poor as time and cost overruns on projects have been frequent and claims on construction projects have thus been prevalent.

Various other authors have investigated shortcomings in service quality, specifically with respect to project performance. Among these authors are Loosemore (2014), who found that poor scheduling and planning have compromised productivity on projects. Ling and Tran (2012) concluded that there are shortcomings in knowledge, experience and skills of contractors, which ultimately impacts the project. Veenswijk *et al*.(2010) pointed out that some of the shortcomings in the industry includes poor tendering practices, a lack of collaboration and communication, collusion, corruption, low transparency, poor co-operation, lack of trust, a culture of blame and general poor project performance incorporating issues such as cost overruns. Odeh and Battaineh (2002) and Sambasivan and Soon (2007) also pointed out that many construction projects have exceeded their time and cost estimates and concluded that contractor's lack of experience was attributed to awarding contracts based on lowest price. Ye,

Shen and Lu (2014) support Sambasivan and Soon's (2007) position and found that poor management of time, cost and quality are frequent and this has primarily been due to selecting contractors based on lowest price.

1.1.2 Consequences of the Problem

Wood *et al.* (2002) concluded that construction businesses have not been profitable and have failed to deliver value to the client due to ongoing adversarial relationships on project teams and the poor service quality. Dlungwana, Nxumalo, van Huysteen, Rwelamila and Noyana (2002) reported that the major challenge experienced by contractors has been the inability to deliver quality projects efficiently. Contractor profit margins have thus been reported to be low and the industry has seen a significant drop in the gross domestic fixed investment (GDFI) and in employment (Dlungwana *et al.,* 2002). Emuze and Smallwood (2014) also reported that profit loss of construction businesses has been high as a result of the short term outlook adopted by contractors.

Tucker *et al*. (2015) reported that the construction GDP in South Africa has dropped and construction businesses have failed because of poor project performance, poor quality and low productivity. Emuze *et al.* (2014) also reported that construction companies have suffered failure due to shortcomings in capability and capacity of these firms. Dada (2014) concluded that time and cost overruns on projects have created a financial risk for contractors and their clients. Chan, Chan, Lam and Chan (2011) and Mahamid (2012) also reported that construction business failure has been high.

Olaniran (2015) and Ren *et al.* (2012) concluded that the pressure of construction firms to survive under the tough market conditions has resulted in contractors cutting prices to win bids and this has resulted in profit loss and poor project performance, which has impacted service quality. Ye, Shen and Lu (2014) also concluded that low price

bidding has resulted in over competition and poor project performance. Olaniran (2015) pointed out that low price bidding can affect the contractor's ability to appoint competent resources to enable the successful completion of the project.

Since the early 1990's competition has been increasing whilst the market has been declining (Edum-Fotowe and McCaffer, 2000). This is supported by Oyewobi, Windapo, Rotimi and Jimoh (2016) and Al-Tmeemy, Abdul-Rahman and Harun (2010), who added that the struggle to survive has necessitated firms to adopt strategies to become competitive.

1.2 Aim of the Study

The aim of this research is to:

Investigate South African public sector construction client's perspectives on relationship quality between contractor and construction client and their perceived shortcomings in service quality

Based on the aim as detailed in the preceding paragraph, the objectives have subsequently been developed toward the achievement of the aim. The subsequent sub section incorporates the objectives of this research.

1.2.1 Research Objectives

The three objectives of this study include:

Objective 1: *To investigate the factors influencing relationship quality between clients and contractors,*
Objective 2: *To investigate the shortcomings in the service quality of contractors and*

Objective 3: *To investigate the procurement approaches being used to improve client contactor relationship quality and service quality.*

1.3 Delineations

- The research focuses on the needs of South African public sector clients involved in construction projects.
- Only the perspectives of South African public sector clients have been considered as part of the analysis. The perspectives of contractors and consultants have not been covered under this study.
- The perspectives of the clients pertain to the service delivered by contractors only.

1.4 Assumptions

- It was assumed that questions were understood and that responses were as accurate as possible. The reasoning is that only targeted participants with relevant knowledge and experience were invited to participate in the survey.
- Based on the literature review, it is assumed that relationship quality and service quality impact one another. The studies of Wood *et al.* (2002); Dada (2014) and Ling and Tran (2012) refer.
- Based on the literature review it is assumed that good contractor client relationships and good service quality impacts the competitiveness of construction firms and their business sustainability (Dulaimi, 2010; Kärnä,*et al.*, 2009).

1.5 Structure of Report

This report comprises the following chapters:

Chapter 1 (this Chapter):

Chapter 1 provides the background to the problem, information from existing studies which support the problem, consequences of the problem, delineations and assumptions applied for the study.

Chapter 2:

Chapter 2 incorporates a critical review of literature on in relationship quality and service quality. A detailed review has been undertaken on studies pertaining to relationship quality, service quality and procurement approaches adopted by construction client organisations.

Chapter 3:

Chapter 3 incorporates the methodology adopted for this research, details of the research design, sampling strategy and the questionnaire design. Details of the constraints during the process and the challenges during the fieldwork have been incorporated into this chapter.

Chapter 4:

Chapter 4 incorporates an analysis of the target population based on the response rate, the organisational and respondent profile. This chapter revisits the aim and objectives of the study

and provides a detailed analysis of findings for each objective. This is followed by a discussion of the findings.

Chapter 5:

Chapter 5 explains how the aim and objectives of this research have been addressed and provides recommendations and conclusions based on the findings. This chapter also incorporates the limitation of the study, practical implications and recommendations for future research.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

Existing studies incorporating relationship quality, service quality and the influence of procurement methods on contractor client relationship quality and service quality have been presented in this chapter.

The purpose of undertaking this literature review is to understand the research topic through the work done by other authors on the subject matter. The critical review process helps in identifying the gaps in existing studies, which will be addressed in the current research (this report). The key words reviewed include construction industry, construction projects, contractor performance, relationships, service quality. Most of the searches incorporated the words “construction industry” as the research is focussed on the construction industry, specifically, contractors and construction clients. The words “contractor performance” and “service quality” helped trace articles with literature on the service quality of contractors, with respect to their performance on projects, and their attitude towards the client and towards the project. The word “relationships” and “construction projects” helped trace articles with literature on the nature of relationships between contractors and clients, and their influence on service quality

2.2 Methodology of Literature review

Literature to support this research was obtained from the following sources:

- Prescribed Textbook, by Saunders, Lewis and Thornhill (2012) was used to guide the approach to the research with respect to how to collect data, the research

methodology to be adopted and the approach to be used in the analysis of the data gathered from field work.

- Textbooks on qualitative and quantitative research
- Published journals and a limited number of peer reviewed articles were used to obtain literature in contractor client relationship quality and service quality.

A search for articles was done utilizing key words pertinent to relationship quality and contractor service quality. The key words included construction industry, construction projects, contractor performance, relationships, service quality. Articles were obtained from the Emerald Database and Google Scholar.

2.3 Definition of "Client" and "Client Company" in this research

"Client" in this research refers to the entity for whom construction projects are done and who will own the completed facility. This definition is supported by Soetanto, Proverbs and Holt (2001). Other authors who made reference to "Client" in this context include Khalfan, McDermott and Swan (2007); Chan *et al*. (2011) and Emuze *et al.* (2014). Client company in this research refers to the public sector construction client bodies which were targeted.

2.4 Performance

Due to the frequency of using the word performance in this report, it is necessary to define performance, its relevance to this study and its association with service quality.

Butcher and Sheehan (2010) argued that the key factors contributing to contractor performance includes the ability to meet time, cost and quality objectives, the relationship between the contractor and client, flexibility, meeting health and safety

requirements and innovation. The contractor's performance influences the client's appraisal of the contractor's service quality (Butcher and Sheehan, 2010). Kärnä *et al*. (2009) also found that the contractor's project performance affects the client's perception of service quality.

This use of the word project performance in this research specifically refers to the contractor's ability to meet time, cost and quality objectives on a project. Authors who asserted that meeting time, cost and quality objectives influences project performace includes Tucker *et al. (*2015), Pekuri, Haapasalo and Herrala (2011), Ye, Shen and Lu (2014), Zuo, Chan, Zhao, Zillante and Xia (2013). Project performance forms part of service quality (Kärnä *et al.*, 2009; Butcher and Sheehan, 2010). Service quality is discussed further in the subsequent sub-section 2.5.

2.5 Evolution of Service Quality and Relationship Quality

Service quality has been gaining an increasing amount of attention from clients (Yisa, Ndekugri and Ambrose, 1996; Kärnä *et al.*, 2009; Butcher and Sheehan, 2010). Clients are becoming interested in the value received from the services delivered (Yisa *et al.*, 1996; Imrie, Cadogan and McNaughton, 2002; Kärnä *et al.*, 2009). Service quality is a necessary means to differentiation, improving client orientation, retaining clients and improving competitiveness (Sureshchandar, Rajendran and Anantharaman, 2002; Imrie *et al.*, 2002; Venetis and Ghauri, 2004; Kärnä *et al.*, 2009).

Service quality refers to the attitude of the service provider and the client's appraisal of service standards (Sureshchandar *et al.*, 2002; Imrie *et al.*, 2002; Forsythe, 2016). Imrie *et al.* (2002), supported by Forsythe (2016) described service quality as assurance, empathy, reliability, responsiveness and deliverables of the service. Miles (2013) found that service quality comprises technology, client interaction and the service delivered. Sureshchanadar *et al.* (2002) argued that ethical behaviour and

service efficiency contributes to service quality. Kärnä *et al.* (2009) affirmed that it is necessary for contractors to provide a superior service and the fulfilment of time, cost and quality objectives are a minimum requirement in this regard.

It can be concluded from Imrie *et al.'s* (2002) study that the relationship between the contractor and client has an influence on the client's evaluation of service quality. It may be concluded from Venetis and Ghauri's (2004) study that service quality helps build and maintain long term relationships between contractors and clients. The reason is the client perceives superior service as value adding and this experience affects future client contractor relationships (Venetis and Ghauri, 2004). Kärnä *et al.* (2009), Frödell (2011) and Zuo *et al.* (2013), supports the position of the preceding authors that contractor's service quality impacts the quality of contractor client relationships.

It can be concluded from Ganesan's (1994) study that long term relationships between the contractor and client offer a competitive advantage and this is likely to improve project performance. Relationship quality is impacted by trust and commitment (Ganesan, 1994). Venetis and Ghauri (2004) supports Ganesan's (1994) position that relationship quality is impacted by commitment and the quality of the relationship influences competitiveness. It may be further concluded from Ganesan's (1994) study that contractor client relationship quality is influenced by long term orientation and trust between the contractor and client. The length and quality of the existing relationship affects the level of trust (Ganesan, 1994). Soetanto *et al.* (2001) affirmed that long term contractor client relationship quality is influenced by contractor performance, honesty, integrity, commitment, co-operation, collaboration and ability to meet time, cost and quality requirements. Ling and Khoo (2016) asserted that client contractor relationship quality is influenced by the client's ability to act as a team member, joint problem solving among contracting parties, open communication and contracting parties having enough trust to share confidential information with each other.

In summary, relationship quality and service quality are an essential means of differentiation and competitiveness for contractors. Relationship quality and service quality are impacted by each other and trust plays an important role in the quality of the relationship. The subsequent sub sections provide a further review of service quality and relationship quality.

2.6 Challenges Faced by the Construction Industry as a Whole

2.6.1 Background

Contractors have generally not been service orientated (Kärnä *et al.*, 2009; Wood, *et al.,* 2002). In South Africa, Haupt and Whiteman (2004) affirmed that the competitive nature of the industry has resulted in contractors focussing on revenue maximisation and carrying out work within the shortest possible timeframes. Also in South Africa, Tucker *et al.* (2015) posited that construction firms have been undertaking work more as a security than for capacity enhancement, which has impacted performance and thus, the industry grapples with many construction firms that lack capacity, technical capability and who are self-interested.

Ho's (2011) study which included South Africa, pointed out that there are various ethical challenges faced by the construction industry, which includes, among others, questionable contractor claims, collusion and contractors who lack commitment. This has impacted project performance, contractor competitiveness and has resulted in business failure (Ho, 2011). Nijhof, Graafland and de Kuijer (2009) reported that the high incidence of contractor corruption has compromised contractor client relationships. Vee and Skitmore (2003) also pointed out that contractors have been known to be unethical, which has led to disputes. One of the primary reasons for unethical behaviour has been the sudden emergence of construction firms who do not possess key competencies and are primarily focussed on profits. This has made it

difficult for honest contractors to maintain their ethical standards (Vee and Skitmore, 2003).

In South Africa, Dlungwana *et al.* (2002) reported that the drop in GDFI, ongoing poor time delivery due to capacity challenges, poor quality, productivity and declining profit margins for contractors have resulted in large sale construction firms seeking business opportunities overseas to survive. There is thus a growing need for contractors to increase their competitiveness by improving their service quality through improved project performance (Dlungwana *et al*., 2002). Zuo *et al*.(2013) also affirmed that the challenges which are being faced by the construction industry such as delays, cost and quality related issues call for new ways of improving efficiency, effectiveness and competitiveness. It has become essential for contractors to adopt a long-term approach to managing projects to overcome competition and improve relationships with clients as this will ensure that long-term profit orientated goals and value maximisation are achieved (Kärnä *et al*., 2009, Al-Tmeemy *et al.*, 2010). Abu Bakar, Tufail and Virgiyanti (2016) support the latter and commented that competition has necessitated there being strategies in place to improve business sustainability and competence.

The subsequent discussion provides insight into the challenges in service quality faced by the construction industry in South Africa and globally, specifically with respect to project performance.

2.6.2 Project Performance in the Construction Industry as a Whole

According to Pekuri *et al.* (2011), the ongoing inefficiencies of contractors have compromised project performance. Furthermore, organisational KPI's are not aligned with business strategy and do not indicate how project performance may be improved.

The increased global competition has created pressure to improve productivity on projects (Pekuri *et al.,* 2011). Ahzahar, Karim, Hassan and Eman (2011) asserted that construction project failures have been common. Project delays have been on the increase, cost overruns have been prevalent and contractor client relationships have been compromised thus (Aibinu and Jagboro, 2002; Dada, 2014). Sambaswan and Soon (2006), Kaliba *et al.* (2009), Zuo *et al.* (2013), Sawhney, Agnihotri and Paul (2014) and Olanrewaju and Anavhe (2014), and Olaniran (2015) also found that time and cost overruns on construction projects have been frequent. Mezher and Tawil, (1998) asserted that delays in public sector construction projects have been prevalent and reported that other areas of service quality improvement include collaboration, communication and prompt response to client requirements.

It was reported, in Kaliba *et al.'s* (2009) study that despite the government investing significant amounts of money on construction projects, industry's major challenge of significant time and cost overruns is still prevalent. Project delays have led to mistrust, adversarial relationships, legal action, financial difficulty and cost overruns on projects. Delayed payment to contractors was found to be the primary cause of project failures, in Kaliba *et al.'s* (2009) study, followed by resource challenges and competence related challenges such as poor co-ordination and supervision capabilities.

Ahzahar *et al*.(2011) found that inadequate supervision on construction projects has resulted in inefficiencies such as re-work. Odeh and Battaineh (2002) also investigated the causes of time delays on construction projects. Odeh and Battaineh's (2002) study confirmed that financing, delays in contractor payment and poor planning were among the main cause of project delays. Delayed contractor payment and shortcomings in certain contractor competencies were common to Odeh and Battaineh's (2002) study, Kaliba *et al.'s*(2009) study and Aibinu and Jagboro's (2002) study. Olaniran (2015) attributed project time and cost overruns to the ongoing selection of contractors based on lowest price. Olaniran (2015) concluded that contractor selection criteria has had a major influence on contractor performance.

Kaliba *et al.'s* (2009) study has alignment to this research as the investigation pertained to government projects and focused on aspects of service quality which pertain to performance (time and cost overruns). However, Kaliba *et al.'*s (2009) study only focuses on time and cost overruns and their causes. It is limited with respect to investigating the effects of time and cost overruns on contractor client relationships or the role which these relationships have had on time and cost overruns. Despite having a limited number of respondents, the study does offer a considerable attempt at identifying the factors which cause time and cost overruns.

Odeh and Battaineh's (2002) study is also relevant to this research as it also focuses on government projects and focusses on aspects of project performance (time delays), which impact contractor service quality. The research by Odeh and Battaineh (2002), however only incorporates contractors and consultants in the survey, not clients. Thus, the perspective on time and cost overruns and their causes may be one sided. Both Kaliba *et al.*'s (2009) and Odeh and Battaineh's (2002) studies have relevance to this research, however they have only focused on a limited area of service quality, which is time and cost delivery.

In South Africa, Thobakgale, Aigbavboa and Thwala (2014) investigated the causes and consequences of disputes between contractors and clients. It was pointed out in Thobakgale *et al.'*s (2014) study that lack of contractor competency, poor supervision, unrealistic tender prices are common causes of disputes in the construction industry and the result has been time overruns on projects and damaged contractor-client relationships. The study by Thobakgale *et al*. (2014) provides an in depth view of the common causes of disputes in the industry and its effects on project performance. However, Thobakgale *et al.'*s (2014) study is a report back on existing literature and only focused on the effect of disputes on project time delivery. The study did not incorporate interviews with client bodies to obtain client's feedback on the cause, consequences and frequency of disputes and their effect on client contractor relationships, based on first hand experience of clients. While it was affirmed, in

Thobakgale *et al.*'s (2014) study that a project comprises human interactions and relationships, very little human – related causes and effects pertaining to disputes were investigated in this paper.

In South Africa, Emuze *et al.* (2014), also affirmed that there is a need for performance on construction projects to improve as performance influences competitiveness of contractors. Shortcomings in contractor competence was found to be the highest contributor to poor performance on projects (Emuze *et al.,* 2014). The factors which lead to project failure, as identified in Emuze *et al.*'s (2014) study are consistent with Kaliba et *al.'s* (2009) study and incorporate competency, supervision skills, numerous amendments, approval delays, time and cost overruns and claims (Emuze *et al.*, 2014). Emuze *et al.'s* (2014) study gives insight into the challenges experienced in delivering successful projects but only focuses on issues specific to construction sites which contribute to project failure. Whist this is a South African study, the analysis and findings were based on ranked data, not responses. Client responses based on their exposure to contractors were thus not incorporated into the study. Thus there may be other shortcomings in contractor service quality which have not been covered in Emuze *et al.'s* (2014) study.

Section 2.6.3 deals with the existing quality of relationships, the importance of good relationships and the influence of relationships on service quality.

2.6.3 Relationship Quality in the Construction Industry as a Whole

Good relationships are a key factor for good project performance (Akintoye and Main, 2007; Lau and Rowlinson, 2011). Good relationships enable problem solving and are a mitigation against cost and time related problems (Lau and Rowlinson, 2011). Fragmentation in the construction industry has had an impact on the development of relationships and the ability to deliver projects successfully (Gustavsson and Gohary,

2012, Naoum and Egbu, 2016). Akintoye and Main's (2007) study attributed the primary causes of the current poor relationships to a lack of communication and trust, misaligned business cultures, poor attitudes and lack of management support. Similarly, Zuo *et al.'s* (2013) study reported that poor communication, lack of trust and poor co-operation levels have been common problems in the construction industry which have led to adversarial relationships among project stakeholders, which include clients and contractors. The focus of contractors has been short term and contracts are primarily relied upon to solve problems as opposed to relying on good communication (Zuo *et al*., 2013).

Communication on projects has generally been poor (Lau and Rowlinson, 2011; Eriksson and Laan, 2007; Tai, Wang and Anumba, 2009; Butcher and Sheehan, 2010). Jiang *et al.* (2011) found that communication and co-operation are important factors in building client contractor relationships, which have been lacking. A lack of communication has mainly been due to a lack of team integration, which has compromised client value (Naoum and Egbu, 2016). Contractor client relationships have been adversarial (Tai *et al.*, 2009; Jiang *et al.,* 2011). Poor communication has been the cause of adversarial relationships (Lau and Rowlinson, 2011; Eriksson and Laan, 2007; Zuo *et al.,* 2013).

A lack of communication on a project can increase costs, delay progress and compromise project quality (Tai *et al.*, 2009). Zuo *et al.'s* (2013) study provides useful insight into the quality of relationships in the construction industry. The study, however adopts a broad view of relationships and performance in the construction industry by considering all stakeholders on a project as opposed to focussing on specific parties such as clients and contractors. Similarly, Tai *et al.'s* (2009) study incorporates the challenges in communication within the entire project team, as opposed to specific participants, but the study still has relevance to this research as communication plays a role in project performance, as per Tai *et al.'s* (2009) study. Both Tai *et al.'s* (2009)

study and Zuo *et al.'s* (2013) study have relevance to this research as the client is a project stakeholder and is part of the project team.

Emuze and Smallwood (2014), attributed the prevalent adversarial relationships on project teams to a lack of trust, cumbersome contract conditions, unfair risk allocation, tender selection processes and unfair payment processes. The study called for further research incorporating clients, consultants and suppliers. Emuze and Smallwood's (2014) study has relevance to this research as themes such as relationships, trust, collaboration formed key points of discussion and findings, which are also relevant to this research. The study, however, considers the entire supply chain incorporating contractors, sub-contractors, suppliers, clients and mostly focusses on the aspect of collaboration. The study investigated relationships among the broader supply chain, as opposed to contractor client relationships specifically. The study did not incorporate a detailed investigation on the specific areas of contractor service quality which have been impacted as a result of fragmentation in the industry. The study also only considered contractor's opinions and these cannot be dismissed as client perspectives for this research.

Thobakgale *et al.* (2014) pointed out that interactions on a project are all human and the emotional aspect of these interactions must be understood. In Vietnam, Ling and Tran (2012) found that higher levels of trust lead to higher levels of client satisfaction and trust is built over a period and over numerous interactions. However, the short-term nature of construction projects can inhibit the development of trust, which impacts relationships on a project (Zuppa, Olbina and Issa, 2016).

According to Nijhof *et al.* (2009), transparency is an essential element in building trust as a means of improving relationships, and has been a serious shortcoming in the industry due to the short-term outlook and dishonesty of many construction firms. Financial difficulty has resulted in contractors resorting to opportunistic claiming by exploiting contract weaknesses and the resulting poor client contractor relationships have necessitated more transparency (Nijhof *et al.*, 2009).

Factors such as cost efficiency, aligned organisational values, superior service quality, open and honest communication and collaboration influence client contractor relationships (Frödell, 2011). Lau and Lowlinson (2011) found that relationships are influenced by integrity and by proven competence. Trust is a crucial element in developing and maintaining good relationships (Ling and Tran, 2012; Zuppa *et al.,* 2016; Wong and Cheung, 2004). Trust, which impacts relationships, assists with better team integration, higher profits, minimises conflicts and is likely to reduce the number of claims through open communication (Zuppa *et al.*, 2016). Trust impacts integration, communication, the ability to negotiate and meet time, cost and quality requirements on a project (Ling and Tran, 2012).

According to Ling and Tran (2012), adversarial relationships between contractor and clients are minimised through the development of trust and the ability to resolve conflicts is improved. Proven competence, solving problems without assigning blame, open and honest communication and financial capability were found to factors influencing relationships, in Ling and Tran's (2012) study. Open and honest communication improves relationships as it facilitates problem solving and enhances transparency (Ling and Tran, 2012). Wood *et al.* (2002) also found that open and honest communication has the highest impact on relationships. Other factors influencing relationships, as per Wood *et al.'s* (2002) study included keeping promises, fairness, reciprocity, values and ethics and reputation.

Zuppa *et al.* (2016) concluded that relationships are impacted by co-operation, communication and integrity. The preference to use alternative dispute resolution methods, non-traditional type approaches to managing projects, competence, openness and respect are essential elements for improving relationships (Zuppa *et al.,* 2016). Zuppa *et al.'s* (2016) study covers an extensive investigation on the factors which influence relationships and areas which are impacted by good relationships have been presented, thereby supporting this research extensively. The study,

however, does not provide much information on the current quality of relationships in the industry or the impact which this has had on specific areas of service quality.

Butcher and Sheehan (2010) found that in general, clients value contractors who align themselves with the client's business requirements, act with integrity, are transparent, committed and pay close attention to building relationships with clients and can meet time, cost and quality objectives as such factors are key to building long term relationships with clients. Relationships are influenced by management's commitment, trust, respect, communication, the number of claims, disputes and cultural alignment between contracting parties (Butcher and Sheehan, 2010).

2.6.4 Procurement Mechanisms and their effects on Relationship Quality and Service Quality

The industry has been described as one in which is driven by short term profit maximisation where opportunism is prevalent, communication is minimal, relationships are adversarial and characterised by a lack of trust, and this has been primarily attributed to the use of traditional procurement systems (Vennstöm and Eriksson, 2010, Yong and Mustaffa, 2012). Unethical conduct has compromised construction project quality (Ahzahar *et al.*, 2011). The high prevalence of contractor selection based on low bid price is a result of the public sector needing to account for their spending (Olairan, 2015).

With most traditional procurement systems, price is a deciding factor and the focus is on short term profits, however, bid price alone cannot be an indication of the bidder's capability to undertake the work (Ren *et al.*, 2012; Yong and Mustaffa ,2012; Strahorn, Gajendran and Brewer, 2015). The traditional procurement system which makes use of open tendering, does not place any restrictions on who can bid as bidding takes

place irrespective of competence, thereby encouraging dishonest behaviour and competitive bidding, which impacts the contractor's ability to complete the work within the low bid price (Ren *et al.,* 2012; Strahorn *et al.*, 2015; Yong and Mustaffa, 2012). Low profit margins, arising from lowest price selection can result in poor quality, disputes and claims, which lead to time delays on a project (Ren *et al.,* 2012; Olaniran, 2015). Finger pointing and self interested contractors are prevalent where lowest price selection is adopted and contractors often submit enormous claims to offset their low bid price (Ren *et al.,* 2012). Other authors who asserted that lowest price selection of contractors is prevalent and has resulted in a short term focus includes Kashwagi and Byfield (2002) and Eriksson and Laan (2007)

Lau and Rowlinson (2011) also argued that price is still a focal point in contractor selection, even though clients can foresee the challenges associated with this selection procedure. Eriksson and Laan (2007) argued that lowest price selection has given clients little control over the attitude of contractors who are selected. This has inhibited the development of client contractor relationships through trust and compromised the ability of contractors to gain a long term competitive advantage (Eriksson and Laan, 2007). The traditional procurement approach incorporating open tendering has resulted in non-performance, low quality, adversarial relationships, claims and increased costs (Kashwagi and Byfield, 2002). Tucker *et al.* (2015) also support the finding that procurement methods used have attracted contractors who have been performing poorly and has compromised client contractor relationships. Lau and Rowlinson (2007), Ren *et al.* (2012) and Emuze and Smallwood (2014) also argued that competitive tendering has compromised client contractor relationship quality.

Tucker *et al.* (2015) affirmed that in South Africa, procurement methods have focussed on socio-political criteria as opposed to contractor capacity and capability and these methods were described as "unfair" in Tucker *et al.'s* (2015) study. According to

Kashwagi and Byfield (2002), contractor performance on projects has not had an influence on competitive advantage as the primary selection criteria used by clients has been price. The competitive environment has created pressure on contractors to increase work volume, which has resulted in low profit margins and poor quality (Kashwagi and Byfield, 2002). Zuo *et al.* (2013) also attributed the ongoing lack of profitability and efficiency to the continued use of traditional procurement systems.

Olaniran (2015) and Baiden *et al. (*2006) asserted that due to the performance issues arising from low price selection, there is starting to be a slow move away from lowest price selection. As a means of minimising risk, clients have resorted to forms of contract such as design- build contracts, pre-qualification criteria, and construction management at risk (Kashwagi and Byfield, 2002). Naoum and Egbu (2016) support the latter's position and concluded that the need to migrate to alternative type of contracts is to keep up with clients changing expectations, improve team integration and communication. Hong, Chan and Chan (2012) argued that there is starting to be an interest in relationship based contractual approaches which are based on the principles of good faith, commitment and mutual trust.

Akintoye and Main (2007) and Eriksson and Laan (2007) also argued that while traditional procurement methods are still being adhered to, the migration toward strategies which focus on building relationships through collaboration, is starting to gain momentum as this approach positively impacts project performance, and can help contractors in responding to client needs more closely. The result is the management of relationships, less conflicts and disputes and no finger pointing (Akintoye and Main, 2007). Managing relationships through building trust, respect, commitment and communication is likely to achieve improved project quality, result in improved conflict resolution and reduced time and cost overruns (Eriksson and Laan, 2007).

The types of alternative procurement methods suggested in Naoum and Egbu's (2016) includes design and build, partnering and alliancing which is likely to assist in improving the quality of relationships between clients and contractors. Baiden *et al.*

(2006) also argued that the traditional procurement approach has brought about fragmentation in project teams and poor project performance and this has necessitated a move toward collaborative procurement approaches such as a design and construct type contracts which improves team integration and collaboration through shared risk and minimises adversarial relationships between clients and contractors.

The literature presented in this chapter incorporates the causes and effects of poor service quality; the nature of relationships on a project team, in the industry and between clients and contractors; the factors which influence relationship quality and the importance of good relationships. The need for contractors to move toward a long term client and relationship orientated approach to managing projects has been highlighted in the preceding sub section 2.5.4.

The literature reviewed in this chapter demonstrates that service quality, which is impacted by contractor's performance on projects has an impact on relationship quality. It is evident that in South Africa, insufficient literature exists on client contractor relationships and the shortcomings in the service quality of contractors.

Based on the literature reviewed towards achieving the aim and objectives of this study, the main research question is as follows:

What are the areas which need to be addressed by construction clients and contractors to nurture better relationships and service quality?

In addressing the main research question, the following sub-questions have been developed, which are aligned with the objectives of the study:

Research Sub-Question 1: What do clients perceive to be the factors influencing client contractor relationships? (Addressed by Objective 1)

Research Sub-Question 2: What do clients perceive as the shortcomings in contractor's service quality? (Addressed by Objective 2)

Research Sub-Question 3: What are the procurement approaches being adopted to effect better client contractor relationships and better service quality? (Addressed by Objective 3)

CHAPTER 3: METHODOLOGY

3.1 Introduction

The purpose of this chapter is to provide information on the following, as adopted to achieve the three objectives established earlier in this study (please refer to chapter 1):

- The research philosophy and approach used
- The research design and strategy used.

3.2 Research Design and Strategy

A survey questionnaire is a widely used, user friendly means of data collection and analysis (Witell, Kristensson, Gustafsson and Löfgren, 2011; Saunders *et al.,* 2012; Rowley, 2014)

The survey design adopted a semi-structured questionnaire seeking both qualitative and quantitative data, to improve the richness of the data analysis (Hanson and Grimmer, 2007; Harrison and Reilly, 2011; Fellows and Liu, 2015)

3.3 Research Methodology

3.3.1 Qualitative and Quantitative Research

Amaratunga, Baldry, Surshar and Newton (2002), supported by Mangan, Lalwani and Gardener (2004) and Harrison and Reilly (2011) argued that qualitative analysis is concerned with deeply understanding the respondent's views and the data produced

from following this process, is of meaning and substance. Qualitative analysis may be applied to research areas where there is limited knowledge and new knowledge may be derived thus (DeRosia and Christensen, 2009).

Quantitative Analysis yields data which is definitive, such as measurements of quantities and the frequency of data (Hyde, 2000; Amaratunga *et al.,* 2002, Rowley, 2014). The study by Christy and Wood (1999) also used the approach of counting the frequency of responses as part of quantitative analysis. The relationships between variables may be studied using quantitative analysis (Amaratunga *et al*., 2002; Altinay and Wang, 2009; Harrison and Reilly, 2011). The data obtained from quantitative analysis is intended to be generalised, and thus can lack the richness of a qualitative study (Hyde, 2000; Amaratunga *et al.,* 2002, Rowley, 2014). Christy and Wood (1999) argued that qualitative research, as opposed to the generalisation targeted in quantitative research, is aimed at deeply understanding the sample being studied.

Amaratunga *et al.* (2002) supported by Jepsen and Rodwell (2008) and Suri (2011) asserted that qualitative research usually occurs on a small scale, with fewer participants as compared to quantitative research, which occurs on a large scale.

The mixing of qualitative and quantitative analysis improves the richness and understanding of data, were information using one technique is used to support the other (Bryman, 2006; Boddy, 2016; Harrison and Reilly, 2011). Qualitative analysis allows more flexibility through open ended questions and produces richer data than using the data from quantitative analysis alone (Jepsen and Rodwell, 2008). Quantitative data from surveys can be used to support qualitative data from interviews (Jepsen and Rodwell, 2008).

Many authors associate the use of interviews with qualitative research as an interview enables understanding of the response through the interviewer clearly communicating the requirements (Zimmerman and Szenberg, 2000; Mangan *et al*., 2004, Hanson and Grimmer, 2007; Jepsen and Rodwell, 2008; Farooq and de Villiers, 2017). Whilst

telephonic interviews can also be applied, face to face engagements improve communication lines and it is easier for the interviewer to pick up on whether the interviewee does not understand or needs clarity (Janes, 2001; Farooq and de Villiers, 2017).

A survey questionnaire is most appropriately used for quantitative research as this approach enables the generalisation of data (Bryman, 2006; Irani, Weerakkody, Kamal, Hindi, Anouze, El-Haddadeh, Lee, Osmani and Al-Ayoubi, 2012; Rowley, 2014)

It was the researcher's initial intent to conduct face to face interviews, however, difficulty was experienced in gaining the interest and support of the potential participants. Kapoulas and Mitic (2012) supported by Altinay and Wang (2009) and Fjellström and Guttormsen (2016), asserted that gaining access to an organisation when conducting research can be a challenge. Organisational culture and the level of trust the organisation has on the researcher can influence the level of access which the researcher is allowed (Altinay and Wang, 2009).

Some of the challenges experienced by the researcher in obtaining the co-operation of potential participants included failure to respond to emails, messages and phone calls despite several follow ups. In some instances, the researcher's phone calls were not taken. During this time, attempts were made by the researcher to gain approval to interview respondents telephonically, but due to the difficulty in obtaining the co-operation of potential participants, a survey questionnaire was developed. Some of the open ended questions which were intended to be incorporated into the interview were included in the questionnaire, which also incorporated closed ended questions. The approach to analysing data was a combination of qualitative and quantitative data analysis.

The structure of the questionnaire and the applicable objectives were as follows:

Objective 1: Part 1 of the questionnaire comprised open ended questions. The data was mainly analysed qualitatively by trying to understand the response. The frequency of comments were analysed quantitatively.

Part 2 of the questionnaire comprised closed ended questions and the data was analysed quantitatively. For objective 1, a mix of qualitative and quantitative analysis was used to interpret the data.

Regarding precedence, qualitative analysis took precedence over the quantitative analysis, as the quantitative analysis was used to support the results of the qualitative analysis. Furthermore, research was heavily dependent on experiences and perceptions of public sector construction clients. Thus, more emphasis was placed on the responses to the open ended questions.

Objective 2 and 3: Part 1 of the survey questionnaire, comprising open ended questions was used to address objectives 2 and 3 and a mix of qualitative and quantitative analysis was used to interpret the data.

3.4 Sampling Plan

3.4.1 Sampling Technique

The sampling technique used was purposive sampling. Purposive Sampling involves choosing the sample to be in line with the research objectives (Palys, 2008, Suri, 2011).

In total, 45 potential participants were sent questionnaires from 11 organisations (Refer to table 4.1). This research was geared toward individuals who have experience

in managing construction projects in South Africa. Such individuals included project managers/ leaders, middle and senior management who are knowledgeable on the subject and could make meaningful contributions to the study. Also important to note is that these individuals are employed by government organisations and are the client representatives who manage construction projects (also referred to in the report as “public sector clients”).

The snowball sampling technique was adopted as it was difficult to gain access to individuals with the desired profile. The latter is supported by Baltar and Brunet (2012) who suggested that a key representative in an organisation should be identified and used to access other suitable individuals. Thus, a key representative from each organisation, who met the required profile, was identified and these individuals were used to seek other potential participants who met the experience requirements of the survey (Suri, 2011; Saunders, 2012; Baltar and Brunet, 2012; Argerich and Cruz-Cázares, 2017).

Christy and Wood (1999), supported by Altinay and Wang (2009) affirmed that snowball sampling can enable the researcher to use their own judgement to determine the most suitable participants who will fulfil the research objectives. The snowball sampling technique, however, can lend itself to bias as the selection of the other individuals are dependent on the perceptions of the key representative selected (Christy and Wood, 1999; Baltar and Brunet, 2012; Argerich and Cruz-Cázares, 2017). Based on the foregoing, the sampling technique can influence results and can result in a low response rate (Argerich and Cruz-Cázares, 2017).

3.4.2 Population

This research was geared toward individuals who have experience in managing construction projects. Such individuals included project managers/ leaders, middle and senior management who have experience on construction projects. As previously stated, these individuals are employed by government organisations and are the client representatives who manage construction projects (also referred to in the report as “public sector clients”))

3.5 Data Collection

3.5.1 Questionnaire Design

The data collection technique applied was a detailed questionnaire comprising open ended questions for the first part of the questionnaire and closed ended questions for the second part of the questionnaire. As far as possible, descriptions were provided where necessary, to aid clarity (Saunders *et al.,* 2012).

For there to be valid responses it was necessary for the questions to be worded so that it was easily understood and this required an extent of research into existing literature (Schensul, Schensul and LeCompte, 1999). Existing literature was first reviewed, and was used to design the survey questions (Jiang *et al.,* 2011). The questionnaires were emailed to respondents. To improve the response rate from the potential participants, the following steps were taken:

- To gain access to the organisations, it was necessary to ensure that the objectives of the study were clearly communicated ((Schensul *et al.,* 1999). The interest to participate (ITP), which was sent to each participant incorporated the objectives of the study. The purpose of the interest to participate letter was to obtain the

individuals acceptance to participate. The individuals had a choice to either accept or reject the request to participate and to indicate this on the form. The ITP form contained a covering letter with detailed explanations with respect to the background and objectives of the research. A description of the individuals targeted were also included as part of the covering letter attached to the ITP form. This information provided context to this research and was intended to ensure that respondents understood the purpose of this research. Furthermore, to aid understanding, explanations were provided to certain questions within the questionnaire as special notes.

- Pilot testing took place. Pilot testing is necessary to determine the suitability and clarity of the survey questionnaire and offers an opportunity to improve the questions (Fellows and Liu, 2015).

  A pilot questionnaire was sent out to a few respondents. However, no responses were received. It was thus necessary to expand on the questionnaire before issuing it again. A possible reason for the non response could have been a lack of clarity of the questions asked. The initial questionnaire comprised 6 open ended questions and 8 closed ended questions, whereas the updated questionnaire comprised 9 open ended questions in part 1 and 18 closed ended questions in part 2.

The questionnaire comprised the following parts:

Part 1: 9 Open ended questions were presented to participants. The reason open ended questions were asked is the study is based on the perspectives of public sector construction clients. Thus, it became necessary to ask questions which enabled participants to answer questions openly, based on their exposure to the subject matter

being studied. According to Fellows and Liu (2015) open ended questions allow unrestricted, in-depth responses.

Part 2: Forced Choice questions were presented to participants. These consisted of 18 closed ended questions. Each of the 18 questions consisted of pre-determined alternatives from which respondents were required to choose. Information obtained from existing studies were used as a guide to develop the closed ended questions. Studies by authors such as Butcher and Sheehan (2010), Kärnä *et al.* (2009) Ling and Tran (2012) were referred to.

A 5 point Likert scale rating applied to the closed ended questions. The Likert scale rating system provided options to individuals which ranged from strongly disagree to strongly agree. This type of rating system does not force a respondent to tick the "Agree", "strongly agree", "strongly disagree" or "disagree" options. Should the respondent be uncertain then they could allocate a score of 3 to the corresponding statement (Saunders *et al*., 2012)

3.5.2 Aspects of Validity

Content Validity refers to the extent to which the questions address the topic investigated (Saunders *et al.*, 2012). Content validity was ensured by reviewing existing studies incorporating subjects such as contractor client relationship quality and service quality. The shortcomings of the existing studies were identified and this informed the questions which needed to be asked.

3.5.3 Approach for reporting of Results

The objectives of the research were used as a guide to assist in determining a structure for reporting. Each objective was listed and the questions pertinent to the objective were addressed under the respective objective. The data analysis process involved the consideration of responses from respondents, which were indicated in verbatim quotes in table format. Existing studies were also referenced to determine areas of alignment and to explain some of the findings obtained.

Ranked data was analysed by referring to the mean scores attained with respect to part 2 of the questionnaire. This data was read in conjunction with the corresponding words as recommended by Schensul *et al.* (1999). Quantitative data were reported in terms of frequencies of responses, which were plotted on graphs (Christy and Wood, 1999; Hyde, 2000; Amaratunga *et al.,* 2002; Rowley, 2014;)

3.6 Ethical Considerations

The following ethical considerations were in place during this research study:

- Integrity and objectivity of the researcher: Findings were reported accurately based on factual representation of data collected from the respondents (Saunders *et al.,* 2012).
- Avoidance of harm: The style of conversations with the respondents was professional. There was no harm caused to the emotional state of interviewees through asking of confidential or private information (Saunders *et al.,* 2012).
- Privacy of participants: Anonymity and confidentiality were maintained by neither revealing the identities of the study participants nor disclosing the responses of the different participants to one another. Whilst individual opinions were used, information was reported such that it will not be possible to identify the participants.

Participants were not named in the report. The data gathered will form part of archived information and will be preserved from unauthorised access. Archived information will be password controlled (Saunders *et al.*, 2012).

- Obtaining Informed consent: This process involved the issuing of Interest to Participate (ITP) forms. A covering letter was attached to the ITP form. As part of the covering letter, a full description of the research objectives was provided so that the participants had a full understanding of the research, together with what was required of them.

  The participant's interest to participate in the survey was indicated by endorsing on the Expression of Interest to Participate (ITP) Form. Following the receipt of the ITP form, survey questions were mailed to participants for feedback. Consistent with the snowballing technique applied, a representative from each participating organisation was targeted, with the intent of this representative identifying other suitable candidates to participate in the research. It was indicated that the expected duration to complete the survey should be approximately 30 minutes. The respondents were instructed to send their forms directly to the researcher.

- Ethical clearance was obtained from the school of construction economics and management's ethics committee. The application contained details of the participants targeted, assurance of confidentiality, anonymity, reporting and accessibility of data.

3.7 Timelines

3.7.1 Breakdown of timelines

The following timeframes applied to the process from the commencement of the research report until submission.

Item	Actual Timeframe	Activity
i	29 May 2015	Ethical Clearance Obtained
ii	01 June 2015	Commence Survey Process
iii	20 September 2015	Conclude survey process
iv	15 November 2015	Complete and submit the first draft report (Report 1)
v	15 December 2015	Complete and submit the second draft report (Report 2)
vi	31 March 2016	Submission of final Research Report

Table 3.1: Timelines used for the submission of the research report (refer to next page)

3.7.2 Constraints

The time constraint was managed by imposing a deadline for the completion of survey questionnaires. The initial timeframe provided was 2 weeks. The late respondents were managed by follow ups to ensure that survey responses were submitted.

3.7.3 Challenges

The major challenges experienced were as follows:

- Initial access to potential participants was a challenge in that many of the client representatives contacted initially indicated willingness to participate by later failed to return calls or respond to emails. The intent of the research was clearly explained and was also detailed in the interest to participate (ITP) form to gain the support of these individuals.

- The conclusion of the survey process was planned for 01 August 2015. However, most of the potential participants did not adhere to the required timeframe and some never completed the questionnaire. As a result, more follow ups (via email, telephone calls, sms's) than initially planned were in place to ensure that completed questionnaires were emailed back.

CHAPTER 4: DATA ANALYSIS

4.1 Introduction

The purpose of this chapter is to provide summary of the target population and an analysis of data obtained from the survey process. Data as per the responses to questionnaires are presented, followed with analysis of the data and then a discussion. The discussion comprised supporting studies which support the findings of the current research.

4.2 Target Population Analysis

4.2.1 Target Population and Response Rate

The sampling technique applied was purposive sampling. The target population included project managers/ leaders, middle and senior management who are knowledgeable on the subject and could make meaningful contributions to the study. Also important to note is that these individuals are employed by government client organisations and are the client representatives who manage construction projects (also referred to in the report as “public sector clients”).

Survey questionnaires were emailed to public sector construction client representatives (included project managers/ leaders, middle and senior management). The survey questionnaire is attached in Annexure B. The ensuing Table 4.1 provides a summary of the target population. To protect the anonymity of respondents, the organisation names have been represented as A to K

Organisation	Respondent	Target Respondents	Acual Respondents	Response Rate (%)
A	1	5	1	20%
B	N/A	5	0	0%
C	N/A	5	0	0%
D	2	5	1	20%
E	N/A	2	0	0%
F	N/A	1	0	0%
G	N/A	5	0	0%
H	3,4,5,6,7	5	5	100%
I	8	5	1	20%
J	9	5	1	20%
K	10	1	1	20%
Total number of individuals targeted		**45**	**10**	**22%**

Table 4.1: Information pertaining to the target population and the response rate

As reflected in the preceding Table 4.1, the response rate, from most organisations was zero to 20 percent. Survey questionnaires were provided to 45 potential participants, from 11 organisations, who were project managers/ leaders, middle and senior management who have experience on construction projects. Only 10 individuals responded, 5 of which were from the same organisation.

The overall response rate was 22%. A one hundred percent response rate was received from Organisation H only. 80 percent of the respondents from organisation A indicated their reluctance to complete the questionnaires as some of the questions were perceived as sensitive. Respondents from the balance of the organisations (other than organisation H) did not respond despite several follow ups.

Even though the data set was smaller than what was expected by the researcher, despite several follow ups to obtain more responses, the data obtained are still valuable and relevant to the subject matter being studied. The majority of the analysis involved analysing data qualitatively through understanding the responses provided and finding literature to support and explain some of the responses. In qualitative research, even a sample size of one cannot be discarded as a single individual can provide in depth responses which can open up knowledge areas for future research, which were not previously explored (Beuckelaer and Wagner, 2012; Boddy, 2016). Hyde (2000) supports the latter and argued that even a single case, if analysed thoroughly can be generalised for the rest of the population.

A small sample can yield valuable results if the researcher, through understanding the population, is able identify suitable candidates to participate and provide in depth, meaningful responses which can be analysed at length, and meet the objectives of the research (Christy and Wood, 1999).

4.2.2 Respondent Profile

4.2.2.1 Background of organisations to which the respondents belong

The subsequent Table 4.2 provides information on the main work being carried out by the organisations involved

ORGANISATION	RESPONDENT	BACKGROUND OF THE ORGANSATION
A	1	Construction and maintenance of roads
D	2	Infrastructure development incorporating building construction and surrounding roads
H	3,4,5,6,7	Transportation infrastructure construction and maintenance
I	8	Construction and maintenance of roads, education and health facilities
J	9	Housing construction
K	10	Construction and maintenance of roads

Table 4.2. Background to the organisations to which the respondents are affiliated

The ensuing Table 4.3 provides a summary of the respondents and their profiles, based on the generic questionnaire issued to respondents, which is attached in Annexure A

RESPONDENT NUMBER	AGE GROUP	RANGE OF EXPERIENCE IN YEARS	FIELD OF EXPERTISE	RANGE OF YEARS OF EXPERIENCE IN THE CURERNT FIELD	ORGANISATION SIZE	GENDER
1	50-55	25-30	Construction Project Manager	10-15	500	Male
2	40-45	20-25	Project Director	10-15	1000	Male
3	35-40	10-15	Senior Project Manager	5-10	1200	Male
4	30-35	5-10	Construction Project Manager	5-10	1200	Male
5	40-45	20-25	Project Director	10-15	1200	Male
6	30-35	5-10	Construction Project Manager	5-10	1200	Male
7	30-35	5-10	Construction Project Manager	5-10	1200	Female
8	40-45	15-20	Construction Project Manager	10-15	3000	Male
9	40-45	15-20	Senior Manager in construction	5-10	200	Female
10	40-45	15-20	Construction Project Manager	10-15	1000	Male

Table 4.3. Consolidated profile of research participants

4.2.2.2 Graphical Representation of Respondent Profile

Qualitative research involves deeply understanding the background of the participant, the response provided and the influence of the respondent's characteristics on the response (Hyde, 2000; Amaratuga *et al*., 2002; *Mangan et al*., 2004; Altinay and Wang, 2009). Based on the foregoing, the profiles of each participant were categorised according to their expertise, organisational size and their number of years of experience.

The following pie charts, as per ensuing Figures 4.1 to 4.3 provide a profile of respondents based on expertise, organisation size and number of years of experience.

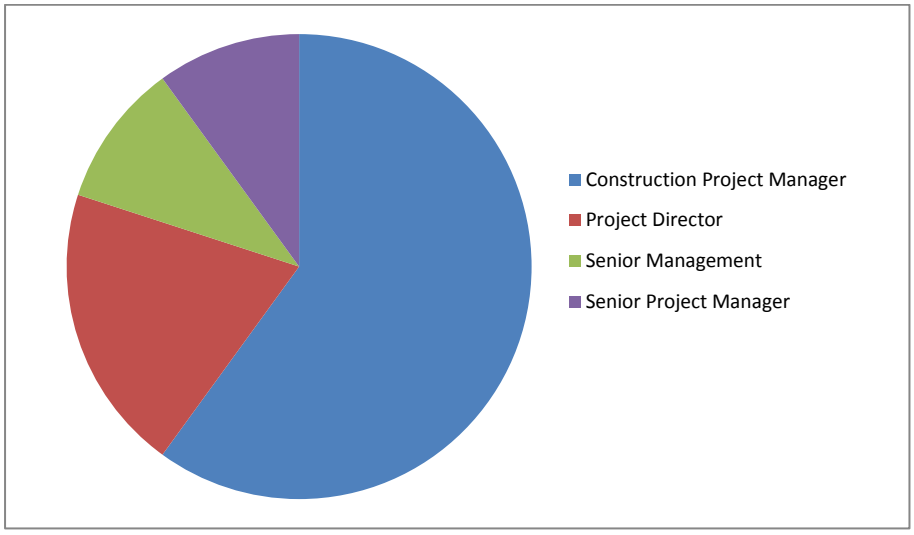

Figure 4.1: Profile of the respondents based on Expertise

The preceding Figure 4.1 provides the profile of the respondents surveyed. Sixty percent (60%) of the respondents are construction project managers. Ten percent (10%) are senior project managers, ten percent (10%) are from senior management and twenty percent (20%) are project directors.

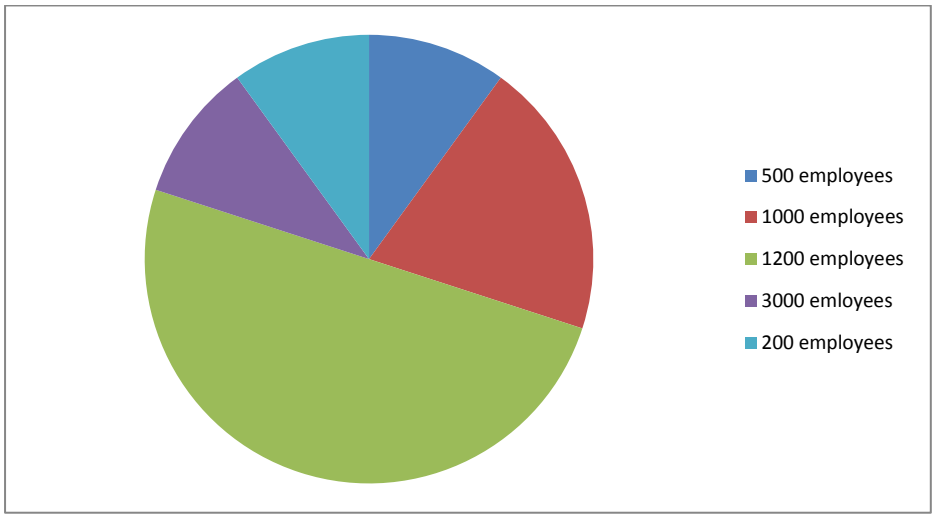

Figure 4.2: Profile of the respondents based on the organisation sizes

The preceding Figure 4.2 provides the organisation sizes of the respondents. The information helps understand how the characteristics of the organisation influences the responses provided.

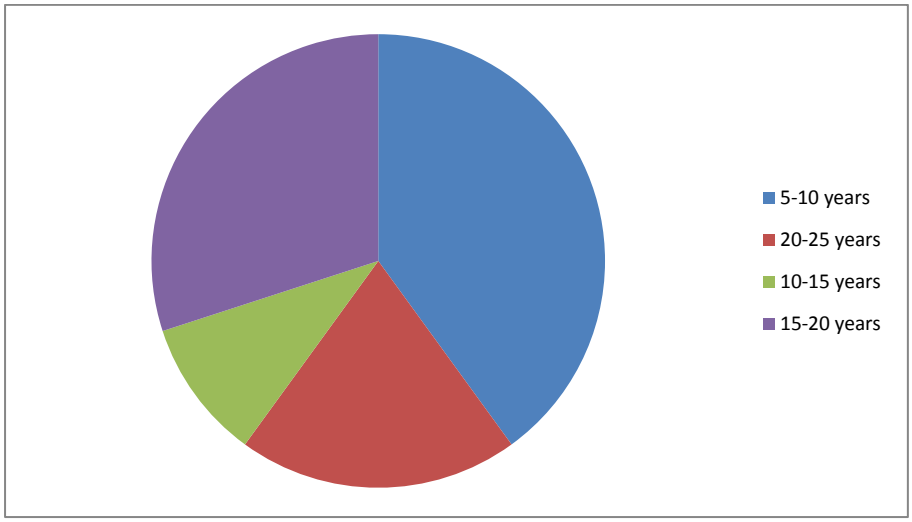

Figure 4.3: Profile of the respondents based on the number of years of work experience.

The preceding Figure 4.3 provides the age group of the respondents. This information has relevance as the maturity level of respondents has an influence on how the questions are answered.

4.3 Data Analysis

4.3.1 Approach for analysing questions which addressed objective 1

Questions 3 and 4 from Part 1 of the questionnaire were used the address Objective 1. Both Questions 3 and 4, which were open ended questions, provided data which was mainly analysed qualitatively. The frequencies of comments were analysed quantitatively.

Part 2 of the survey questionnaire comprised quantitative data where respondents were required to rate statements on a 5 point Likert scale. The subsequent quantitative analysis of Questions 3 and 4 from Part 2 was used to support the analysis from Part 1 of the survey questionnaire.

4.3.2 Approach for analysing questions which addressed objective 2

Question 5 from part 1 of the questionnaire was used to address Objective 2. Question 5 was and open ended question and the data obtained from Question 5 was mainly analysed qualitatively. Frequencies of comments were analysed quantitatively.

4.3.3 Approach for analysing questions which addressed Objective 3

Question 8 from part 1 of the questionnaire was used to address Objective 3. Question 8 was an open ended question and the data obtained from Question 8 was mainly analysed qualitatively. Frequencies of comments were analysed quantitatively.

Based on the responses to the questions addressing objectives 1, 2 and 3, common themes were identified and percentages were assigned to these themes based on the frequency of responses. Quantitative representations of the themes were presented using graphs.

Important Note: Since sample size comprised 10 respondents, even the responses which appeared less frequently were analysed and discussed as these are unique and relevant to this research. In many instances, it was found that the respondents who were outliers provided insightful responses and had more working experience than the rest of the respondents. Thus, as far as possible all responses were taken into consideration for the analysis.

4.3.4 Analysis of Ranked Questions

The analysis of ranked questions was only applied to Objective 1. A 5 point Likert scale categorisation was adopted in part 2 of the questionnaire (from 1= strongly disagree to 5 = strongly agree). The midpoint was considered as being 3 out of 5, with all scores above 3 indicating that the respondents are agreeable with the statements made (Emuze *et al.*, 2014).

The mean ranking was obtained by taking the average of the scores assigned to the questions in part 2 of the questionnaire . The scores are attached in Annexure B. The

standard deviation was then determined, which reflects the distribution of the data away from the mean (Saunders *et al.*, 2012). The mean and standard deviations were calculated using built in formulas on Excel and a sample size of 10 was used in the calculation of mean and standard deviation. The standard deviation was used to assess the reliability of the data.

The mean scores were used to understand how strongly the respondents felt about the statements made. Authors which used mean scores as part of data analysis included Emuze and Smallwood (2014).

4.4 Factors influencing Relationship Quality between Clients and Contractors

This sub section addresses **Objective 1** of the research which is:

Objective 1: *To investigate the factors influencing relationship quality between clients and contractors.*

Objective 1 addresses the research sub-question 1, "What *do clients perceive to be the factors influencing client contractor relationships?"*

The ensuing Table 4.4 summarises the questions used to address Objective 1

Objective	Part 1 of Questionnaire	Part 2 of questionnaire (Quantitative)
Objective 1: To investigate the factors influencing relationship quality between clients and contractors.	**Question 3:** *Do you feel that there is a need for the quality of contractor-client relationships to improve within your organisation? Please discuss ie list specific focus areas with respect to the nature of current relationships*	**Question 3:** *It is important that contractors think long term when it comes to construction projects (Rate on a 5 point scale)* **Question 4:** *As a client we see room for improvement in the quality of relationships and overall service standards with contractors (Rate on a 5 point scale)*
	Question 4: *List and describe the factors which influence relationship quality between client and contractor.*	

Table 4.4: Summary of Questions used to address Objective 1

The ensuing Table 4.5 provides a summary of the responses to Question 3.

Respondent	Response to Question 3 (Part 1 of the questionnaire)
R1	*"Yes there is, Currently we are obligated to use an implementing agent to roll out our projects. If the implementing agents are cognisant of educations requirements and taking our limited budget into account we would have a systematic program for the roll out of schools"*
R2	*"Yes. I cannot comment as this is sensitive information."*
R3	*"The relationship is very important, the two parties should be open with each other and treat each other fair"*
R4	*"There is a need for quality relationship between the client and contractor. If the relationship is not good, it may affect the following areas: 1: Delivery of the project wherein the squabbles will lead to unnecessary delays of the project .2. Poor relationships may lead to a breakdown of trust and a functional relationship which may compromise the achieving the objectives of the projects leading to project failure. 3. Time and Quality management may be compromised when there is a poor relationship between the client and a contractor."*
R5	*"Yes, the benefit is long term. Future engagements will be favourable to both parties."*
R6	*"1.Yes. 2. Yes. 3. Communication must be improved, Contractor payments must be made on time, contractors must have rapid response to the client's requirements/needs."*
R7	No Response
R8	" *The Current relationship boarders on Master Servant relationship. Us and them relationship. Taking undue advantage of the client. Some of which must change to promote a good relationship between contractors and client, wherein, trust, and mutual respect is nurtured and opportunistic claiming is discouraged."*
R9	"*Yes I think so because the Contractor will understand the priority of the client to have a quality product. As a client there are many infrastructure needs that need to be implemented for the communities and with a quality product, it will minimize the costs that the client will be spending in maintaining a facility that is supposed to be spending less on maintenance."*
R10	No Response

Table 4.5: Participant Responses to Question 3

The subsequent sub section deals with the analysis of the responses as per Questions 3 and 4 (from part 1 of the questionnaire) and the supporting responses from the quantitative questions (Questions 3 and 4 from part 2 of the questionnaire)

4.4.1 Analysis of Findings for Question 3 (as per Table 4.5)

Question 3 was used to understand the nature of client contractor relationships which currently exists. Based on the above responses as indicated in Table 4.5, eight out of 10 (80%) of the clients indicated that client contractor relationships need to improve, by indicating a “yes” or providing a positive response in respect of the question asked.

Aspects of relationship quality were discussed, which included improvements in communication (Respondent R6), the need for openness and fairness (Respondent R3); making contractor payments on time (Respondent R4), and prompt response to client needs (Respondent R4).

4.4.4.1 Quantitative Analysis to Support the analysis of the findings for Question 3

This section quantifies the extent to which clients would like contractors to start thinking long term and this is supported by Questions 3 and 4 from Part 2 of the survey questionnaire, as presented in Table 4.4.

All 10 participants responded to Question 3. The mean score attained was 4.8 out of 5. This mean ranking fell between agree and strongly agree. Thus, clients feel strongly that there is a need for contractors to start thinking long term. The standard deviation is 0.42, which is close to zero, indicating that the mean score is reliable.

The average score for Question 4 was 4.3, which falls between agree and strongly agree. Clients thus feel strongly that the quality of relationships and services needs to improve. The standard deviation was 1.49 and this was influenced by non-response of respondent R10. This outcome supports the eighty percent who indicated that contractor client relationships need to improve.

Also in relation to Objective 1, the subsequent sub section provides the responses to Part 1 of Question 4 (open ended questions), and the corresponding analysis in support of Objective 1.

4.4.2 Analysis of Findings for Question 4

The subsequent Table 4.6 provides a summary of the responses for Question 4

Respondent	**Response to Question 4 (Part 1 of the questionnaire)**
R1	*"This question would best be answered by our implementing agents as they have independent project managers that are in direct contact with the contractors."*
R2	*"Suppliers/contractors who look for loop holes to raise compensation events largely. Secondly contractors who try to shy away from delivering quality products. Largely, the morale of staff reduces and staff turnover then becomes an issue during the project. In this way nothing is ever completed on time and within the required quality limits."*
R3	*1) "Integrity* *2) Knowledge* *3) Openness,* *lack of these results in lack of trust between the 2 parties"*
R4	*1." lack of Trust - where either the client or the contractor do not trust each other . This will lead to conflicts and need for unnecessary conflict resolutions and delay projects.* *2. lack of professional respect - where the contractor or the client show contempt on one another's competence. This may lead to delays where time is wasted in order to prove the other party wrong."*
R5	*"Open and honest communication - minimize conflict and eliminate excuses when milestones are not achieved as planned."*
R6	*"Integrity , trust , professional competence , and transparency"*
R7	*"Disputes* *Quality of Product Received* *Resources* *The project can either have schedule delays or it can go to arbitration if disputes are not well resolved."*
R8	*"Experienced contractors tend to be frivolous on claims ie taking chances. Whilst SMME contractors are sometimes not honest with their financial position even though a rigorous selection process was done before tender was award, ultimately affecting completion time* *and cost"*
R9	*"Good communication, openness, proper consultation, willing to resolve disputes within an amicable process prior to considering the legal route."*
R10	*No response*

Table 4.6: Participant Responses to Question 4

Question 4 was answered by nine out of the ten of the respondents. Based on the preceding Table 4.6, the main factor which influences client contractor relationship quality is open and honest communication. The majority (six out of ten) of the comments pertained to the importance of open, honest communication between the client and contractor. Other factors influencing contractor client relationship quality was found to be trust (2 out of 10 respondents) and fairness (2 out of 10 respondents). The ensuing Figure 4.4 summarises the factors influencing client contractor relationship quality:

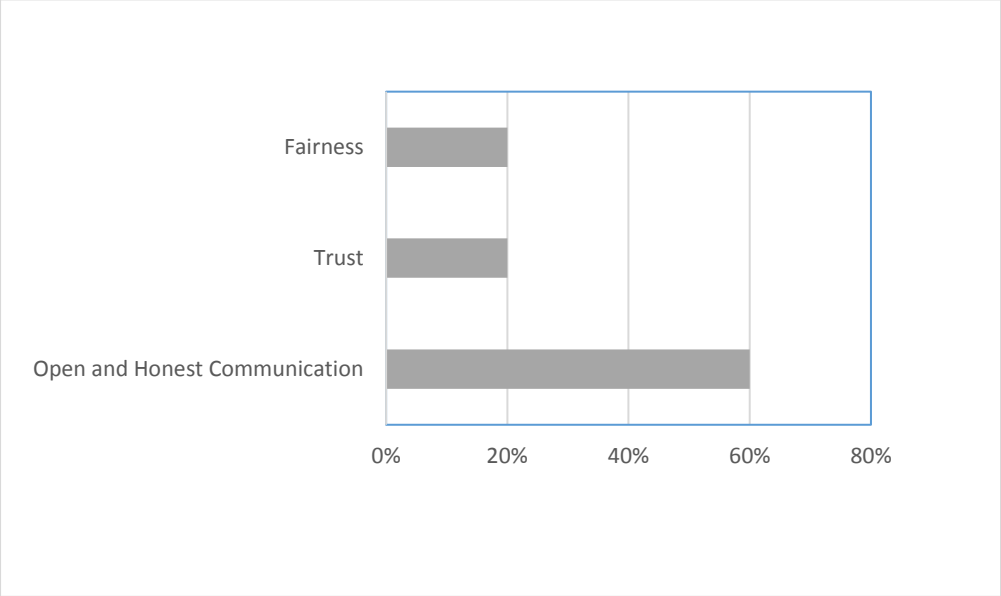

Figure 4.4: Factors Influencing Client Contractor Relationship Quality

The subsequent subsection provides a discussion, based on the analysis of responses for Questions 3 and 4, from Part 1 of the Questionnaire (open ended questions).

4.4.2.1 Open and Honest Communication

As per Figure 4.4, the majority of the respondents alluded to open and honest communication being a factor which influences client contractor relationship quality. This section provides an analysis of the respondent's comments on open and honest communication and client contractor relationships.

Respondents R7 and R9 alluded to good communication being essential for the resolution of disputes. In summary, good communication promotes amicable dispute resolution which respondents prefer, as opposed to resolving disputes legally (Respondents R7 and R9's comments refer). Respondent R5 also agreed that good communication is essential for the resolution of conflicts.

Respondents R3, R6, R9, R2 and R8's responses also pertained to open and honest communication. Respondent R2 and R8 remarked that contractors involved in opportunistic claiming influences client contractor relationship quality. Respondent R8, in response to Question 3, described the relationship between clients and contractors as "*master servant*" and further commented that contractors take advantage of the client. In response to Question 4, respondent R8 commented that "*experienced contractors are frivolous on claims*" and other contractors are not honest with their financial positon at tender stage, resulting time overruns on projects. Respondent R2's comments align with R8, with respect to opportunistic claiming. Respondent R2 commented that contractors who are more focussed on opportunistic claiming as opposed to quality project delivery impacts client contractor relationships. Respondent R6 and R3, in Question 4 also listed integrity as a factor influencing relationship quality but did not provide any further comments in this regard.

The response from respondents R8 and R2 should be given serious consideration. While a minority, the responses give insightful information on the behaviour of contractors and provides a reflection of the respondent's exposure to the subject matter based on first-hand experience. The age group of respondents R2 and R8 (between 40-45) could possibly have influenced the way questions have been answered. Respondent R2 is a project director and R8 is a construction project manager(Table 4.3 refers). The seniority of these individuals with respect to their positions could also have been an influencing factor with respect to the responses provided.

4.4.2.2 Trust

In Question 4, two out of ten respondents listed trust as a factor influencing client contractor relationship quality. Respondents did not detail their answers but respondent R4 commented that a lack of trust can result in conflicts, which can delay the project.

4.4.2.3 Fairness

In Question 3, 2 out of 10 respondents (respondents R6 and R3) alluded to the importance of fairness between clients and contractors as this influences the quality of client contractor relationships.

The discussion, which follows, as per the subsequent subsection, pertains to the analysis done for Questions 3 and 4, which are in support of objective 1: *To investigate the factors influencing relationship quality between clients and contractors*

4.4.3 Discussion on Open and Honest Communication

All comments which were consistent with communicating openly, clearly and honestly were categorised under open, honest communication. The presence of open and honest communication was opined by most of the respondents as a factor influencing relationship quality. Wood *et al.* (2002) found that open and honest communication was the primary factor influencing relationships. Frödell (2011), Ling and Tran (2012) and Zuppa *et al.* (2016) also support the importance of open and honest communication. Open and honest communication facilitates problem solving, provides reassurance and enhances transparency (Ling and Tran, 2012).

In Question 4, Respondents R2, R4, R5, R7 and R8 alluded to a lack of open and honest communication being a cause of time delays on a project. This is supported by Akintoye and Main (2007) who explained that a lack of consultation and open, honest communication can contribute to poor quality, cost and time overruns on a project. Nguyen, Ogunlana and Lan (2004), supported by Andersen, Birchall, Jessen and Money (2006) found that open communication is one of the primary factors in ensuring project success and most of the project manager's focus should be on effective communication. Khalfan *et al.* (2007) explained that maintaining open, honest communication ensures better understanding of the information delivered, thereby increasing the chances of project success.

It can be concluded from respondent R4 and R7's responses that disputes and conflicts, can lead to time delays if not properly resolved through open communication. This confirms Butcher and Sheehan's (2009) position that good communication can alleviate the potential for disputes, claims and legal action. This finding is also consistent with respondent R9 who alluded to good communication, openness and consultation as a means to resolve disputes amicably as opposed to legally.

Soetanto *et al.* (2001) found contractor honesty and integrity to be the most valued factor when it comes to building long term relationships. This supports respondents

R6 and R3 who also listed integrity as a factor influencing client contractor relationship quality. This is also in agreement with Butcher and Sheehan's (2010) study where communication, integrity and transparency were found to be key factors influencing client contractor relationships.

Soetanto *et al.'*s (2001) study confirmed that unnecessary claims were one of the highest ranked factors by clients, which influences client contractor relationship quality. Soetanto *et al.'*s (2001) study reasoned that contractors may resort to unnecessary claims to offset their low bid price and the reason for submitting a low bid price is to overcome competition. Opportunistic claiming is frowned upon by many clients, who would like contractors to refrain from such practices (Soetanto *et al.*, 2001). Soetanto *et al.'s* (2001) finding that opportunistic claiming is frowned upon by clients, is consistent with the following responses:

- Respondent R2's comment in Question 4 that contractors look for loopholes to raise compensation events
- Respondent R8's comment in Question 4 that "*experienced contractors/ suppliers tend to be frivolous on claims"*
- Respondent R8's comment in Question 3 that contractors take undue advantage of the client and that this needs to change to promote a better client contractor relationship wherein trust and mutual respect is encouraged and opportunistic claiming is discouraged (as per respondent R8's comment).

Respondent R2's concern on contractors exploiting contracts for self-gain is supported by Vennström and Eriksson (2010). Jiang *et al.* (2011) also found that client exploitation is common and this supports the concern raised by respondent R8, in Question 3, as described in the last bullet preceding this paragraph. Also, in support of respondent R8's position, Nijhof *et al.'*s (2009) study confirmed that contractors take advantage of the client's lack of technical knowledge when making claims and the resulting relationship breakdown has necessitated more transparency between contractors and construction clients.

Vee and Skitmore (2003) pointed out that the contractor's attitude of open and honest communication to the client when making claims and estimates is a key element of professional integrity.

4.4.4 Discussion on Trust

Trust is essential for the development of relationships (Wood *et al.*, 2002; Wong and Cheung, 2004; Ling and Tran, 2012; Zuppa *et al.*, 2016). This supports respondent R4's and R6's response that trust influences client contractor relationship quality.

Zuppa *et al.* (2016) concluded that the presence of trust minimises conflicts and Ling and Tran (2012) found that trust influences communication and the ability to meet time, cost and quality requirements. Zuppa *et al.'s* (2016) study and Ling and Tran's (2012) study supports respondent R4's position that a lack of trust can result in conflicts and can result in the project being delayed.

4.4.5 Discussion on Fairness

While the responses on fairness between client and contractor were minimal, it is important to discuss further as the responses are unique in this regard. In Question 3, respondent R 6 commented that clients need to pay contractors on time and respondent R3 expressed that there needs to be fairness between the client and contractor. Respondent R3's concerns are supported by Frödell (2011), who concluded that the client must remain fair to the contractor by adhering to contractual obligations. Respondent R4's concerns are supported by Odeh and Battaineh (2002) and Kaliba *et al.* (2009), who confirmed that delayed contractor payments have been prevalent and have been the primary causes of construction project failure.

4.5 Client Perceived Shortcomings in Contractor's Service Quality

This sub section addresses **Objective 2** of the research which is:

To investigate the shortcomings in the service quality of contractors

Objective 2 addresses the research sub-question 2, "*What do clients perceive as the shortcomings in contractor's service quality?"*

Question 5 was used to address Objective 2, and Question 5 is, "*Describe the gaps, if any, which currently exist with respect to the services which your contractors provide"*

4.5.1 Analysis of findings for Question 5

The subsequent Table 4.7 provides the responses to Question 5.

Respondent	Response
R1	*"Contractors are very unskilled in providing contracts of 50 million plus. They require training and workshops to indicate to them what a quality product is."*
R2	*"Delivery on time, understanding client needs, understanding client culture. All of the above must be improved."*
R3	"*None."*
R4	"*The contractor would do better if they understood to draft a comprehensive time schedule and tie it with cost schedule. Honest communication from the contractor needs to be improved so that the client may intervene while there is still time."*
R5	*"Plan project resources better and manage accordingly."*
R6	*"The professional competence of the contractors in so far as project management and cost management skills are a concern need to be improved to benefit our relationship with the contractors."*
R7	*"Communicate better"*
R8	*a) Some of the gaps are a result of the contracting environment. Often contracting is seen as adversarial, which does affect relationships. It will be nice if communication, especially regarding claims is improved (subject to the contract conditions) b) inadequate resources deployed to the site by experienced contractor contrary to the tendered proposal c) Honesty by SMME contractors about their financial situation ie lack of working capital"*
R9	"*Majority of the projects that are currently being implemented by the SMME Contractors on behalf of the organization and are not completed on time and within cost. Also the contractors do not understand the social aspect of appointing local labourers and sub-contractors when implementing the projects as their main focus is to complete the project on time and move to another."*
R10	No response

Table 4.7: Responses to Question 5

Table 4.7 has reference to the summarised comments under this section. With respect to Question 5, the majority of the respondents, which is 8 out of the 10 respondents, alluded to there being shortcomings with regard to the service quality of contractors.

In summary, the shortcomings may be summarised as presented in the ensuing Figure 4.5

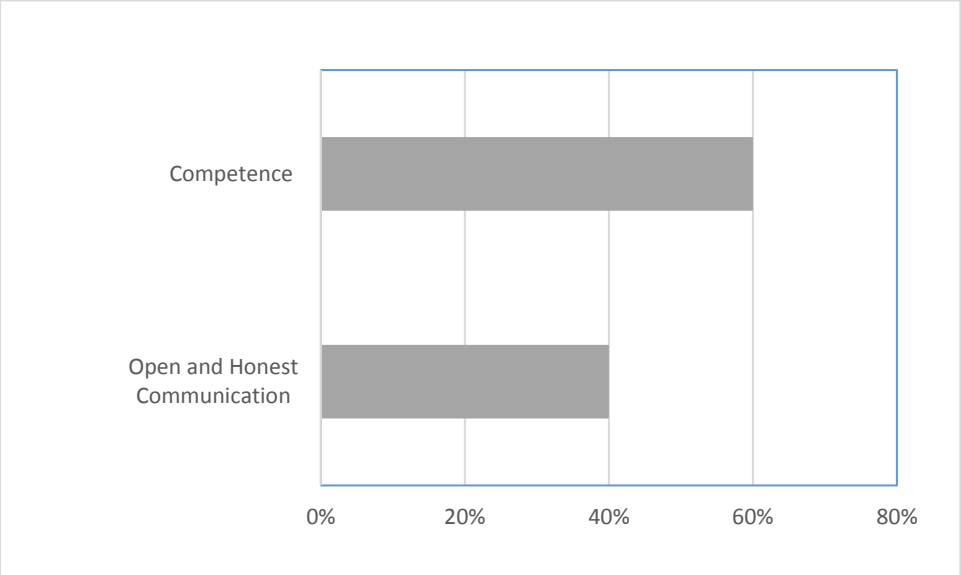

Figure 4.5: Shortcomings in the Service Quality of Contractors

The subsequent subsection is an analysis of findings for Question 5, as summarised in Table 4.6, which is in support of Objective 2: *To Investigate the Shortcomings in the Service Quality of Contractors.* The findings have been categorised into headings based on the recurring themes, as per the responses.

4.5.1.1 Competence

As summarised in Figure 4.5, six out of the ten respondents (sixty percent) have indicated that a lack of competence is a shortcoming in contractor service quality.

Some of the competency related factors incorporated a lack of skills in delivering large scale projects with a value of R50 million or more (as per respondent R1's comment), inability to deliver projects within time and the inability to compile and manage time and cost schedules (respondent R4's comment), inability to plan and manage resources (Respondent R5's comment), a lack of project management and cost

management skills (respondent R6's comment) and the inability to complete projects within time and cost (Respondent R9's comment).

4.5.1.2 Open and honest communication

Four of the ten respondents opined that open and honest communication is a shortcoming in contractor's service quality. Respondent R8 referred to the current client contractor relationships as adversarial and explained that communication with respect to claims needs to improve. This is consistent with respondent R8's response in Question 4, that contractors take chances when it comes to claims.

Respondents R4, R8 and R9 mentioned that contractors sometimes misrepresent their capabilities to undertake work. Respondent R8 explained that at tender stage, contractors do not provide a true indication of the resources to be used during the execution of the project. The misrepresentation is picked up at construction stage, where the number of resources deployed to site are found to be inadequate. Respondent R8 also commented that contractors misrepresent their financial capabilities, which is essential in enabling the contractor to carry out work.

Other forms of misrepresentation include dishonest communication to the client on the entity undertaking the work, which results in the inability to complete within time and cost. Respondent R9's response refers. Respondent R4 also commented that contractors need to improve their abilities to communicate honestly so that projects can be completed on time and within cost.

The subsequent subsection is a discussion on the analysis of Question 5 which is in support of Objective 2: *To investigate the shortcomings in the service quality of contractors.*

4.5.2 Discussion on Competence and Open and Honest Communication

4.5.2.1 Competence

The analysis shows that the primary shortcoming in the industry pertains to a lack of contractor competence. In summary, the primary competence related shortcoming pertains to managing projects within time and cost, project management skills, the contractor's capability of managing large scale projects, contractor's planning capabilities in general and contractor's resource planning and management skills. It must be noted that the respondent's concerns on contractors being unable to complete projects within time is consistent with the preceding discussion on Open and Honest Communication, where the concern was that that a lack of open an honest communication can lead to time delays on a project.

In support of the findings as summarised in the preceding paragraph, Ling and Tran (2012) found that time and cost overruns were primarily due to contractor competence issues such as inadequate experience, knowledge, supervision skills and financial capability. Competence related challenges were also explored in Hashim and Chileshe's (2012) study. The shortcomings in the construction project manager's competencies was ranked the second highest challenge and the contractor's inability to plan resources well was ranked the third highest challenge in Hashim and Chileshe's (2012) study. This is in support of respondent R5's response, *"plan project resources better and manage accordingly"* and respondent R6's comment that *"professional competence of contractors insofar as project management and cost management skills are a concern and need to be improved".*

To confirm the findings on the concerns on resource management and planning (respondent R5) and project and cost management (respondent R6) as per the preceding paragraph, Alzahrani and Emsley (2013) found that resource management has received little attention on construction projects and argued that this is one of the

most critical elements of project success. Planning and controlling capabilities are essential for project success (Alzahrani and Emsley, 2013).

Nguyen and Chileshe (2015) also support the finding under Objective 2 and found that competency was a shortcoming in the Vietnamese construction industry. Competency related shortcomings included a lack of experience and poor planning capabilities in Nguyen and Chileshe's (2015) study. This supports respondent R4's concern that contractors do not understand how to draft time and cost schedules and this can result in time delays. Respondent R4's concern is also supported by Odeh and Battaineh (2002) who found that poor planning was one of the main causes of time delays on construction projects. Contractors are not conversant with scheduling tools and do not update their schedules regularly (Odeh and Battaineh, 2002). The lack of contractor's experience is a result of lowest price award and inadequate subcontractor experience (Odeh and Battaineh, 2002).

Loosemore (2014) also found that poor scheduling and planning is prevalent among contractors. This has compromised construction productivity and such competencies are decreasing as older skilled staff retire without a skills transfer process in place (Loosemore, 2014). The level of co-ordination is poor and the reason is that sub-contractors have been left to co-ordinate projects on their own (Loosemore, 2014). The latter sentence supports respondent R9's comment that the projects which are being completed by smaller contractors on behalf of the main contractor are not completed within the time and cost constraints.

In South Africa, Emuze *et al.* (2014) found that time and cost management where among the key shortcomings among contractors. Also in South Africa, Haupt and Whiteman (2004) found that competence and capability is a serious shortcoming among contractors, which has resulted in time and cost overruns and overall poor project performance.

4.5.2.2 Open and Honest Communication

Open honest communication was found to be a shortcoming in contractor's service quality, with the second highest frequency, based on the analysis of the responses as summarised in Table 4.7 and Figure 4.5. Comments which pertained to open and honest communication included communicating clearly, communicating openly and being honest when communicating. Nguyen *et al.'s* (2004) study, confirms the outcome of this analysis, that competency and communication were identified as some of the most important factors necessary for good project performance.

The finding, as per this section, that open and honest communication is a shortcoming in service quality, is supported by Tai *et al.* (2009), Yong and Mustaffa (2012) and Hashim and Chileshe (2012). Tai *et al.'s* (2009) study attributed the prevalent poor communication to the attitude of self-interest which results in there being no motivation to communicate openly and honestly. Gustavsson and Gohary (2012) reasoned that the fragmented nature of the industry has compromised the ability to communicate openly and honestly, co-operate and achieve project success.

Instances of dishonest communication, as per the analysis in the preceding Section 4.5.1.2, included contractors misrepresenting information, such as resources and financial capability at tender stage. Other forms of dishonesty included questionable contractor claims (Respondent R8). In response to Question 5, respondent R8 commented that current contracting relationships are adversarial and communication of claims needs to improve, and, consistent with this comment, respondent R8 commented in Question 4 that, contractors take chances when it comes to claims. In Question 3, respondent R8 expressed that contractors take advantage of the client when it comes to claims and this must be discouraged to promote a trusting relationship. The discussion on open and honest communication, as per the preceding

Section, 4.4.3 refers. Ho (2011) also confirmed that questionable contractor claims and uncommitted contactors were some of the main challenges in the industry.

Jiang *et al*. (2011) also confirmed that client exploitation has resulted in adversarial relationships, thereby confirming respondent R8's concerns about adversarial relationships. Vennström and Eriksson's (2010) and Yong and Mustaffa's (2012) study also found that contractor opportunism is prevalent and referred to contracting relationships as "adversarial", thereby supporting respondent R8 who also referred to contracting relations as "adversarial". It was concluded in Jiang *et al.'s* (2011) study that the chances for relationship development are minimised where the client has detected dishonest contractor behaviour.

Also in line with shortcomings in open and honest communication, contractors do not provide a true indication of who undertakes the project and sometimes assign the project to a smaller entity to complete. This results in the inability to complete projects on time and within cost (respondent R9's comment refers). Respondent R9's final comment with respect to Question 5, that "*their focus is to complete the project and move to another*" is an indication that contractors have a short-term focus. The various forms of misrepresentations as described by respondents R8 and R9 are consistent with a short-term focus. Vennström and Eriksson (2010) also explained that contractors have a short-term focus and their behaviour is a hurdle in instating change in the industry. This is also consistent with Nijhof, Graafland and de Kuijer's (2009) study.

Ling and Tran (2012) reasoned that contractors of better financial capability are more capable of developing trust with their clients as the risk of these contractors trying to financially exploit the client via weaknesses in the contract, is reduced and thus, these contractors are less likely to make frivolous claims. Contractors who do not have the financial capability to undertake the contract are likely to use dishonest means, such

as opportunism, to remain profitable as this is the only means of survival, thereby ruining trust with their clients (Ling and Tran, 2012).

4.6 Improvement in Long Term Client Contractor Relationships

This section addresses **Objective 3** of the research which is:

Objective 3: *Investigate the procurement methods currently being used to improve client contractor relationship quality and service quality*

Objective 3 addresses the research sub-question 3, "What *are the procurement approaches being adopted to effect better client contractor relationships and better service quality?"*

Question 8 of the questionnaire was used to address Objective 3 and Question 8 reads:" *What are the different approaches to contracting which you use or will consider to build contractor client relationships and service quality in the long term? Also elaborate on procurement methods used in this regard if applicable"*

The subsequent Table 4.8 provides the responses to Question 8

4.6.1 Analysis of responses for Objective 3

The ensuing Table 4.8 provides the responses to Question 8.

Respondent	Response
R1	*"This would be best answered by our implementing agents, I have a bias toward the contracts they are currently using"*
R2	*"Moving forward strong consideration must be given to EPC full turnkey with punitive clauses for technical quality and delivery time (read schedule). In this way interface risks are mitigated and the contractors then cannot raise compensation events for late deliver at interface. When one interface (between client and contractor) exists then management of teh contract and milestone payment is easier. Also performance guarantees and acceptance tests may be linked to these milestone payments."*
R3	*"Re measurable contract (BOQ) this manages the risk for all parties"*
R4	*"Open Tender System and Turnkey project are important to get the right correct contractor then build an effective relationship in particular looking at a long term relationship. The relationship must be based on trust, professional integrity and dependability."*
R5	*No Response*
R6	*"Open tender, Closed tender, Negotiated. Procurement uses the first approach to BWO's (Black Women Owned) as well as frame work before going out to the market."*
R7	*"procurement strategies and internal contracting strategies such as Service Level Agreement"*
R8	*"Alternative contracting methods ie SCM and Targeted Contracts eg Cost Plus , negotiation of contracts, selective/ nominated tender etc* *however some of government's current policy and legislation is limiting"*
R9	*"The current contracting approach that is being used by the Institution is the contract agreement between the client and the contractor where the consultant is appointed to manage the contract on behalf of the client. It is working well when the contract is being followed properly and it is the only suitable contract for the type of services the Institution is offering to the community."*
R10	*No Response*

Table 4.8: Responses to Question 8

The intent of the question was to determine whether the respondents (or South African public sector clients) understand procurement systems other than traditional type systems, wherein the selection criteria of contractors is lowest price, and whether these individuals have started considering building long term relationships with their

contractors by using alternative procurement methods such as design -build (Kaswagi and Byfield, 2002; Baiden *et al.*, 2006), alliance contracting (Naoum and Egbu, 2016) or other types of procurement methods which improve collaboration, integration and relationships (Baiden *et al.*, 2006) .

Question 8, which addresses Objective 3 was answered appropriately by five of the ten respondents. Only three respondents (R2, R4, R8) made comments pertaining to alternative procurement approaches. Of the respondents which support alternative contracting approaches, only 1 respondent (R4) suggested building long term trust based relationships through the procurement approach adopted. Respondents R2 and R4 made mention of turnkey contracts and respondent R 8 commented on alternative contracting strategies such as targeted contracts. Two of the respondents still support the use of traditional type procurement systems (R9 and R6) and 2 respondents (R7 and R3) demonstrated poor understanding of the question posed.

The responses may be summarised as per the ensuing Figure 4.6.

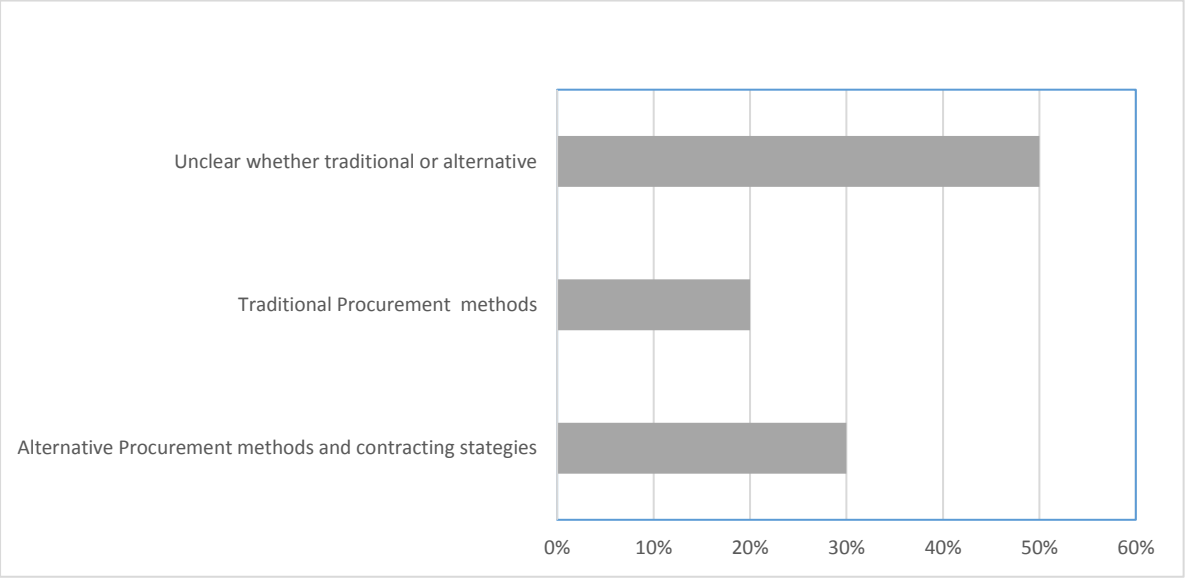

Figure 4.6: Procurement approaches used by public sector construction clients

The subsequent subsection is a discussion incorporating existing studies to support the findings from the analysis of Question 8, which is in support of Objective 3: *Investigate the procurement approaches being used to improve client contractor relationship quality and service quality.*

4.6.2 Discussion on Procurement Approaches

Respondent R2 opined that building punitive causes into the contract is likely to alleviate quality and time related risks and suggested the use of a design build type contract (turnkey contract) to minimise risks and compensation events. The views of respondent R2 are in alignment with Edum-Fotowe and McCaffer (2000) and Ren *et al.* (2012). The procurement system suggested by respondent R2 is a non-traditional type of procurement system where the time, cost and quality related risks are shifted onto the contractor, thereby increasing the likelihood of improving time, cost and quality delivery (Edum-Fotowe and McCaffer, 2000 and Ren *et al.,*2012). This has relevance to this research as the primary shortcoming in service standards, as per *Objective 2,* was found to be competency, specifically in the areas of time, cost and resource management. Respondent R4 also supports the use of a design build type contract and commented that this will help in building long term relationships wherein trust, integrity and dependability are the key considerations. Akintoye and Main (2007) and Eriksson and Laan (2007) also support the use of contract types which encourage the development of relationships and trust through working together.

Respondent R8 suggested the use of a nominated subcontract (where the client is involved in contractor selection). This is supported by Vennström and Eriksson (2010) who recommended that the client should have a role in the determination of suppliers, materials and methods to increase their influence on the project. Respondent R8 also suggested using targeted contracts. Chan *et al.* (2011) also support the use of a target cost contract, as the risk is shared and payment is based on actual cost with an

incentive for time and cost performance. This method avoids overpayment, reduces conflict between client and contractor, minimises opportunism and maximises profitability (Chan *et al.*, 2011). This is relevant to this study as findings as per Objectives 1 and 2 demonstrates that contractor opportunism is prevalent in the industry. Respondent R8's comment in Question 4 and 5 refer and respondent R2's comment in Question 4 refers. Both the respondent's comments pertained to opportunistic behaviour of contractors.

Respondent R9 alluded to the continued use of traditional procurement systems and respondent R9's description of a traditional procurement system is consistent with Thwala and Mathonsi (2012) who described a traditional procurement system as one where a contract exists between the client and consultant and the consultant undertakes the designs and preparation of tender documentation. Respondent R9 further commented that the system is working well and is being executed properly. This comment is inconsistent with Respondent R9's comment in Question 5, which suggested that there are time and cost overruns as projects are being done by smaller entities on behalf of the main contractor.

Based on the outcome that thirty percent did not answer and twenty percent did not understand the question (fifty percent in total, who were non-responsive), It is difficult to determine whether this fifty percent whose answers could not be used in the analysis, have started considering the use of procurement approaches to encourage long term relationship development, or whether these respondents still prefer using traditional procurement approaches.

The purpose of the question was to gain an understanding on whether South African public sector clients have started to consider

adopting strategies to improve client contractor relationships and service quality (as suggested by Zuo *et al.,* 2013 and Akintoye and Main, 2007). It has been evidenced in this section that very few public-sector clients have started to consider procurement

approaches which improve client contractor relationship quality and the service quality of contractors. When considering the implementation of alternative type of procurement systems, it is necessary to be aware of the limitations with respect to implementation in the public sector. The comment of respondent R8 that "*some of government's current policy and legislation is limiting"* supports this concern.

The subsequent subsection 4.6 summarises the findings from the analysis for Objectives 1,2 and 3

4.7 Summary of findings for Objectives 1,2,3

Objective 1 sought to investigate the factors influencing relationship quality between clients and contractors, thereby addressing research sub-question 1. The findings from the analysis was that there is a need for client contractor relationships to improve and the primary factor influencing contractor client relationships was open and honest communication. Trust and fairness were also found to be factors which influence client contractor relationship quality.

Objective 2 sought to investigate the shortcomings in the service quality of contractors, thereby addressing research sub-question 2. The findings from the analysis was that the main shortcomings in service quality are contractor competence and open and honest communication.

Objective 3 sought to investigate whether clients have started to apply procurement approaches to improve relationship quality and service quality, thereby addressing research sub-question 3. A limited number of respondents are aware of alternative type procurement approaches which will improve service quality and client contractor relationships. Some of the respondents still prefer using traditional procurement approaches when selecting contractors.

CHAPTER 5: RECOMMENDATIONS AND CONCLUSIONS

5.1 Introduction

The purpose of this chapter is to present how the aim and objectives of this research have been addressed and to recommend and conclude based on the findings relating to the objectives of the study. This chapter also incorporates the limitation of the study, practical implications and recommendations for future research.

5.2 Findings

The purpose of *Objective 1* was to investigate the factors influencing relationship quality between clients and contractors. The analysis confirmed the need for client contractor relationships to improve. The primary factor influencing client contractor relationships was found to be open and honest communication, followed by trust and fairness.

The purpose of *Objective 2* was to investigate the shortcomings in the service quality of contractors. Based on the analysis, the primary shortcoming in service quality is contractor competence followed by a lack of open and honest communication from contractors.

Competence related shortcomings included the inability to deliver large scale projects, inability to plan and manage resources, inability to compile and manage time and cost schedules, a lack of project management skills and the inability to deliver projects within time and cost.

In summary, good communication is essential for the amicable resolution of disputes, as opposed to following the legal route to resolve disputes. It is also essential that

honesty and openness is always maintained when communicating with the client. The honest communication of claims was identified as a shortcoming under *Objective 2* and this is consistent with the findings from *Objective 1*. Various forms of dishonest communication were found to be prevalent such as misrepresentation of the contracting entity undertaking the work and misrepresentation of resources and financial capabilities.

The purpose of *Objective 3* was to investigate whether South African public sector clients have started using alternative procurement approaches to improve client contractor relationships and service quality. The responses to this question revealed that only a limited number of South African public sector clients are aware of alternative type contracting approaches aimed at improving contractor client relationships and service quality. Some public sector clients still support the use of traditional procurement approaches.

5.3 Practical Implications

This research contributes to practice by demonstrating that client contractor relationships are likely to improve if contractors focus on building trust with their clients and recognise the importance of communicating openly and honestly at all times to their clients. Open and honest communication between contractors and clients is also likely to improve contractor's service quality. When key contractor competencies such as resource management, delivering projects within time and cost and overall project management are improved, this is also likely to improve service quality.

It is necessary that the appointed consultant, who is the interface between the client and contractor, is vigilant in monitoring contractor competence and contractually addresses any shortcomings in this regard, to ensure that projects are successfully delivered and that the client receives value from the services delivered. The consultant

role is essential in ensuring that claims are submitted only if necessary and that these are explained fully to the client.

5.4 Conclusion

The main research Question for this study was “What are the areas which need to be addressed by construction clients and contractors to nurture better relationships and service quality? “and was based on the problem that a short term outlook has been adopted by contractors, which has influenced client contractor relationships and service quality. The research question has been addressed through the aim and objectives in this research.

This research improves the understanding of client’s needs through appropriate survey questions, where the client perspectives have been sought, on the factors which influence client contractor relationship quality and their perceived shortcomings in contractor service quality. This research concludes that the client’s perspective on the primary factor influencing client contractor relationships is open and honest communication, followed by trust and fairness. This has addressed research sub-question 1. The primary shortcomings in service quality was found to be the contractors level of competence, followed by a lack of open and honest communication. This has addressed research sub-question 2. It may further be concluded that a limited number of public sector clients are aware of alternative procurement approaches aimed at improving client contractor relationships and service quality. Some clients continue to support the use of traditional procurement approaches. This has addressed research sub-question 3.

One of the main difficulties faced by the researcher was obtaining a higher response rate through the co-operation of individuals. Several attempts were made at obtaining responses such as follow up emails, phone calls and sending telephonic messages.

In hindsight, the researcher could have improved the response rate by paying close attention to the length of the questionnaire and the style of the questions as these factors play as key role in the response rate (Janes, 2001; Jepsen and Rodwell, 2008, Wiley, Han, Abaum and Thirkell, 2009; Gorrell, Ford, Holdridge and Eaglestone, 2011; Rowley, 2014,). The questionnaire used in the current research comprised 18 questions, and the length of the questions and the questionnaire, could have been one of the main causes of the poor response rate. Wiley *et al*., (2009) affirmed that improving the visual design of the questionnaire and making it as interesting as possible can increase the response rate. DeRosia and Christensen (2009) argued that respondents struggling to understand a questionnaire is common, especially where the questionnaire is self-administered as the researcher is not able to provide clarity where needed. The latter point is relevant to the current research as the questionnaire was emailed to respondents and the researcher was not physically present to provide clarity if needed.

Altinay and Wang (2009) affirmed that the researcher should do everything they can to encourage participation, such as sending flyers to individuals or organisations being targeted. Wiley *et al*. (2009) recommended that sending follow ups or reminders on a formal letter is likely to increase the response rate. The use of incentives such as vouchers or donations can increase response rates (Wiley *et al*., 2009). To enable clear understanding of the research, DeRosia and Christensen (2009) argued that adequate information on the project or study should be sent to the participants. An example includes issuing a magazine detailing the study as this will aid understanding and is likely to increase co-operation levels. Whilst the researcher did provide an explanation of the research and the objectives to the respondents, this still did not stimulate responses. Through the adoption of approaches as suggested by the above-mentioned authors, the response rate could possibly have been increased.

Many researchers have argued that an interview is appropriate for qualitative studies as this approach enables an in depth understanding of information through

communication (Zimmerman and Szenberg, 2000; Farooq and de Villiers, 2017; Mangan *et al*., 2004). The study by Jepsen and Rodwell (2008) incorporated interviews as part of a qualitative study and the individuals surveyed were recommended by a panel, as being the most suitable candidates to participate in the research. It is important that the researcher understands the organisation, the culture and the business closely, to establish trust (Altinay and Wang, 2009). Based on the foregoing, the use of interviews, as opposed to a questionnaire alone may have been more appropriate to the current research and may have enabled a better understanding through face to face engagements. To support the interviews, developing a short questionnaire with ranked data may have been more appropriate for the current research. To increase the likelihood of gaining the support for an interview the researcher should have first established trust with the organisations, as suggested by Altinay and Wang (2009).

The study only incorporates the opinions of public sector clients, however, still adds to the industry's knowledge base on client contractor relationships and service quality. This study offers value to contractors who are interested in understanding how they can improve their relationships with their clients and how they can improve their services based on what clients perceive to be shortcomings in service standards. This will improve their business sustainability, competitiveness and the value delivered to the client.

5.5 Limitations

One of the major limitations of this study is that only 10 individuals have participated in the survey, however, the usage of the data was maximized to enable a good understanding of public sector client's perspectives regarding relationship and service

quality. Despite the limited number of responses, the researcher has, to the best of her ability tried to make a meaningful analysis and discussion of the data which was provided. Still, the findings cannot be generalised due to the limited number of respondents.

It must be taken into consideration that this study only incorporated the views of public sector construction clients. Contractors and consultants have not been included in the survey process. Thus, the possibility of the client playing a role in the quality of relationships between clients and contractors has not been explored in this study.

5.6 Recommendations for Future Research

It is necessary to validate the findings from this study by undertaking future research using a larger sample size. Appropriate strategies need to be in place to access respondents from public sector organisations and to ensure a positive response rate.

With regard to the shortcomings in contractor's service quality, many of the responses pertained contractor competence, specifically with regard to resource, time, cost and overall project management and some of these responses were not detailed. Thus, to improve the richness and adequacy of the data gathered it is recommended that the study gets extended to incorporate consultants, who are involved in public sector projects. The information obtained may be influenced by the consultant's direct involvement with the contractor. The consultant may thus be in a better position to identify the contractor's shortcomings in service quality as a result of their expert knowledge and exposure to construction projects, where client's exposure may be limited.

Some of the responses provided an indication that in some instances the client may also be playing a role in the poor contractor client relationships which exist. This is supported by respondent R6's concern in Question 3 pertaining to clients needing to

pay contractors on time and respondent R8's comment in Question 3 where the client contractor relationship was described as "*Master- Servant".* It thus becomes necessary to investigate the client's role in the existing quality of relationships through engaging contractors, to understand their views on the factors which influence client contractor relationships, based on their interactions with clients.

The findings in Objective 3 revealed that few clients are aware of alternative type contracting strategies to improve client contractor relationships and service quality. It is recommended that this is validated through a larger sample size. Based on the literature survey (Ren *et al.*, 2012; Strahorn *et al.*, 2012), traditional procurement methods are the primary cause of the ongoing adversarial relationships between contractors and clients. It is recommended that the association between the procurement methods adopted and the quality of contractor client relationships is verified through statistical testing. A large sample will enable an understanding of the current procurement methods used, and will provide a reliable percentage of how many South African public sector clients still prefer to adhere to traditional procurement approaches when selecting contractors.

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ANNEXURE A: GENERIC QUESTIONNAIRE

Age of participant:

25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	>65

Total Experience in years:

5-10	10-15	15-20	20-25	25-30	30-35	35-40	>40 years

Field of expertise:

Project manager (Construction)	Project Director (Construction)	Construction manager	Engineer (Specify)	QS	Architect	Middle management	Senior management	Other (Specify)

Experience in the abovementioned field in years:

5-10	10-15	15-20	20-25	25-30	30-35	35-40	>40 years

Organisation:	

Estimated number of employees	

Province:	

Nationality:	

Gender

Male	Female

ANNEXURE B: SURVEY QUESTIONS

Questions_Part 1

Number	Question
1	What do you as a client representative peceive as long term shared value (or long term value for money) and how can this be achieved to benefit both the contractor and the client ?
2	Describe the factors which you feel have the most significant influence on client satisfaction
3	Do you feel that there is a need for the quality of contractor-client relationships to improve within your organisation? Please discuss ie list specific focus areas with respect to the nature of the current relationships.
4	List and describe the factors which influence relationship quality between client and contractor.
5	Describe the gaps, if any, which currently exist with respect to the services which your contractors provide ie what is it that you would like your contractors to do better?
6	What have been the consequences for both parties as a result of the existence of these gaps?
7	As a client is there anything which you can do better to influence contractor client relations and the overall levels of client satisfaction?
8	What are the different approaches to contracting which you use or will consider in order to build contractor client relationships and service quality in the long term ? Also elaborate on procurement methods used in this regard if applicable.
9	Do you as a client or your contractors currently have initiatives in place to improve client focus? If so, please discuss the criteria used.

Part 2 of Survey Questionnaire

QUESTION NUMBER	STATEMENT	Respondent 1					Respondent 2					Respondent 3					Respondent 4					Respondent 5					Respondent 6					Respondent 7					Respondent 8					Respondent 9					Respondent 10					Number of responses	Sample Size	Mean	Standard Deviation
		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5				
1	As a client it is important to me for both the contractor and client to shift their thinking from the requirement to fulfil time, cost and quality objectives only to achieving long term value for both the contractor and the client					5					5			3				2								5			3					4								4				4					5	10	10	4	1.00
2	Relationship quality and trust levels between the contractor and client play a significant role in achieving client satisfaction. (Note: contributing factors to relationship quality may include the contractors ability to listen, emotional intelligence, trust, overall attitude, transparency and a relationship building culture and so on)					5					5			4					4								5			3					5								5				5					5	10	10	4.6	0.66
3	It is important that contractors think long term when it comes to construction projects					5					5			4					5						4					5					5								5				5					5	10	10	4.8	0.40
4	As a client we see room for improvement in the quality of relationships and overall service standards with contractors.					5					5			4					5						4					5					5								5				5						10	10	4.3	1.49
5	Differentiation with respect to service standards plays a significant role in client satisfaction and future contractor client relationships.					5					5			4					5					3							5					4					5				2					4		10	10	4.2	0.98
6	Contractors having a long term outlook with respect to services delivered influences contractor- client relationship quality					5					5			4					5						4					3					4					2				2					4		10	10	3.8	1.08
7	To my knowledge, contractors who provide a better service to our organisation are generally more competitive than the average service provider					5			3					4					4						4					3					5					3									5			10	10	4.1	0.83
8	**Project success is:**																																																							
a	Meeting time, cost and quality objectives only								3			1							4			1													4					3				1								5	8	10	2.2	1.72
b	Where project effort is aligned with both the long and short term goals of the organisations concerned (together with meeting time, cost and quality objectives)					5					5					5					5					5					5					4					3								4			10	10	4.4	0.80
c	Influenced by the levels of trust which exist between client and contractor (together with meeting time, cost and quality objectives)										5					5					5			4											4					2					3								5	8	10	3.3	1.90
d	Other (Please comment)																					5																									4									3	10	0.9	1.81

QUESTION NUMBER	STATEMENT	Respondent 1					Respondent 2					Respondent 3					Respondent 4					Respondent 5					Respondent 6					Respondent 7					Respondent 8					Respondent 9					Respondent 10					Number of responses	Sample Size	Mean	Standard Deviation
		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5				
9	**Relationship quality is influenced by:**																																																				
a	Contractors Performing value adding actions which are beneficial to both parties for example knowledge sharing and growing their suppliers					5					5				4						5				4									3									5					5			4		9	10	4	1.48
b	Trust levels including transparency										5				4						5														5									5					5					6	10	2.9	2.39
c	Emotional intelligence, the ability to listen and communicate and collaborate										5				4						5					5					5				4									5			4				3		9	10	4	1.48
d	The degree of alignment with respect to the core values of the organisations concerned										5				4						5				4									4							4					5					5	10	3.5	1.80
e	Other (Please comment)																																																			10	0	0.00
10	Our organisation values contractors sharing knowledge with other service					5			3						4					4				3									3					2									5			3		9	10	3.2	1.40
11	High levels of trust and openness exist with our existing service providers	1							3						4						5					5									4				3									5			4		9	10	3.4	1.62
12	Relationship quality with our current service providers is generally good				4				3						4					5				3									4				2									5				5	9	10	3.5	1.50
	Rank the following in order of importance																																																				
13	**Client satisfaction is strongly influenced by:**																																																			
a	The contractors ability to think					5					5					5						5			3					3					3				2									4					10	10	3.7	1.19
b	Relationship quality including trust levels and transparency and the contractors ability to think long term				4						5					5					5			4					3					3				4									5			4		10	10	4.2	0.75
c	Fulfilling time, cost and quality objectives only					5			3			1									5	1					2								4				3					3							4			10	10	3.1	1.37
d	Contractors differentiating themselves with respect to the manner in which the service is delivered		2								5				4						5	2							3					3									5				4				4		10	10	3.7	1.10
e	Cultural aspects	1									5				4						5			3					3					3									5	1						4			10	10	3.4	1.43
f	Other (please comment)																									5																											10	1	2.00	
14	Our current service providers understand the importance of adding value for both parties and have value		2								5				4									3				2					3				1									5			3		9	10	2.8	1.54

QUESTION NUMBER	STATEMENT	Respondent 1					Respondent 2					Respondent 3					Respondent 4					Respondent 5					Respondent 6					Respondent 7					Respondent 8					Respondent 9					Respondent 10					Number of responses	Sample Size	Mean	Standard Deviation
		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5				
15	**The major gaps with respect to service standards which exist are related to**																																																				
a	poor relationships (including poor communication, collaboration, trust and so on)	1									5		2								5			3													5		2					2									5	9	10	3	3
b	contractor's level of competence					5				4			2								5			3					4						4			2					2									5	10	10	3.6	3.6
c	lack of understanding the customer's culture and values and the ability to provide the service accordingly					5					5		2								5			3											4			2				1									5	9	10	3.2	3.2
d	failure to focus beyond time, cost and quality objectives ie. no long term outlook					5					5		2								5			3											4				3					4								5	9	10	3.6	3.6
e	Other (please discuss)																																																		5		10	0.5	
16	Problems arising are solved via negotiations and effective communication as opposed to contractually	1									5		2												4				4						4				3				1								4		9	10	2.8	2.8
17	Contractors who have a long term outlook with respect to project success have a better chance of being used for their services in future compared to those who focus purely on time, cost and quality objectives.					5					5				4						5			3					4						4				3									5				5	10	10	4.3	4.3
18	Our projects are generally successfully delivered and we are generally satisfied with all aspects of project delivery including the services received before, during and after the project is complete	1							3						4						5		2					3						4				2							4					5			10	10	3.3	3.3

ANNEXURE C: PRE-TEST QUESTIONNAIRE

Pre-Test Questions:

1. What are the factors which your organisation considers important with regard to the services received on construction projects?

2. What are the major service related problems currently experienced with your appointed contractors? More specifically, what are the gaps which currently exist?

3. What have been the consequences of these problems for both yourself and the contractor concerned? Also describe what actions were taken to avoid these problems for future projects.

4. What does your organisation perceive as long term value and how can shared value be obtained between your organisation and its service providers?

5. Do you currently have service providers who differentiate themselves and how do they do so?

6. Do you currently apply innovative contracting methods to assist in building contractor – client relationships in South Africa? If so, please provide a description and the results obtained.

RATE ON A FIVE POINT LIKERT SCALE:

1= not important
2= indifferent
3=important
4=very important
5=extremely important

Question 1:
How important is it for your organisation to become long-term orientated via the development of relationships and fostering trust with service providers for the mutual benefit of both the client and contractor?

Question 2:
How important is shared value (between contractor and client) to the client?

Question 3:
How would you rate the relationships which you have with your current service providers?

Question 4:

How would you rate the overall service quality which your current service providers offer?

Question 5:
How would you rate your overall satisfaction on the applicable projects?

Question 6:
How would you rate the success levels of these projects?

Question 7:
To what extent do your service providers differentiate themselves via innovation, knowledge sharing, collaboration, communication, relationship management and so on?

Question 8:

Fulfilling the business needs and objectives of an organisation can relate to delivering services efficiently and cost effectively, innovative thinking of service providers, timeous delivery and so on, which are specific per organisation. To what extent are your contractors meeting your organisation's business needs?

ANNEXURE D: INTEREST TO PARTICIPATE FORM

Ms Evashne Singh
University of Witwatersrand
School of Construction Economics and Management
New John Moffatt Building
1 Jan Smuts Avenue
Johannesburg
2050

Transnet SOC Limited
Carlton Centre
150 Commissioner Street
Johannesburg
2001

18 May 2015

Dear Sir / Madam

REQUEST FOR SURVEY PARTICIPATION ON THE FOLLOWING RESEARCH TOPIC

Client Satisfaction in Construction

I am an MSc candidate at the University of Witwatersrand, from the School of Construction Economics and Management. I am carrying out research in the area of client satisfaction in construction.

To date, the primary focus with regard to delivering projects successfully has been the fulfilment of time, cost and quality objectives. Factors such as the focus on the fulfilment of client objectives through the focus on the quality of relationships, collaboration, trust, alignment of core values, and a long term focus has been neglected and this has negatively influenced client satisfaction and the construction industry. It can be deduced that the factors which influence client satisfaction are not clearly understood by contractors, which necessitates a study in this regard. The effects of not clearly understanding the client's needs include adverse effects on business sustainability, profitability, client retention and competitiveness of construction firms in South Africa.

Clients also need to clearly understand what value to their business is so that they can align their requirements accordingly. A shift in thinking is required if the current conditions are to improve. Having an understanding of client requirements will improve the competitive position of contractors and the current state of the construction industry. One of the focus areas of the research is the role which trust and contractor client relationships play in obtaining client satisfaction.

To the fore going, a survey of South African public sector clients will be undertaken as part of this study to understand their views on the factors which influence client satisfaction in construction. To achieve objective results, the survey is geared towards individuals who are experienced in managing construction projects. Such individuals will include project managers/ leaders, middle and senior management who are knowledgeable on the subject and who will be able to make meaningful contributions to the study, of which your firm has been carefully selected. Your interest to participate in this survey can be indicated by

endorsing on the **Expression of Interest to Participate (ITP) Form**. The survey will be held in the third quarter of 2015.

Following the receipt of your ITP form, survey questions will be mailed to you for feedback from, preferably three (or more) representatives who are project managers/ leaders, middle and senior management with relevant knowledge and experience. The expected duration to complete the survey should be approximately 30 minutes. The respondents are to send their forms directly to the researcher (Evashne Singh).

If you have any pertinent questions and require further information, please contact me via 073 538 5307 or 403081@students.wits.ac.za or my supervisor (Dr. Yomi Babatunde) at 011 717 7658 or oluwayomi.babatunde@wits.ac.za.

Thank you
Evashne Singh
MSc Project Management Candidate

Cc:

Dr Yomi Babatunde (supervisor) oluwayomi.babatunde@wits .ac.za

ANNEXURE E: ETHICAL CLEARANCE

School of Construction Economics & Management

University of the Witwatersrand, Johannesburg -PO Box 20, Wits 2050, South Africa • Tel: +27 (0)11 717 7652/77669 - Fax: +27 (0)11 717 9729 Email:CEM@wits.ac.za

SCHOOL OF CONSTRUCTION ECONOMICS AND MANAGEMENT RESEARCH ETHIC COMMITTEE

CLEARANCE CERTIFICATE	**PROTOCOL NUMBER CEM/15/03/MRR**
PROJECT TITLE	Client Satisfaction in Construction
INVESTIGATOR(S)	Evashne Singh **(ST NO. 403081)**
SCHOOL/DEPARTMENT	**SCHOOL OF CONSTRUCTION ECONOMICS AND MANAGEMENT**
DATE CONSIDERED	29 May 2015
DECISION OF THE COMMITTEE	Approved conditionally with respect to the declaration
EXPIRY DATE	29 May 2017
DATE 29 May 2015	**CHAIRPERSON** (Dr. E Heron)

cc: Supervisor : Dr. O Babatunde

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and **ONE COPY** returned to the Secretary Mrs. M. Sithole at the CEM reception desk.

I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. **I agree to completion of a yearly progress report.**



Signature **Date** **29/05/2015**