Development of a framework for client satisfaction in the Saudi construction industry

Development of a Framework for Client Satisfaction in Saudi Construction Projects

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Signature.....

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ABSTRACT

The adoption of practices that will ensure the satisfaction of construction clients has increasingly become a critical issue in the Saudi Arabian construction industry. A review of the literature showed that this industry is currently characterised by dissatisfaction among construction clients and lacks practices that motivate clients and optimise their construction activities. Based on this background, this PhD research explores client-contractor relationships in the Kingdom of Saudi Arabia (KSA) with the aim of identifying best practices that promote client satisfaction and developing a framework that could be used as a guide to enhance client satisfaction. A qualitative research methodology was employed using semi-structured interviews to elicit primary data from 30 clients and 30 project managers who were purposely sampled. The interviews investigated: the level of client satisfaction in the construction industry of the KSA; current practices of measuring the level of its client satisfaction; and factors that contribute to client satisfaction and dissatisfaction during the execution of construction projects. This data was analysed using a thematic analysis. The results from the analysis revealed a low level of client satisfaction in relation to the performance of the construction companies. This is caused by factors which include late completion; cost overruns; lack of proper communication between project team and client; dishonesty and insincerity; low levels of commitment to agreed designs; use of an inexperienced workforce, leading to poor implementation practices; negligence in planning; and lack of commitment to health and safety practices. The results also established the key factors influencing the extent of client satisfaction to be: effective financial management of the project; maintaining good communication between the client and project team; the use of good quality building materials; honesty of contractors; use of a skilled workforce; paying attention to details; commitment to services and duties; adherence to health and safety standards; striving for perfection; and proper planning. Based on these results and the literature review findings, a framework for enhancing client satisfaction was developed and validated by 16 practitioners in the KSA. The research concludes that construction activities could be optimised in the KSA with regard to client satisfaction by proper planning and adoption of appropriate construction practices. It recommends that future research could focus on the nature of the projects, professional practices and types of clients.

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CHAPTER 1: INTRODUCTION

1.1 Introduction to Chapter 1

The issue of satisfaction in construction has in recent times attracted research attention as firms continuously strive to remain competitive in a dynamic construction industry. Satisfaction, which is defined as a psychological phenomenon that is achieved when expectations are either met or exceeded, is seen as a vital tool to measure success despite the importance of other factors too, such as cost, quality and delivery on time (Nzekwe-Excel, 2010). In a construction setting, the various construction practitioners – such as architects, civil engineers, project managers, clients and customers – desire some sort of satisfaction both from the construction process and the finished product (Alrashed and Muhammed, 2014). Hence satisfaction is seen as a common need for the construction participants, especially the owner of the construction project, otherwise known as the construction client. In order to effectively understand client satisfaction in construction, therefore, different aspects of project performance will be explored.

Research by Omonori and Lawal (2014) highlights that the construction industry is quite a complex one, and the various phases of construction range from conception to handover. At the heart of these processes, which involve managing available costs and maintaining the specified and desired quality, as well as working within a stipulated time, is the satisfaction expected from the construction project. Omonori and Lawal (2014) believe that it is more difficult to carry out construction activities based on a customer's requirements, as the customer is mainly the user of the constructed product. Omonori and Lawal (2014) add that in as much as the customer needs to be satisfied with what he or she pays to use, the customer's needs can only be anticipated, inquired into and incorporated into the construction process. Consequently, the focus is then turned to the client who owns the construction product, and is involved in the project delivery right from its conception phase. Thus, obtaining best practices that will increase client satisfaction within the Saudi construction industry is the basis of this research.

A study conducted by Webber (2010) indicates that client satisfaction is essential for maintaining client engagement with stakeholders and prospective customers. Webber considers that there has to be a thorough understanding of the client's needs, obtained through an evaluation of the model proposed for Professional Construction Management (PCM) services. Through a review of the literature on construction projects, Webber

(2010) proposed a model that incorporates construction activities with the intention of satisfying clients while handling or delivering construction projects.

Several terms have been used to classify and identify the construction client. Berntsen (2016) point out a variety of construction clients, such as consultants and designers, as well as the owner of the construction project, whom they also describe as the project vendor. Egemen and Berntsen (2016) further highlight that the construction client may have the liberty to either outsource the project to contractors or construction agencies or to participate and become involved in the daily construction activities, but in either case the client would be responsible for overseeing the activities involved in the construction project. This is because the construction client is usually responsible for making key decisions relevant to the success of the project. Consequently, in order to retain a competitive advantage while delivering the project, contractors or project participants need to ensure that the project meets the required design specifications, is delivered on time, within the limits of cost and time, and ultimately satisfies the client or owner of the construction project.

Omonori and Lawal (2014), however, argue that when considering clients who are usually the owner of the construction projects, their requirements for satisfaction may differ. Construction clients are mainly interested in obtaining value for money spent, as well as ensuring that the constructed project is durable and reliable, and meets or exceeds design expectations. Client satisfaction is therefore an essential part of project success, and hence this research is aimed at identifying, highlighting and testing best practices that enhance client satisfaction within the Saudi construction industry, with the hope of optimizing construction activities and obtaining value for money spent.

1.2 Background of the research: client satisfaction

As mentioned, client satisfaction in the construction industry is the primary area of focus of this research. This is because the construction client is a key member of the stakeholders involved in construction projects. Stakeholders are defined as a group of people who have a vested interest and can make decisions that would influence the progress and success of any construction project (Al (Chinyio and Olomolaiye, 2010). Stakeholders involved with construction include architects, civil engineers, quantity surveyors, regulatory bodies, government agencies, project managers, clients, suppliers and customers, amongst others. The construction client, as a key member of the stakeholder group, plays a vital role in the

long term sustainability of business relationships between the stakeholders. According to Othman (2015), the clients are also responsible for maintaining the flow of revenues and profits, while articulating the expected needs of the stakeholders to enhance project performance.

Client satisfaction is a priority for construction companies who intend to be successful in the long run and this is linked with the quality of construction projects. According to Ahmad et al. (2012), client satisfaction and quality are directly interlinked with each other, as high-quality projects yield expected satisfaction to the client. In other words, if a high-quality project is delivered, the stakeholders (including the construction client) will be satisfied. It is also identified by Rumane (2013) that the continuous improvement in the quality of construction work also contributes towards enhancing client satisfaction and building a competitive or distinct image from the existing rivalries.

1.3 Research context: the Saudi construction industry

This research is undertaken with specific reference to the Saudi construction industry. Within this industry, projects for residential and commercial buildings as well as activities for infrastructure development are the main context of the research. In the Kingdom of Saudi Arabia (KSA), the construction industry contributes greatly to the country's economic growth and development. According to Alasamri et al. (2012), there is an emerging need for residential and commercial buildings and infrastructure in Saudi Arabia, and this is attributed to the rapid growth and development of the nation, particularly in the area of tourism. The high revenues derived from tourism are a substantial reason for such construction projects as well as the development of other utilities.

Within the Saudi construction industry, a large number of contractors are engaged in construction activities. The government of Saudi Arabia, which is the main construction client, contributes effectively by providing finance for their projects. The commonly adopted methods for financing used in the industry are project finance, conventional finance and shariah compliant finance (Husein, 2014). While carrying out construction work, the range of people involved includes suppliers of raw materials, advisors, professionals, contractors and sub-contractors, architects, technicians, electricians and labour. Hence, a variety of people are involved in different aspects of construction phases and activities such as design, operation, maintenance and other works. This generates complications, as there is a need to maintain good coordination to provide satisfactory

services, and enhanced satisfaction for those involved in the construction, especially the client (Lock, 2017). As Mazher et al. (2015) point out, quality improvement can be achieved only through experienced employees, and its measurement and examination can be handled only by such employees. Consequently, this research looks at what best practices could be adopted or improved in order to enhance client satisfaction within the Saudi construction industry.

1.4 Research Problem

In the Saudi construction industry there is a high correlation between the nature of construction projects and financial development (Mazher et al., 2015). The industry has been vital to the country's economic growth and the factors that contribute to its competitiveness and long-term stability are essential drivers for the satisfaction of its stakeholders. Due to the complex nature of the construction industry and its relevance to economic development, client satisfaction is essential, as issues such as complex processes or activities, the availability of skilled labour and capital investment, technological changes, time constraints and market fluctuations continue to resurface. In addition, the delivery of construction projects in Saudi Arabia is significantly less efficient in terms of design, quality standards and specifications compared to other countries. Specifically, the rules and regulations for the construction industry are not so strict in Saudi Arabia and this is partly responsible for the relatively lower quality of project outcomes in the KSA (Zhou, Goh and Li, 2015). Consequently, these problems have shown the need to identify best practices employed in carrying out construction activities that would improve the quality of construction and enhance the satisfaction derived both from the construction process and the constructed facility, with a particular focus on the client.

However, despite the numerous quality improvement techniques used in various countries, such as the USA, there is no empirical evidence that adopting these techniques would achieve client satisfaction in the Saudi Arabian construction industry (Zhou, Goh and Li, 2015). Furthermore, the current literature does not give a clear picture of how to achieve such satisfaction in the Saudi context specifically. In an attempt to bridge this knowledge gap, therefore, this research aims to answer the following research question:

What practices could be adopted or improved in order to achieve greater client satisfaction within the Saudi construction industry?

1.5 Research aim and objectives

In order to address the research question above, the aim of this research is to identify the best practices in construction that could be adopted within the Saudi construction industry to achieve greater client satisfaction.

To accomplish this aim, the research objectives are:

1. To critically review the literature relating to the construction industry in order to identify the persistent and current issues relating to client satisfaction and practices in the construction industry of Saudi Arabia.
2. To evaluate the factors for satisfying clients that influence the practices and processes by contractors and construction companies operating in the Saudi Arabian construction industry.
3. To study the socio-cultural, economic and technical factors that lead to optimum satisfaction among clients.
4. To identify the ideal practices that should be adopted for greater client satisfaction in the construction industry of Saudi Arabia.
5. To develop a practice guide (framework) for improving the satisfaction of construction clients in Saudi Arabia.
6. To validate the framework for improving client satisfaction in the Saudi Arabian construction industry and draw conclusions for the entire research project.

1.6 Structure and outline of the thesis

A brief outline of the chapters covered in this research is shown in Table 1.1 below:

Table 1.1: Organisation of research and thesis

Chapters	Description
Chapter 1: **Research introduction**	This chapter covers the main research problem that is being researched in order to develop the detailed thesis. The aim and objectives as well as the question this research seeks answers to are presented in this chapter.

Chapter 2: **Review of literature and development of theoretical base**	This chapter starts with the collection of pertinent academic sources for an in-depth critical review on the best practices for client satisfaction in the construction industry specific to the research setting of Saudi Arabia. On the basis of the reviewed literature, a conceptual/theoretical framework is developed in order to underpin the research purpose with facts and findings.
Chapter 3: **Conceptual framework**	This chapter presents a detailed discussion of the conceptual framework developed from a critical review of the literature.
Chapter 4: **Research methodology**	This chapter contains the details of the research approach, research design, research paradigm, research analysis approach, and ethical considerations that have been covered during this thesis work.
Chapter 5: **Data analysis**	This chapter undertakes and presents an in-depth and critical analysis of the findings gathered with the help of qualitative and quantitative data collection methods.
Chapter 6: **Discussion of the results**	This chapter discusses in detail the analysed findings in the light of the examined literature in order to address the objectives of the research.
Chapter 7: **Development of a best practice framework for client satisfaction in the Saudi Arabian construction industry**	This chapter presents a best practice framework based on the overall findings examined and analysed, and explains the components of the framework and its implementation.
Chapter 8: **Research validation**	This chapter provides the evidence that validates the findings of the research and ensures the credibility and reliability of the study. It presents a discussion of

	different methods used in this study for exploring the process of research validation.
Chapter 9: **Conclusions and recommendations**	This final chapter of the research presents a summary of the findings that directly answer the research question. It also provides the conclusions of the study, practical implications, contributions of the research, limitations and recommendations.

1.7 Summary of Chapter 1

The chapter has provided a background knowledge of the Saudi construction industry in terms of the practices followed for client satisfaction. From the background and context it can be seen that client satisfaction is one main area of concern for this industry in Saudi Arabia. In this context, client satisfaction with the quality of a project can sustain a long-term relationship with the contractor or contracting company. The chapter indicates that the work of Saudi construction firms in terms of client satisfaction is less effective than it should be. Thus, it is crucial to investigate the best practices that can improve the quality and performance of projects and hence achieve greater client satisfaction.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction to Chapter 2

The previous chapter presented the research aim and objectives as well as the main question that this research aims to answer. This chapter focuses on what has been done in the field of construction management to optimise client satisfaction through the adoption of best practices. The chapter then outlines the theoretical concepts of satisfaction in the construction industry in particular, based on an in-depth literature review. The chapter then develops a conceptual framework for the research.

2.2 Client satisfaction

The subject of client satisfaction has over the past years been a major concern for construction industry researchers (Yang and Peng, 2008; Akbar and Parvez, 2009; Othman, 2015; Loosemore, 2016). The need to ensure higher levels of client satisfaction has arisen due to the low levels of satisfaction among clients regarding the outcome of construction projects (which did not meet their requirements) or the process of the construction, leading to various issues for the client (Omonori and Lawal 2014). Client satisfaction has been reported to be a major concern for construction professionals due to the long term implication of satisfaction on future businesses and recommendations from clients (Raut and Mahajan, 2015). Generally, three main bases have been used in order to measure client satisfaction: time, cost and quality performance of construction projects (Saeed and Hassan, 2012; Rumane, 2013), although other bases for measuring this have also been presented in the literature. To provide a better understanding of client satisfaction in the context of the construction industry, the next section provides a theoretical basis for client satisfaction.

2.3 The theoretical concept of satisfaction and its importance

The major elements of client or customer behaviour lie in understanding the key factors, such as customer effort and expectation (Yang and Peng, 2008). The information available to clients or customers has a major impact on their expectations. Thus the analysis of satisfaction is not limited to the evaluation of the product and purchase experience. This means that there are a number of parameters and qualities on the basis of which the analysis of the satisfaction can be made. The parameters for client satisfaction are quality, cost, communication skills, time, customer orientation and response to complaints (Khan

and Khoso, 2014). According to Locke (1970), satisfaction can be defined as the comparative study between an individual's perception and expectation of the results. Hence for satisfaction to be measured, there has to be an expectation which would be compared with an output and the comparison between expectation and outcome is referred to as satisfaction. Churchill and Serprenant (1982) postulated that the satisfaction of a customer is dependent on the actual results in relation to the expectations of the results. They went on to describe satisfaction as the comparison between the expectations of the customers before the purchase and the performance of the services after the purchase (Churchill and Serprenant, 1982). According to Zeithaml (1988), the satisfaction of customers depends on the value derived by them from the products and services. The value can be defined as the enjoyment of the quality of the products and services by the customers in relation to the price paid by them. In relation to the present research, the definition offered by Zeithaml (1988) is viewed as the most relevant as it defines the meaning of customer satisfaction in a suitable manner. In other words, the real measure of the satisfaction is the enjoyment of the quality of the products and services by the customers as compared to the price paid by them.

More recently, Loosemore (2016) has suggested that the qualities required in a consultant in order to give satisfaction to the clients are technical knowledge and providing quality in the work. Their in-depth technical knowledge helps ensure the work is carried out correctly and the quality of the service provided gives it an extra edge. Good and appropriate communication skills are also required in consultants in order to provide such quality of service to the clients. Thus, one of the reasons for dissatisfaction among clients is having consultants with inadequate skills (Loosemore, 2016).

Research conducted by Othman (2015) suggests that there is a great need to provide satisfaction in relation to construction projects. By developing an assessment framework to study the impact of strategic decisions on construction client satisfaction, Othman (2015) explores the various decisions made by construction stakeholders which have positive and negative influences on the level of client satisfaction, and adds that project success is usually characterised by the satisfaction of the project client. Similarly, Othman (2015) believes that client satisfaction is dependent on the strategic decisions taken by the clients and the quality of the services provided by the consultants. His research was focused on the satisfaction of construction clients based on the overall performance of the construction consultants. Consequently, satisfaction ratings were based on good communication and the nature of the type of project or service rendered. In addition, client

satisfaction was based on the quality of service offered by the construction consultants as well as the involvement of the construction client in delivering the construction project. The research concluded by analysing different models of satisfaction, although based on the supply chain area of construction (Othman, 2015).

Nzekwe-Excel (2010) developed an Integrated Framework for Satisfaction Assessment of Construction Project Teams within the UK construction industry. The main idea behind the framework development was to provide knowledge of the constructs of satisfaction required by members of a project team, and this was obtained through the integrated framework. Thus there had to be a rating system for members of the project team in order to capture their level of satisfaction throughout the different phases of the project life cycle. In addition to this, attention was given to the analysis of satisfaction models. Despite the various models of satisfaction analysed, however, there was evidence that a different model needed to be developed in order to assess the satisfaction of members of the project team. The need for this further supports the importance of the satisfaction of construction practitioners, especially of the client within a construction environment (Nzekwe-Excel, 2010). Research by Ambroz, and Praprotnik (2008) suggests that if the organisation culture is not aimed at providing excellent services to the customers, there is little chance that these organisations will succeed in the long run. Organisations must therefore be open to implementing the suggestions received based on the expectations of the customers and there should be enough space for customer participation in the process.

The studies identified above provide specific details of the satisfaction of construction participants within the existing construction processes. However, little attempt has been made to explore the mechanisms used for ensuring client satisfaction, and this can be regarded as a research gap. This research addresses this need and will attempt to explore the factors that are responsible for or enhance client satisfaction specifically.

2.4 The concept of satisfaction in construction

In any endeavour, whether in the production of goods or the provision of services, satisfaction is an essential measure of success. Stan et al. (2013) highlight two distinct types of satisfaction experienced in construction which are usually related to customers and clients: cognitive and overall satisfaction. The authors explain that cognitive satisfaction entails the satisfaction experienced when the customer or consumer of a product is happy about the use of such a product, while overall satisfaction relates to where the consumer or owner derives pleasure (pleasurable fulfilment) from the use of the

product (Stan et al., 2013). They go on to define satisfaction as an emotional response to a product or service with regard to the expectation from such product or service (Stan et al., 2013). An extensive literature review carried out by Bassiouni et al. (2012) shows that the issue of expectation is one of the indices related to client satisfaction; other indices include need, location, available resources, raw materials, and personnel. Bassiouni et al. (2012) go on to posit that value creation involves organisations' ability to meet and, in most cases, exceed the quality expected and demanded by the customers or users. Weinstein and Abratt (2009), however, argue that the knowledge of expectation may not influence satisfaction in all cases as expectations differ from one individual to another. According to Rumane (2013), construction companies, which lay more emphasis on client satisfaction, are more than capable of attaining a competitive and sustainable advantage. Rumane (2013) points out that the presence of quality and satisfaction in a product, service or project is a victory for the client and thus enables the construction firm or industry to combat increasingly competitive pressure. Consequently, such construction firms are able to meet emerging expectations of the market or of current and potential clients (Rumane, 2013).

In the quest to identify sources of best practices in construction activities that enhance client satisfaction, the sources of satisfaction within a business environment are explored. According to Molinari, Abratt and Dion (2008), within a business environment satisfaction plays a significant role in making behavioural decisions leading to business activities. They explain that consumers or customers are attracted either by the display or the price. Repurchase is achieved when the consumer's expectation has been met or exceeded. On the other hand, if the expectation of the consumer was not met, for instance in terms of quality or taste, there would be no repurchase. Hence the best practices within the business environment are geared towards attracting and retaining the consumer who pays for the product or service (Molinari, Abratt and Dion, 2008a). Similarly, Molinari, Abratt and Dion (2008b) categorically state that satisfaction, quality and value all play an important role in promoting Business-to-Business (B2B) transactions. B2B involves using online platforms for trade, whereby consumers do not physically see the product, but repurchase if their satisfaction has been met or exceeded, the quality level is clearly high, and the value placed on the product was sincere (Molinari, Abratt and Dion, 2008b).

The construction industry, however, differs from the business or marketing ones. In the construction sector, client satisfaction is often achieved through carefully selected contractors who physically carry out the construction activity. Prior to the commencement

of any construction project, there is a rigorous contractor selection process based on price, quality proposed, quality of material to be used, marketing image, previous experience, competitiveness and even financial capabilities. Hence the processes are aimed at ensuring that the selected contractor will be capable of delivering the project to the satisfaction of both the clients and the users (Bassiouni et al., 2012). Rumane (2013) thus concludes that client satisfaction is highly dependent on the nature of the contractor as well as the contractor's level of confidence and their capability. Consequently, factors such as bidding requirements, timely completion of projects, quality of material used, delivery and means of communication are all important when considering the best practices that would influence contractor selection which in turn would enhance client satisfaction (Rumane, 2013).

The construction industry can adopt a number of practices for client satisfaction; for instance, aligning client and business needs; interactive coordination and communication with clients; progress evaluation; understanding the problems and taking immediate action to deal with them; and evaluation and control (Egemen and Berntsen (2016). Outcomes from a study by Langford and Male (2008) show that both the brand image and word of mouth recommendations are directly linked with client satisfaction.

Hence client satisfaction in the construction industry not only stimulates personal experience, but also acts as a tool for promotion. A positive personal experience by a client leads to differentiation in the marketplace and attracts other prospective clients. On the other hand, there may be client dissatisfaction, as a result of ineffective service delivery, lack of quality and/or overrun of cost and time (Langford and Male, 2008). It is these issues of client dissatisfaction that raise the need for exploring best practices so as to give the greatest degree of importance and satisfaction to the clients in construction projects. Exploration of the best practices, essential for client satisfaction, is an effective way to resolve the problems faced by clients in the construction services.

For client satisfaction in the construction industry, quality is the predominant area of focus. One of the tools employed for ensuring quality within the construction sector is Total Quality Management (TQM). This refers to a method of organisational management that aims at improving the quality of products and services through ongoing refinements in response to continuous and articulated feedback (Sadikoglu and Olcay, 2014) and is seen as a best practice for construction (Bassiouni et al., 2012).

According to Mehta (2014), quality management in construction is the standard for quality performance and satisfaction. Satisfaction with the quality of the project is dependent on quality management, as it enables firms to determine the quality and efficiency of the project. The most significant matter of concern for the construction industry is quality improvement, which prevents issues of client dissatisfaction. For construction projects, the best way of obtaining a higher quality seems to be to keep the compatibility between internal construction processes and their supply chains, which ultimately maintains an efficient system of quality management (Mehta, 2014). Bal et al. (2013) state that the emphasis on the stakeholders' perspectives, and specifically that of the client, makes it easy for contractors to set goals for their team members (Bal et al., 2013). Furthermore, Angelova (2011) considers that customer relationship management can be used as an effective tool to enhance customer loyalty, which would ultimately enhance client satisfaction, whereas most companies rely on marketing tools to inquire about customers' wants and needs. Consequently, relationship marketing is an essential tool for enhancing and maintaining customer relationship (Angelova, 2011). The next section of the literature review focuses on exploring the lapses experienced in current practices within the Saudi construction industry.

2.5 The concept of client satisfaction in the construction industry

According to Hill and Alexander (2017), satisfaction is a type of cognitive or affective response, based on an analysis of the product, experience related to the consumption of products and attributes of purchase, and such a response might be expressed before or after making a purchase decision, before or after consuming the product or after an extended experience. This definition of client satisfaction indicates three core themes of satisfaction: focus, timings and summary response. Satisfaction focus reflects the specific attributes or specific benefits of the product. Timing indicates the duration of the consumer's interaction with the product or the product attributes within which the customer develops a positive or a negative perception about the product. The summary response indicates the level of satisfaction attained by the customer. This level of satisfaction may range from very high to very low, according to the requirements and preferences of the customers. Rashvand and Majid (2014) highlight the critical criteria for client and customer satisfaction in relation to performance management.

From the perspective of Blut et al. (2015), the level of customer satisfaction indicates the overall evaluation of the firm's products and performance. It is a crucial indicator of the

organisation's performance because it is closely associated with the behavioural and economic consequences that are beneficial for the organisation. The authors disagree with the relationship between customer satisfaction and productivity. Moreover, in production management and operation research, it has been argued that this relationship is positive (Blut et al., 2015). It has been examined by the authors that an organisation is able to achieve higher levels of customer satisfaction by lowering costs and improving productivity.

According to Omonori and Lawal (2014), client satisfaction is determined by the extent to which the construction process and product meet the client's expectations. It involves a combination of verification with the standards and effectiveness of the quality. They point out that customer relations are highly non-recurrent and dynamic, and that in addition to this, although the number of customers is small, the relationship between the customer and the contractor is highly complex (Omonori and Lawal, 2014). Such complexities arise because the contractor produces the physical product in the form of the construction project and the service processes for the party ordering the project. The involvement of a number of supplier networks of construction further increases the complexities in the customer-contractor relationship (Omonori and Lawal, 2014). Furthermore, additional complexities may emerge in the relationship between customer and contractor as a result of which the customer satisfaction in the construction project is relationship-specific rather than transaction specific (Omonori and Lawal, 2014). Finally, it has been highlighted that client learning is essential for building a strong architect-client relationship. Siva and London (2012), for instance, point out that client learning needs to be considered by architects.

2.6 Overview of the Saudi construction industry

The KSA has been identified as one of the largest markets for construction projects in the Middle East (MEED, 2014). Over the last decade, construction projects amounting to a net worth of 61 billion dollars were awarded in the Kingdom. In addition to this, approximately a trillion-dollar worth of projects were planned, and schedules were developed in accordance with the availability of resources and their allocation. Constructions companies involved in the projects have a strong motive for delivering successful projects in the agreed period of time (MEED, 2014).

The Saudi construction industry has been dev through integration of the construction companies and government agencies (Alasamri et al., 2012). In the KSA, a number of

other industries, such as hospitality and tourism, have become aligned with the developments in the construction industry; this is increasing the use of effective and time-tested methods for delivering successful construction projects that will achieve higher client satisfaction. The strings of development in the Saudi construction industry have also attracted a number of foreign developers, who are interested in exploiting the advantages of the fast-growing market (Oxford Business Group, 2008). Thus, it is essential to develop a clear understanding of the best practices that can lead to higher client satisfaction in the Saudi construction industry.

In comparison with other industrial sectors, such as the automotive sector, success has been influenced by the level of customer satisfaction and loyalty (Jahanshahi et al., 2011). In addition, customer service quality, product quality and loyalty can be measured at different stages, such as at the commencement of the purchase or some time after the purchase. Yu and Yan (2014) explain that the maximisation of customer satisfaction can be achieved by adhering to the clauses of the contracts and respecting the interest of the client and other stakeholders. Furthermore, they stress it is essential to deliver the best project outcomes, even if the overall budget increases due to unexpected overhead costs (Yu and Yan 2014). The promotion and expansion of a construction firm also depends on the successful completion of its previously undertaken construction projects in the region (Yu and Yan (2014), and the level of stakeholder satisfaction has been found crucial as it has a direct impact on the projects (Yang and Peng, 2008).

2.7 Overview of the UK construction industry

The construction industry or sector has continued to function as a key contributor towards the development of the UK economy through a wide range of technologies, services and products. The use of these entities varies with their subsequent economic valuation and the value they generate for the project. The report published by the Department for Business Innovation and Skills (2013), reveals that the construction industry in the UK contributes approximately £90 million to the economy, which is 6.7% of the total economy. The sector involves a total of 280,000 businesses, employing about 2.93 million individuals in different projects and locations, which is 10% of the total employment in the UK (Department for Business Innovation and Skills, 2013).

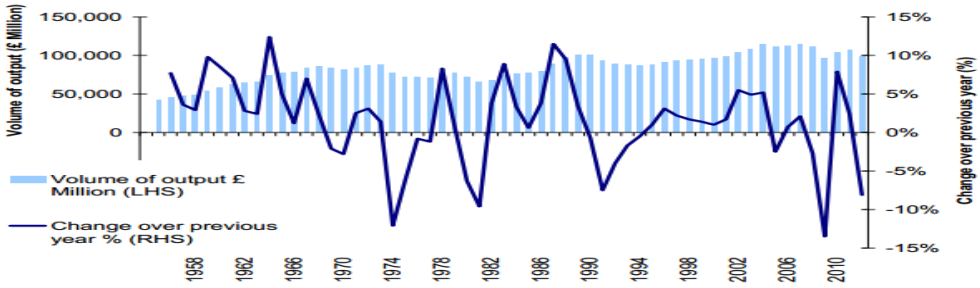

Figure 2.1: Annual status of UK construction industry from 1958 to 2012

(Source: UK Department for Business Innovation and Skills, 2013)

Dissatisfaction in the construction industry can be attributed to a number of factors, such as overrunning of project costs, and delays in operations due to lack of data sharing and lack of coordination between the different departments. Othman (2015) argues that in the UK construction industry, variables such as client satisfaction play a crucial role in the success of a project. Thus, client satisfaction is the most crucial issue contributing towards the success of a construction project (Othman, 2015). In recent years, the UK has witnessed a growth in the construction industry, reflected in its contribution towards the economy of the nation, showing a growth of 2.6% in 2014, although the conditions were different in the last two quarters (Othman, 2015).

Wahab, Dainty and Ison (2008) state that the government policy of the UK consists of various steps to improve the productivity and skills in the construction industry. Productivity and skills are the core drivers of the economic performance of the UK. In order to fulfil these objectives, the government has focused mainly on five key drivers: supporting science and innovation, encouraging investments, improving competition, promoting enterprises, and improving key skills (Wahab, Dainty and Ison, 2008). These measures have positively affected the construction industry in the UK by increasing the level of total output in the country, leading to an increase in the employment rate, and also a gradual increase in the percentage of the workforce in the construction industry. These measures have also helped increase the number of workers participating in training programmes conducted by construction companies (Wahab, Dainty and Ison, 2008).

Safapour et al. (2017) note that the construction industry has faced some problems such as lack of research and development, an industry structure that is fragmented in nature, and unreliable and low profitability, but the authors point out that these problems are being

resolved through the principle of construction excellence. This principle helps the construction companies to provide world class products and services, and there are four integrated programmes in order to achieve this: productivity, to improve the competitive approach of the UK construction industry; innovation, for exploring the latest technology for the future; engagement, by working with people of different backgrounds; and best practice knowledge, by continuous improvement. Safapour et al. (2017) further point out that for the prosperity of the construction industry in the UK, some factors – such as the creation of a good reputation for the company, employee and customer satisfaction, appropriate strategic planning and management – require thorough attention.

Boasson and Wettestad (2016) state that in the UK's construction industry, factors such as the organisation of the various activities, procurement of material, linear designing process and sheer reliance on a competitive edge based on cost-based tendering have been the causes of the recent slowdown in the industry. Integrated designs and use of better project management techniques can be effective in enhancing the level of deliveries in the industry, and all the barriers in the UK construction industry can be attributed to the lack of integrated designing process, imperfect information sharing system and diverse moral hazards in the industry (Boasson and Wettestad, 2016). Apart from this, certain policy measures based on conventional engineering and project management have led to the delay of construction projects in the UK. The country's industry has witnessed different phases over the last two decades; however, according to Boasson and Wettestad (2016), the current reforms are aimed at changing the relationship between construction companies and clients.

Yun, Won and Park (2016) reveal that the UK construction industry has witnessed a number of major reforms which have been a result of technical innovations, evolving the methods of procurement and financial funding, and various initiatives related to policies. Boasson and Wettestad (2016) show that the industry has been marked by fragmentation, with a total of approximately 150,000 individual firms that are clients, equipment providers, consultants and architects, workers and building commissioners at different sites across the country. Yun, Won and Park (2016) further argue that the involvement of a number of entities makes the projects more complex and detailed, lessening trust and increasing the number of delayed projects (Yun, Won and Park, 2016). In addition, Demirag (2017) mentions that in the UK, the construction contracts are primarily selected on the lowest price bids and further, the contractors implement strategies to cut the costs and maximise the margins.

2.8 Comparison between the construction industry of the UK and that of Saudi Arabia

Bokhari and Qureshi (2016) mention that the Saudi construction industry has been implementing Business Project Re-engineering (BPR) to focus on eliminating barriers to quality management in the sector. The use of BPR is being popularised in the Saudi construction industry; however, an improper use of the strategic management tool can lead to dangerous consequences (Bokhari and Qureshi, 2016). The scenario in the UK construction industry is different, as the industry has been continuously deploying techniques, tools and manpower to improve the overall level of satisfaction of clients and the rate of the success of projects (Bokhari and Qureshi, 2016).

In the UK, construction contracts are primarily evaluated on the basis of the cost involved; in the KSA, however, the majority of the construction projects are undertaken on the basis of the nature of these projects, which relates to the methods of design, procurement and contract type. The report entitled Saudi Construction Market Analysis (Construct Arabia, 2014) reveals that in Saudi Arabia, there has been a rise in the demand for commercial and residential buildings, and this has instigated a boom in the construction sector, which is now the second most rapidly growing industry in the KSA. In the past few decades, the growth in the industry has been higher in comparison to the growth in the United Kingdom, as it has been fuelled by the sudden development of the economic status, with contributions from the Saudi oil and natural gas industry (Construct Arabia, 2014). The industrial revolution that spread from Europe in the 18th and 19th centuries brought growth and expansion of the construction industry, fuelling the changes in living standards, economic expansions, increased industrial projects and innovations (Construct Arabia, 2014).

Hong et al. (2015) point out that in Saudi Arabia, construction companies have been implementing sustainable engineering practices and green building technologies to build a type of infrastructure that uses a minimal amount of non-renewable energy and has a minimum negative impact on the environment (Hong et al., 2015). The majority of construction projects in Saudi Arabia are funded or conducted with the involvement of the public sector, which requires a high level of accountability and the best allocation of the natural resources. In the Saudi construction industry, it has been observed that each phase of construction involves the use of innovative methods that are implemented even half way through the project. Such interventions are generally successful; however, there are chances that they may affect the ongoing progress, budget, timeframe and information-

sharing, which may impact the overall project output (Hong et al., 2015). On the other hand, there are certain differences to the United Kingdom construction industry, as the level and availability of various resources differ between the two nations.

The UK construction industry is more about the use of technological innovations, highly precise services and client-centric project outcomes in comparison to the KSA industry. In the UK, the construction companies use more strategic data management system and project management tools, as the valuation of the projects is dependent on their completion within a limited timeframe and with more customer-centred results (Department for Business and Innovation Skills, 2013). In the UK, precise reasons that are responsible for the delay in projects are non-alignment of the operational activities and lack of data-sharing among different agencies in the projects (Loosemore, 2016).

However, although there are differences in the construction industry and the environment between the two nations, there are also some similarities. A review of the previously discussed information reveals that there are some common factors that are responsible for the delay of construction projects in both countries. Among these factors, the presence of harsh and unavoidable changes in the weather conditions remains the most significant (Boasson and Wettestad, 2016). In both the UK and Saudi Arabia, there are certain unique projects with uncommon circumstances which can lead to a delay in the completion of the project. Poor and unrealistic scheduling of the activities can also cause delays in those activities and hence affect the entire project (Boasson and Wettestad, 2016). In both Saudi Arabian and UK construction projects, other common reasons that lead to a delay in project completion are dependency on a third party, poor budgeting, and communication gaps between the different agencies involved in the project. Another major reason is a lack of coordination and of effective use of project management tools. Construction projects require a number of activities and involve a huge amount of various resources, and all of these make the process of management complex and dependent on all these factors (Loosemore, 2016). Yet although there are some differences as well as similarities, in both nations it is essential to implement better practices that can enhance the overall level of client satisfaction in the industry.

Knowledge of the Saudi and UK construction industries has been developed to evaluate the differences in their practices and the ways in which these practices are useful in enhancing the overall level of satisfaction of clients. In the present study, a comparative approach has been used in order to find innovative tools that can be implemented in the Saudi construction industry to enhance client satisfaction. The literature review is

therefore based on a conceptual approach that aligns all the essential variables and concepts in order to identify the best practices that can be used in the Saudi construction industry to manage client satisfaction. It has also been found that external stakeholders tend to have strong influence on the level of client satisfaction (Ohman and Hacker, 2011). All the above studies reflect on the conditions for satisfaction in the construction industry with a particular interest in the construction client. The array of literature reviewed was able to categorically state the importance of satisfaction in construction, and suggests that in long term construction projects, a high degree of customer satisfaction is essential, so that the desired objectives can be achieved. However, there is still little information available regarding construction projects being run specifically in Saudi Arabia. For example, the prime focus of the study of Loosemore (2016) was on the UK construction industry and its related practices. The orientation and prerequisites that it follows, and its client satisfaction mechanism, are quite different from those of Saudi Arabia. The latter is a rapidly developing country, which has its own specific orientation for construction projects and industry, and the methods used by its contractors to satisfy the customers can differ from those followed in other countries. The lack of proper and adequate information regarding the customer satisfaction mechanism used in the Saudi Arabian construction industry can therefore be considered as a research gap, which the present research aims to fill.

2.9 Client satisfaction issues in the Saudi Arabian construction industry

As discussed by Azis et al. (2012), client satisfaction is the main aim of the Saudi construction industry and it can be achieved by avoiding or preventing various issues that occur in this industry. These issues have affected the confidence level and loyalty of clients towards the Saudi construction industry. This industry is regarded as one of the most uncertain industries, because of the complexities and difficulties involved in construction projects. Various innovations and technological changes have contributed to increasing the efficiency of these projects, but at the same time, these changes affect the productivity and efficiency of employees.

Azis et al. (2012) state that there are a number of factors associated with the construction industry that cause serious issues for its growth and expansion. In this respect, financial problems because of late payment, design changes and cost overruns; human resource problems caused by absenteeism and excessive overtime; and productivity and technological problems are key factors.

Delays in time are another significant issue for the industry, resulting from problems related to such factors as financing, design change, and weather conditions (Azis et al., 2012). According to Mahendra et al. (2013), risk management techniques are not widely used, because of a lack of knowledge and awareness of them. Thus, in the construction industry, the type of risks should be identified and after that, a proper organisation and controlling of risks should be conducted so that the level of customer satisfaction can be increased in the construction industry.

The use of hi-tech machines is replacing the traditional ways of undertaking tasks. Innovation and the technological boom have revolutionised the whole construction industry, due to which it has become difficult for employees and workers to adapt to these changes within the time needed (Kamane and Mahadik, n.d.). Employees are unaware of the new technologies and innovations taking place in the market, and so they are given training, which requires time, and this leads to a delay in delivery times. This has affected the mindset of clients and their loyalty level towards the Saudi construction projects. Kamane and Mahadik (n.d.) assert that the risks involved in a construction projects affect the objectives of the project, which in turn can lead to a high level of customer dissatisfaction.

Considering the report published by Construction Week (2014), on the quality of Saudi construction projects, it is essential for the industry to ensure a long lifespan of buildings. This can be achieved with the support of advanced practices and latest technologies, including the use of better building materials and environment-friendly construction technologies. However, in the last few years, this industry has witnessed a few cases of illegal practices by some companies in the sector (Construction Week, 2014). The use of low grade cement and iron, along with outdated quality improvement practices, have become the most common practices, followed by some construction firms to increase their profits. This may lead to the collapse of buildings even after their regular maintenance, affecting not only the safety of anyone in such a building, but also possibly serious harm to the client. The average lifespan of buildings in Saudi Arabia is 25 to 50 years, while it is up to 100 years in many other countries across the globe (Construction Week, 2014). All these factors incur a high cost for clients, which again affects their satisfaction level and makes them dissatisfied.

The recession in 2008 also affected the growth and development rate of the Saudi construction industry. The industry witnessed a contraction at that time, and as a result, it is still not able to cover most of its areas (Construction Week, 2014). Although it received

considerable support from the government, it is still unable to develop at the same pace as other industries in the country. Thus, the lack of basic utilities such as water and power has affected the usage of various buildings by the people of the country. All these factors reveal a negative impact on the construction industry of Saudi Arabia.

According to an Industry Best Practice report (MGF, 2014), the level of accidents and injuries has increased in the Saudi construction industry, and it is now regarded as one of the most dangerous in comparison to other countries. However, in the UK too, there are serious accident and injury issues. An analysis by Aulich (2013) shows that in the UK, more than 80 to 100 workers are killed on construction sites every year, and around 500 to 800 workers are injured in minor and major accidents on such sites annually. Aulich's (2013) main theme is that the best practices involved in the construction industry, which affect client satisfaction, need to be recognised. Thus, the core working group must be identified with the working project, and a master plan should be made for the sites, thus helping to gain client satisfaction (Aulich, 2013).

According to Wong et al. (2015), a high level of knowledge management strategy is needed in the dynamic and changing environment of the Saudi construction industry, and the employees and workers need this level of knowledge and awareness of the recent trends in this industry. This leads to improved business performance along with innovation. Lack of effective management of knowledge results in dissatisfaction of clients as the appropriate delivery of construction projects with the required quality standards is not provided to them. According to Kangogo and Manyasi (2013), in their study of the hotel industry, customer satisfaction is developed by recognising the needs of the customers, which affect the overall business of the industry. In the same way, the construction industry needs to identify the needs of its clients.

Partnering is another important factor in the construction sector. In the view of Pasquire, Sarhan and King (2015), partnering in this sector refers to the improved performance of the construction projects along with direct satisfaction of contractors and clients. Nowadays, partnering involves a range of issues and problems which may result in disagreement between the partners. Such disputes affect the performance of the construction projects, leading in turn to weak performance by employees and a longer lead time, and thus affecting the satisfaction level of clients. In addition, if the partners do not take an equal interest in the construction project, this may affect its quality, which leads again to the dissatisfaction of clients.

Le-Hoai, Lee and Lee (2008) state that a number of issues have affected the Saudi construction industry and the satisfaction level of customers. The point out that lack of communication channels between the managers and employees, associated with construction projects, often leads to the misinterpretation of information. This then leads to conflicts and lack of understanding among employees, which in turn affect the construction projects by delaying them and thus causing client dissatisfaction.

The lack of a competent project team, project manager or project management skills affects the quality and standards of construction projects. According to Lee and Liang (2014), the International Project Management Association (IPMA) identifies the key aspects such as cost, safety and timely delivery of the project that help in achieving efficiency in the plan schedules, quality, cost and scope.

Other issues are poor project management assistance, slow information flow between parties, and poor site management and supervision (Le-Hoai, Lee and Lee, 2008). Lack of adequate resources and training facilities for skilled managers and workers in site management are other factors that cause problems in completing construction projects efficiently. Moreover, an increase in demand for national infrastructure projects has resulted in a shortage of raw materials such as steel, bricks and cement, and hence caused a rise in their prices, which is a cost incurred by the clients. Thus all these factors lead to delays and extra costs in the projects, which are ultimately passed on to the clients, making them dissatisfied.

As discussed by Jaillon, Poon and Chiang (2009), one of the major issues affecting the satisfaction of clients is the waste generated by many construction companies (Jaillon, Poon and Chiang, 2009). The measures adopted by the industry to decompose the waste generated are currently inadequate as they consist of transferring it to a river or leaving it in open areas, and due to this lack of proper decomposition, environment sustainability and health are being negatively affected (Jaillon, Poon and Chiang, 2009). Clients become dissatisfied with their link to these companies, which do not fulfil their corporate social responsibility. Thus, clients shift their loyalty to those construction companies which adopt proper waste management activities in order to ensure that their market share and market size are not negatively affected.

According to Orr and Scott (2008), the need for globalisation has increased in construction projects, in order for them to gain access to a high level of assistance and pool of resources (Orr and Scott, 2008). There are unique challenges being faced by the construction industry in terms of collaboration among participants from different countries. These

partners differ in their backgrounds, cultures, upbringing and thinking, and this can cause problems in effective collaboration and coordination. Thus a high level of knowledge, coordination and mutual trust is required between these parties. Construction firms may have to bear high costs due to a problem in coordinating cross-national communication differences, and any problems in this area may result in poor quality of the construction projects along with high cost and time delays for the clients.

Orr and Scott (2008) further believe that the main issues affecting the Saudi construction industry are the lack of a skilled workforce, as well as issues relating to technological advancement, project quality, time constraints, finance and budgeting, risk and health, legal and strategic issues and the lack of effective monitoring techniques. The other problems are lack of effective industry collaboration, lack of communication between clients and contractors and lack of client relation management (Orr and Scott, 2008).

2.10 Overview of client satisfaction theories and their implication in the construction industry

Yang and Peng (2008) believe that customer satisfaction is a result of responsibilities, obligations and duties followed in projects, and that it shifts the industry from the aim of production to its customer base. From the viewpoint of Loosemore (2016), the phenomenon of satisfaction is one of the important factors of life, and in the construction industry, analysis shows that a fundamental role is played by client satisfaction in ensuring the success of a project. Loosemore adds that identification and satisfaction of the needs and expectations of the clients are becoming important in order for construction companies to survive in the competitive marketplace of the global construction industry (2016). The satisfaction level of clients is determined by comparing the preference of clients for the products and services as well as the quality of two companies in the same industry (Loosemore, 2016). The company which offers high quality standards has a higher level of customer satisfaction. According to Akbar and Parvez (2009), customer satisfaction is defined as the extent or limit to which a service or product is up to the level or expectations of the customers or whether the service or product is able to meet the satisfaction level of the customer or not (Akbar, and Parvez, 2009).

In the construction industry, client satisfaction is a measurement of quality assessment and performance of the infrastructural projects and services delivered to clients (Loosemore, 2016). Satisfaction is derived by comparing the perception of a person towards the delivery made to them and their expectations of the product delivered. It is also understood by examining the difference between pre-purchase expectations and service

performance or post-purchase product. Satisfaction is said to be exceeded or achieved when the delivered product or service corresponds to the expectations of the client. The satisfaction level depends on the comparison made and the thinking of the client in relation to this comparison. Their satisfaction level is directly affected by their perceptions and expectations of performance. According to Mosahab et al. (2010), the concept of service quality is a multi-dimensional concept and the model of SERVQUAL (Service and Quality Model) demonstrates more evaluated data of the service quality gap than the one demonstrated in the SERVPERF model (Mosahab, 2010). Hill and Brierley (2017) state that the key drivers that lead to a customer satisfaction analysis can be evaluated with reference to the Kan theory. This theory proposes that the relationship between customer satisfaction and product quality is assessed by means of a risk analysis and the cooperative game theory (Hill and Brierley, 2017), The Shapley Value for the cooperative game theory could be successfully implemented as a tool, in order to evaluate the significant factors that contribute to customer satisfaction problems, thereby leading to managerial attention to these problems (Marta et al., 2008). Thus, through the generation of the key drivers of customer satisfaction, an adequate customer satisfaction strategy can be framed (Hill and Brierley, 2017). Accordingly, adequate steps towards customer retention and acquisition of new customers can be undertaken. Thus, both the theoretical as well as practical benefits of using the Shapley Value, along with the risk concepts, have been demonstrated in order to develop an optimal marketing strategy. Othman (2015) examined the quality of service given by contractors and the expectation of the project owner as an analysis tool, by using the service quality gap (Othman, 2015). He found that very little attention is paid by the contractors towards customer satisfaction and this contributes to poor performance (Othman, 2015).

According to Loosemore (2016), satisfied clients in relation to the construction industry give importance to long-term relationships, strategic alliances and partnerships with their service providers, like contractors and consultants. There are some models that are used by construction companies to determine the satisfaction level of clients (Loosemore, 2016). These models are SERVQUAL, the Performance Assessment Model, the EFQM Business Excellence Model and Application models in practice. Servqual helps to measure the quality of the service provided by the company and the satisfaction of clients from the outcome. The Performance Assessment Model refers to the measurement of inputs and outputs of the performance of the company and an assessment of the satisfaction level (Loosemore, 2016). The EFQM Business Excellence Model helps to measure the

excellence of an organisation on the basis of the performance and structured approach followed by the company to attain client satisfaction. Application models in practice focus on measuring client satisfaction on the basis of the above models. It was observed by Saeed and Hasan (2012) that TQM was used by the construction industry in their projects at different stages and the benefits derived by using TQM in the construction industry were helpful in achieving customer satisfaction, improved quality, cost reduction and saving of time. Jahanshahi et al. (2011) found that the key factors affecting the automotive industry include the level of customer satisfaction and loyalty. In addition, they noted that customer service quality, product quality and loyalty can be measured at different stages, such as at the commencement of the purchase or at some time after the purchase (Jahanshahi et al., 2011).

Khan and Khoso (2014) point out that the significance of customer satisfaction has been acknowledged and that customer demand has become particular in terms of quality, cost and the time within which the services are rendered. More specifically in relation to the construction industry, they state that the new business philosophies pertaining to customer satisfaction need to be adhered to, in order to assure sustainability (Khan and Khoso, 2014). Furthermore, they add that the strategic objectives of the construction companies can be achieved only with adequate management of customer satisfaction and facilitation (Khan and Khoso, 2014). Alrashed et al. (2014) shed light on the risks associated with construction projects in Saudi Arabia, stating that the key risk associated with the construction industry involves all those problems that have the potential of causing harm or the loss of life or property.

Construction organisations, overall, portray a positive image of strict adherence to loyalty, leadership, ethics and integrity towards their customers. Thus, an in-depth knowledge of the client's demands and satisfaction, along with adequate flexibility towards any change in client needs, in terms of internal capability and the effectiveness for bringing about that change, are collectively essential for the construction industry.

As competition is increasing in the construction industry, it has become essential, as pointed out by Nzekwe-Excel (2010), for companies to focus on client satisfaction in order to ensure economic stability. The Satisfaction Assessment Integrated Framework (SAIF), a ready to use toolkit designed by Nzekwe-Excel (2010), is an approach towards client satisfaction in which a tree structure is designed in order to highlight the main participants involved in the construction projects. Each member discussed in the tree structure is considered important or the top element.

The identification of the main attributes of satisfaction is discussed under this framework, such as multi-attribute analysis and fault tree analysis. The multi-attribute analysis prioritises the main attributes of satisfaction on the basis of project participants and clients, while the fault tree strategy focuses on the level of satisfaction with a particular team. Malik (2012) provides a detailed discussion of what has been done in relation to the concept of customer satisfaction, pointing out that companies should establish a system to ensure that all their activities lead to this. He adds that in a market economy, all the businesses compete with each other for satisfying the needs of customers, and believes that perceived service quality is expected to have a positive and direct influence on customer satisfaction (Malik, 2012).

SAIF was designed for the purpose of observing and measuring elements such as satisfaction attributes (Nzekwe-Excel, 2010), so the analysis of the levels of satisfaction of the project participants and clients can be conducted with the help of this toolkit. The expectations and the satisfaction attributes of the project participants and clients are scaled at each and every phase of the project, with the help of a mathematical algorithm/model of the framework design (Nzekwe-Excel, 2010). Thus, an unlimited number of attributes of satisfaction can be gathered with the help of SAIF. According to Akbar & Parvez (2009), customer satisfaction is defined as the extent or limit to which a service or product is up to the level or expectations of the customers or whether the services or product is able to meet the satisfaction level of the customer or not. In addition to this, the levels of satisfaction of the project participants and the clients can be improved with SAIF. It also focuses on integrating the project team members and their attributes of satisfaction. On the basis of the assessment and satisfaction features of the clients and participants of projects, the measurement of satisfaction and improvement in it are possible (Nzekwe -Excel, 2010).

2.11 The need for client satisfaction in the construction industry

Peppers and Rogers (2016) state that the satisfaction of the client is highly significant both for retention of existing clients and attracting new ones. Companies in the prevailing business environment invest various resources in order to satisfy their client, and thereby increase their sales, as client satisfaction leads to repeated product or service usage (Peppers and Rogers, 2016). There are various methods which a company can adopt in order to provide satisfaction to its customers, including customer relationship management and benchmarking. The satisfaction of the customer is correlated with the company's

performance to a significant extent, and has a positive effect on the customer's loyalty intentions. The goodwill of the company is also dependent on the degree of effectiveness of the company's efforts for attaining customer satisfaction (Peppers and Rogers, 2016).

According to Pearson (2016), client satisfaction is the main reason behind the existence of construction companies. Satisfying the targeted needs of the client helps construction companies in increasing their market share and market performance, facilitating repeat purchases and high profitability levels and creating positive word-of-mouth and client loyalty towards the company (Pearson, 2016). Pearson (2016) notes that client satisfaction is the main determinant to gain positive outcomes. On the other hand, if clients feel dissatisfied, then a negative impact is created on the profitability of construction companies in the form of low market share, negative word-of-mouth, undesirable consequences, redress seeking and an increase in the number of complaints. Client satisfaction is vital for the construction industry, as it motivates stakeholders to increase their investment in this industry. With the aim of client satisfaction, construction companies are able to deliver their projects with quality targets, time and cost. According to Gashti et al. (2011), in a study of the automobile industry, the satisfaction level of product and service quality is affected by the owners. They also stated that the satisfaction of the customer is directly affected by the quality of the service, which in turn affects the customer's positive behaviour (Gashti et al., 2011).

Research according to Ahmad et al. (2012) suggests that clients' requirements are fulfilled by quality buildings, and that such buildings support the operations of the client organisation and their business development. Buildings with quality initiatives support employers through better and more innovative products and also provide healthy workplaces for employees and motivate them. Two types of project success were proposed by Ahmad et al. (2012): project management success and product success. Project management success is measured based on time, cost and quality, while a quality building is associated with product success. Ahmad et al. (2012) further believe that although a construction project may be completed on time and within the cost boundaries, it may fail to develop a quality building to support the required technical and business operations.

Clients who are the key information providers form barriers to the accurate development of briefs, due to their lack of knowledge and experience of the briefing process. Several research studies were conducted to enhance briefing practices where these have failed to identify the design team qualities that can improve the client's participation (Ahmad et al. 2012). Hence in response to the research in these areas, it is proposed that the architects

should play significant roles, be knowledgeable, be good leaders and be equipped with specialist skills in various types of buildings. Through a questionnaire survey on clients and construction consultants such as architects, three categories – quality of client's brief, management efforts and organisation commitment – were studied. The findings resulting from the analysis suggested that construction consultants have a highly significant role to play in the provision of satisfaction within the construction industry, and they have to be knowledgeable, good leaders and correctly equipped with specialist skills in relation to various types of building (Ahmad et al. 2012).

Omonori and Lawal (2014) found that customer satisfaction is a crucial factor in helping firms to determine the essential factors for becoming the customers' preferred choice. It has become essential for construction companies to satisfy their clients' needs and expectations because they are the main stakeholders of the company and the fulfilment of their needs is essential, in order to maintain a positive image in this competitive industry (Raut and Mahajan, 2015). The satisfaction of the customer can thus be treated as the ultimate goal of the construction industry, and companies that provide a high degree of customer satisfaction help in building the relationship and a state of collaboration which is very profitable for those companies (Omonori and Lawal 2014). There are various means used by firms in the construction industry to satisfy their customers, such as establishing call centres and using a customer feedback system, and the level of a firm's customer satisfaction can be measured through various ratings: price, delivery schedule and quality (Omonori and Lawal 2014).

An analysis by Raut and Mahajan (2015) showed that a construction company is able to ensure its long-term viability by the way in which it effectively manages its resources and client satisfaction.

Othman (2015) discusses the fact that the construction industry has given considerable attention to customer satisfaction and quality improvement in recent years. In his view, to improve client satisfaction in construction projects in a competitive marketplace, it has become essential for the industry to give the utmost attention to quality improvement (Othman, 2015). He adds that the client's satisfaction level is regarded as a measurement tool for the industry in the improvement of the quality of its various construction projects, and client retention is achieved with a high level of satisfaction, along with a high achievement of competitiveness and profitability (Othman, 2015). Client satisfaction, in Othman's view, helps the construction industry to generate long-term financial

performance and secure client loyalty: if a client is satisfied, then this develops a strong relationship between the client and the construction company, which results in fewer issues in construction projects (2015). He concludes that a high level of satisfaction of existing clients will help construction companies to attract new clients as well, as these may consult the existing clients to discover the satisfaction level ensured by the company (Othman, 2015).

According to Manley and Chen (2015), the aim of customer satisfaction in the construction industry helps the industry to manage its functions effectively and efficiently. With this aim, a construction company moves in the right direction to attain benefits like flexibility, long-term competitive advantage, cost-cutting, quality improvement and trust. The construction company strives hard to survive in the market, which is achieved by ensuring customer satisfaction (Manley and Chen, 2015). According to Lepkova and Zukaitė-Jefimovienė (2012), while evaluating the satisfaction level of the consumers, both dimensions of the perceived facilities management quality should be considered, which are the observed maintenance quality and service recovery quality. They add that customers experience the quality dimensions on the basis of two aspects: what has been delivered to them and how is it delivered (Lepkova and Zukaitė-Jefimovienė, 2012).

Ali, Al-Sulaihi, and Al-Gahtani (2013) state that due to problems such as high competition and slow economic growth in Saudi Arabia, a considerable amount of effort is required by construction companies in order to enhance their productivity and performance. Customer satisfaction is the factor directly related to the performance of the company, and is the basic tool to evaluate the profitability of the company (Ali, Al-Sulaihi and Al-Gahtani, 2013). Many construction companies in Saudi Arabia have the corporate mission of focusing mainly on the satisfaction of the client. It is one of the crucial factors that make the company more successful as it helps in gaining a competitive advantage. Due to the prevailing competitive business environment, the need for improving the quality of customer services provided is a matter of prime concern for companies in the construction industry (Ali, Al-Sulaihi and Al-Gahtani, 2013). According to Angelova (2011), customer relationship management can be used as an effective tool to enhance customer loyalty, which would ultimately enhance customer satisfaction, whereas most of the companies use marketing tools to inquire about customers' wants and needs. Relationship marketing is an essential tool for enhancing and maintaining customer relationship. A parallel marketing concept called the purchase decision process is used in order to model identifiable inputs relating to two constructions. This parallel marketing concept is specifically adopted in

order to suit residential construction (Yang and Peng, 2008). In a bid to enhance client satisfaction in construction, Francisco et al. (2015) conducted research to integrate client perspectives into construction processes and the building of Geographical Information Systems (GIS). The research approach for information integration allows the visualisation of the work flow of the Architectural, Engineering and Construction (AEC) processes that take place around the building. The same building will be affected by different AEC processes. The fourth dimension, that of Building Information Modelling (BIM) represents the planning of the building phases. BIM collaborative work enables safe, secure and efficient processes to be developed which can be managed following BIM-based methodology (Francisco et al. 2015). Consequently, a web 3D model was developed to aid integrating building planning with 3D documentation following the BIM methodology with the help of Open Source software. Francisco et al. (2015) further believe that with 3D documentation, different construction phases are visualised in a unique and shared global model, which is updated along execution time in accordance with well specified visual planning. In conclusion, it was suggested by Francisco et al. (2015) that the bottlenecks or delays in processes could be identified through 3D documentation, and that by updating the status indicator with respect to construction time, improvements could be achieved in management, final client satisfaction and the filtering process, thus allowing stakeholders to select the most meaningful aspects of the construction process.

As discussed by Presley and Meade (2010), a construction company adopts different measures, such as better decision-making processes in the company along with efficient work, innovation and efficiency, to ensure that its clients are satisfied. They explain that by emphasising customer satisfaction, the construction company is able to maintain a good relationship between the managers and stakeholders. If clients are satisfied, then they have fewer issues with the management of the company and hence fewer conflicts arise. This provides the benefits of maintaining mutual trust and freely sharing problems with each other, and this in turn provides an opportunity to the company to work in a dynamic environment and deliver better quality to its clients (Presley and Meade, 2010).

In the view of Lou (2010), construction companies are focusing on the adoption of new trends prevalent in the industry, which focus on delivering better infrastructure, customer involvement and enhanced satisfaction. The need for the expansion of business has increased in the era of globalisation, to attract a large number of customers. Teamwork and spirit are necessary for obtaining the best quality infrastructure and services, and this leads to enhanced customer satisfaction in the construction industry.

Having identified the problems facing the Saudi construction industry, the present research has conducted a comparative analysis of the construction industries of Saudi Arabia and the UK.

2.12 Identification of the problems faced by contractors in the process of achieving client satisfaction

Potts and Ankrah (2014) state that there are many problems – such as high cost, lack of technical support, low level of employees' education, and lack of resources – faced by contractors in the process of adopting the latest technologies and practices. In their view, adoption of these technologies and practices is necessary for construction projects to maintain timely delivery and quality, but the above factors act as barriers to adopting the best practices in the construction industry of Saudi Arabia (Potts and Ankrah, 2014).

As discussed by Olalekan (2013), there are many problems faced by contractors at the time of the construction work. The main one that may arise is the shortage of efficient workers in construction projects.

The contractor may face problems in providing training and knowledge to the workers regarding the use of new technologies, and this will increase the costs for the contractor (Olalekan, 2013). According to Santoso and Soeng (2016), cost is the major barrier to the adoption of best practices in the Saudi construction industry (Santoso and Soeng, 2016). Most of the Saudi construction companies have to import the latest and most advanced practices and technology from other countries, which involves a huge cost. Moreover, not every company is able to incur a huge amount of cost in importing the latest technology or machines. Thus, a lack of finance acts as a major barrier for companies in adopting advanced practices and technology in their construction projects (Santoso and Soeng, 2016).

Hazır (2015) considers that one of the major barriers to the adoption of best practices in the Saudi construction industry is resistance to changes taking place in a dynamic environment. The author explains that in the era of globalisation, it has become important for construction projects to adopt regular changes, and that these assist construction companies to adopt the latest technologies and practices and move forward with the changing world. He also explains that this makes it easy for them to survive in the global dynamic market. Changes are implemented by construction companies in the field of technology, organisational structure and working style, and in this context, research shows

that resistance to change is a major issue as employees are not always ready to adopt the changes (Hazır, 2015). The author further states that employees resist changes as they feel comfortable with old technologies and practices, and it is employees in a higher age group, who have a high level of experience, who are mainly the ones showing resistance towards changes. These employees do not accept changes positively and do not contribute to the performance of companies as they feel dissatisfied with the changes adopted (Hazır, 2015).

Hazır (2015) also mentions that contractors face a major difficulty, arising from their employees' lack of sufficient education and knowledge in the adoption or application of new technologies and practices. According to Samarghandi et al. (2016), most of the workers in the construction industry are unskilled; they have experience of farm work, but no proper training in the construction business. Moreover, as Samarghandi et al. (2016) point out, most of the construction companies fail to provide a high level of training to their employees and workers because they do not want to incur much cost on training and development sessions. As a result, since employees are not trained properly they are not familiar with the correct ways of using the latest technologies and practices, and this becomes a problem for the construction industry in implementing the latest practices and techniques in its construction projects (Samarghandi et al., 2016). According to Rahman, Wang and Yap (2010), contractors may have to deal with issues related to the safety and security of workers. Many workers demand additional benefits for their safety and protection at construction sites. The contractor has to ensure that accidents in the workplace are minimised, which can be done by providing the workers with safety and security benefits. This will require someone checking the safety and security of the workers. It is crucial for employees to learn about health and safety legislation in order to avoid accidents (Rahman, Wang and Yap, 2010).

The contractors may face issues related to competition in their own field. The contractors in Saudi Arabia are increasing rapidly. This has increased the number of options for selecting the best contractor in the industry, which means that contractors working in a small area may find it difficult to compete with the contractors who have resources and customers. An increase in competition and easy entry of new contractors into this field are also major issues for contractors in Saudi Arabia (Rahman, Wang and Yap, 2010).

According to Samarghandi et al. (2016), the lack of technical support from local people is another problem faced by contractors in the adoption of the latest practices in construction

projects. Construction companies need large sites for the construction and development of buildings. Many times, by limiting their support in terms of technical assistance, local people do not provide the required help, because they fear losing their land and being dominated by the large construction companies help (Samarghandi et al., 2016),. The other problem is related to the lack of resources required by the construction industry for the development of its projects. These resources include manpower, finance, land, transportation facilities, high level skills and experience, construction materials and the latest technologies. Due to limited funds, poor equipment and lack of highly skilled manpower, it becomes a major problem for contractors to adopt the latest processes (Samarghandi et al., 2016).

According to Kerzner and Kerzner (2017), it is easy to adopt technologies in construction projects, but the contractors confront a major problem arising from the regular changes taking place in the technical world. They point out that it is a globalised world and technologies are constantly changing. The installation of new technology requires a huge number of people, and it becomes difficult for the contractor to bring new technologies on a regular basis, and so when technologies become outdated, it becomes a complex situation for the contractor to change from the old technology to the new one (Kerzner and Kerzner, 2017).

Carrying out construction projects require a high consumption of time, and time management is another major problem for contractors aiming to complete the work within the given timeframe. The huge amount of time involved in obtaining government approval is the issue usually faced by contractors that affects the timely completion of the project (Kerzner and Kerzner, 2017). Additionally, purchasing a piece of land and acquiring resources is a long step for a contractor. Thus to complete the different tasks of a construction project within a definite time period requires time management.

2.13 Issues emerging from the literature review

A number of issues have been identified that affect the Saudi construction industry and the level of satisfaction among its clients. In this respect, the relationship between the contractors and the clients or the partners is one of the key issues examined in the literature review (Omonori and Lawal, 2014). The inter-personal disputes between the partners or client and contractor which may arise on the grounds of management of work or resources, eventually affect the performance of the construction project. A lack of

effective interest by the contractors or partners in the project may have a serious impact on the quality of the project, and thus create a negative impact on client satisfaction (Pasquire, Sarhan and King, 2015). The literature shows that the lack of appropriate communication channels between the contractors, partners, employees and clients is one of the key factors for the emergence of disputes among them. Le-Hoai, Lee and Lee (2008) point out that the lack of communication channels causes miscommunication and fosters misunderstanding among employees, contractors and partners, which delays the projects, and leads to increased client dissatisfaction. The authors explain that the project supervisor tends to provide directives to the employees and workers and so it is essential to provide them with proper language training so that they can better understand the directions provided by the supervisors. Through this kind of language training the issues of miscommunication and wrong interpretations of the data can be avoided to a significant level (Le-Hoai, Lee and Lee, 2008).

In the view of Ambroz and Praprotnik (2008), if the organisation culture is not aimed at providing excellent service to the customers, there is little chance that these organisations will succeed in the long run. They add that organisations must be open to implement the suggestions received, work should be based on the expectations of the customers and there should be enough space for customer participation in the process (Ambroz and Praprotnik, 2008). According to Angelova (2011), customer relationship management can be used as an effective tool to enhance customer loyalty, which will ultimately enhance customer satisfaction, whereas most of the companies use marketing tools to inquire about customers' wants and needs. Relationship marketing is therefore an essential tool for enhancing and maintaining customer relationship (Angelova, 2011).

Lack of adequate resources for the quick development of infrastructure is another key issue that creates a serious impact on client satisfaction. Poor management assistance, inappropriate site management, inadequate technical assistance and lack of adequate training have been examined as the key factors that cause delay and additional costs, which are eventually borne by the clients and lead to client dissatisfaction (Le-Hoai, Lee and Lee, 2008).

Waste management is another key factor that leads to an increase in additional costs and indicates mismanagement of resources, thus aggravating client dissatisfaction. As mentioned earlier, no appropriate measures are adopted by the construction companies to undertake effective decomposition of waste material released during the process of construction of the project. Inadequate decomposition also causes a serious threat to the

sustainability of the environment and public health, thus impacting corporate social responsibility, and causing client dissatisfaction. It has been seen from the literature that clients prefer construction companies that adopt an efficient waste management mechanism and adhere to environmental sustainability.

In addition to this, problems such as lack of technical support, lack of financial support to acquire or import advanced technology, resistance to adopting change, and inadequate technical abilities and skills to operate the latest technology prevent the construction companies in Saudi Arabia from adopting best practices, and create client dissatisfaction (Potts and Ankrah, 2014). According to Mazher et al. (2015), quality improvement can be achieved through experienced employees and its measurement and examination can also be handled by such employees. Thus in order to improve the quality management process, three elements should be considered: quality planning, improvement and control.

In addition, the literature review has highlighted the importance of customer satisfaction. In this respect, the key element examined is that a company can sustain its long-term presence in the market because of customer satisfaction. The issues in respect of customer satisfaction in the Saudi construction industry have also been identified in the literature review. The major issues in this context have been, firstly, the increase in the knowledge and awareness of the customers, along with the level of customer expectations; and secondly, the lack of effective communication between the client and the project manager (Samarghandi et al., 2016). It has also been seen that various kinds of risks are associated in the construction industry of Saudi Arabia which indirectly affect the level of customer satisfaction of this industry. For this reason it has been identified that customer relationship management needs to be implemented at various levels of construction industry in order to satisfy the clients associated with the industry. Furthermore, various models are applied in order to achieve the required level of customer satisfaction. According to Mosahab et al. (2010), the concept of service quality is a multi-dimensional concept and the model of SERVQUAL (Service and Quality Model) demonstrates a more evaluated data of service quality gap than that of the SERVPERF model. Moreover, they observed that the quality of the service given to customers influences their satisfaction level (Mosahab et al., 2010).

`The literature review also focused on various aspects of client satisfaction that have a direct effect on the external stakeholders. External stakeholders tend to have strong influence on the level of client satisfaction, which in turn tends to strongly affect the

construction industry. It has been highlighted that technical and functional dimensions of service quality are of significant value in satisfying customers.

Yang and Peng (2008) explain that potential barriers are divided into three types: attitudinal, industrial and institutional, and that several items are identified which are relevant to each type of barrier. Customer satisfaction needs to be improved in the construction industry. Therefore, there is a need to achieve greater efficiency in order to increase the level of customer satisfaction. It has been identified through literary sources that it is essential for the main clients and decision makers to be identified (Yang and Peng, 2008). The literary sources used in various articles focused on the most common problems that must be avoided by engineers in order to achieve a higher level of client satisfaction, including project team changes, schedule delays, negative approaches to problems, multiple contacts for the client representative, overdesign, and low-quality products.

It has been highlighted that client learning is essential for building a strong architect–client relationship. Thus, client learning needs to be focused on by the architects. A parallel marketing concept called the purchase decision process is used in order to model identifiable inputs relating to two constructions. This process is specifically adopted in order to suit residential construction (Yang and Peng, 2008). Thus, customer satisfaction plays an important role in the entire purchase process, which starts from needs recognition and ends with alternative evaluation. In this regard it can be said that different customers have different perceptions and the level of satisfaction differs from customer to customer.

2.14 Summary of Chapter 2

Overall, the Saudi construction industry is booming nowadays because of the infrastructure developments taking place in the country on a regular basis. The government of the country has supported the construction sector to bring innovative ways of completing the construction work on time. However, it has also been established in this research that there are many issues which affect the satisfaction level and quality of Saudi construction projects. The main issues include the lack of knowledge and skills, accidents and health problems, technological changes, lack of finance, and the use of cheap or inferior quality of materials.

There are many problems which hinder construction companies from adopting various client satisfaction-related techniques and practices. The main ones are high cost, lack of technical support, outdated technologies, poor time management, lack of support from local people, lack of education of employees and lack of resources. Among all the defined problems, the lack of a skilled workforce is the most critical issue affecting construction industry projects in Saudi Arabia. This problem acts as a hurdle to accomplishing construction tasks within the timeframe. It even affects the quality and standard of the construction project, making it difficult for contractors to complete the construction work accordingly. There are several factors that are responsible for this issue, such as lack of a good level of education, inadequate skills and experience of employees, unavailability of the necessary quality training practices for the employees and a lack of proper monitoring techniques. Thus, a skilled workforce it is essential in order to render satisfactory services to the clients in the construction sector, and enhanced client satisfaction is the main and ultimate aim of the construction companies in Saudi Arabia.

Construction works require perfection in the designing and construction process in order to maintain the necessary standards of health and safety, and in order to have perfection in the designing process, it is vital to have a well-skilled and expert workforce. An unskilled workforce results in deficiencies and loopholes in the designing and construction process, and hence the threat of accidents and uncertainties increases. A construction project requires cooperation and teamwork in order for it to be completed on time, along with the contributions from engineers, architects, contractors and sub-contractors. The construction industry involves the integration of finance, human resources, raw materials, building sites, technical assistance and other resources, which are arranged according to the demands and perceived value of the clients. All these kinds of duties owed by different

people involved in the work require significant skills to accomplish the construction projects with perfection. So in this context, the evolution of construction management tools has been supportive in managing complex and large projects, and ensuring timely delivery. Saudi construction companies have adopted various strategies or models for client satisfaction. Some of the models or strategies followed by the Saudi construction industry are TQM (Total Quality Management, DBS (Disclosure and Barring Service) and BPR (Business Project Re-engineering), which play a major role in the successful completion of various construction projects.

The present comparative study of the environmental conditions present in the construction industry of Saudi Arabia and the UK reveals that there are certain factors that are commonly present in both the nations and are responsible for project delays and budget increases. It is therefore essential that all the factors that lead to the success of construction projects are aligned in a proper manner and coordinated towards the completion of the project. The use of project management tools is essential to guide the overall alignment and timely delivery of all the activities required for project completion. The detailed review in this chapter has provided an understanding of the actual environment in the construction industry in the KSA and entities that affect the level of client satisfaction. The client satisfaction level is directly affected by the contribution of the workforce.

CHAPTER 3: CONCEPTUAL FRAMEWORK

3.1 Introduction to Chapter 3

As shown in the previous chapter, there are different factors that can contribute towards client satisfaction in the construction industry. To ensure that data collection and analysis lead to the required results, this chapter develops a conceptual framework that links the key factors discussed in the literature review and the interrelations between them. This study will first employ a conceptual framework to present the main variables and the sub-variables associated with the research, which will help in understanding the broader aspects of the research subject to be covered in this research. The conceptual framework presents the different concepts and parameters which need to be used, and so the presented chapter reflects a specific conceptual framework to accomplish the objectives of the present research. It forms the basis to create a better understanding of the issues and guides the data collection for this research.

3.2 Conceptual Framework

The use of a conceptual framework in research is a common practice (Yosef, 2009). Many researchers such as Yin (2013) and Vaishnavi and Kuechler (2015) have discussed the importance of developing a framework prior to the collection of data. As reported in Yosef (2009), most social phenomena in contemporary times are complex and linked to multiple bodies of knowledge that belong to different disciplines. Researching complex phenomena requires a better understanding of the complex factors and the interrelations and links between the factors.

A conceptual framework is defined as a structural tool that is considered to align all the essential aspects related to the research, variables involved in the research and some strategic models (Shields and Rangarajan, 2013). A model framework is a tool that illustrates the different theoretical components based on verified data results to prove any particular phenomenon or process (Ravitch and Riggan, 2011). Conceptual frameworks possess ontological, epistemological, and methodological assumptions, and each concept within a conceptual framework plays an ontological or epistemological role (Yosef, 2009). This role helps in presenting not just the concepts gleaned from the literature but also the links between these concepts in an assumed reality.

In this research study, the conceptual framework presents all the factors from the literature that have been identified to have a relationship with client satisfaction. The researcher's understanding of the interrelationships among the factors helps in showing the links and

how they work and shapes the framework (Silverman, 2015). The next sections in this chapter discuss the key concepts and factors identified in the previous chapter and how they are related.

3.2.1 Factors and concepts presented in the conceptual framework

From the review of literature, it was identified that client satisfaction can be linked to three main concepts: client satisfaction factors; client dissatisfaction factors; and practices adopted by construction companies to meet client satisfaction. A simple relationship between the three main concepts is shown in Figure 3.1.

Figure 3.1: The relationship between the three concepts of the research

As can be seen from Figure 3.1, achieving client satisfaction requires a review of the practices of construction firms in relation to the outcomes of these practices in leading to client satisfaction. The relationship is mediated by the extent to which the practices contribute to meeting the factors responsible for client satisfaction. The key practices, factors influencing client satisfaction and the criteria for measuring this satisfaction are discussed in the next section.

3.2.2 Components of the conceptual framework

From the review of literature in Chapter 2, and in line with Figure 3.1 above, there are three main components of the conceptual framework: quality management practices, client satisfaction factors; and the criteria for measuring client satisfaction and dissatisfaction. The details of the components and the assumed relationships between them are displayed in Figure 3.2 below.

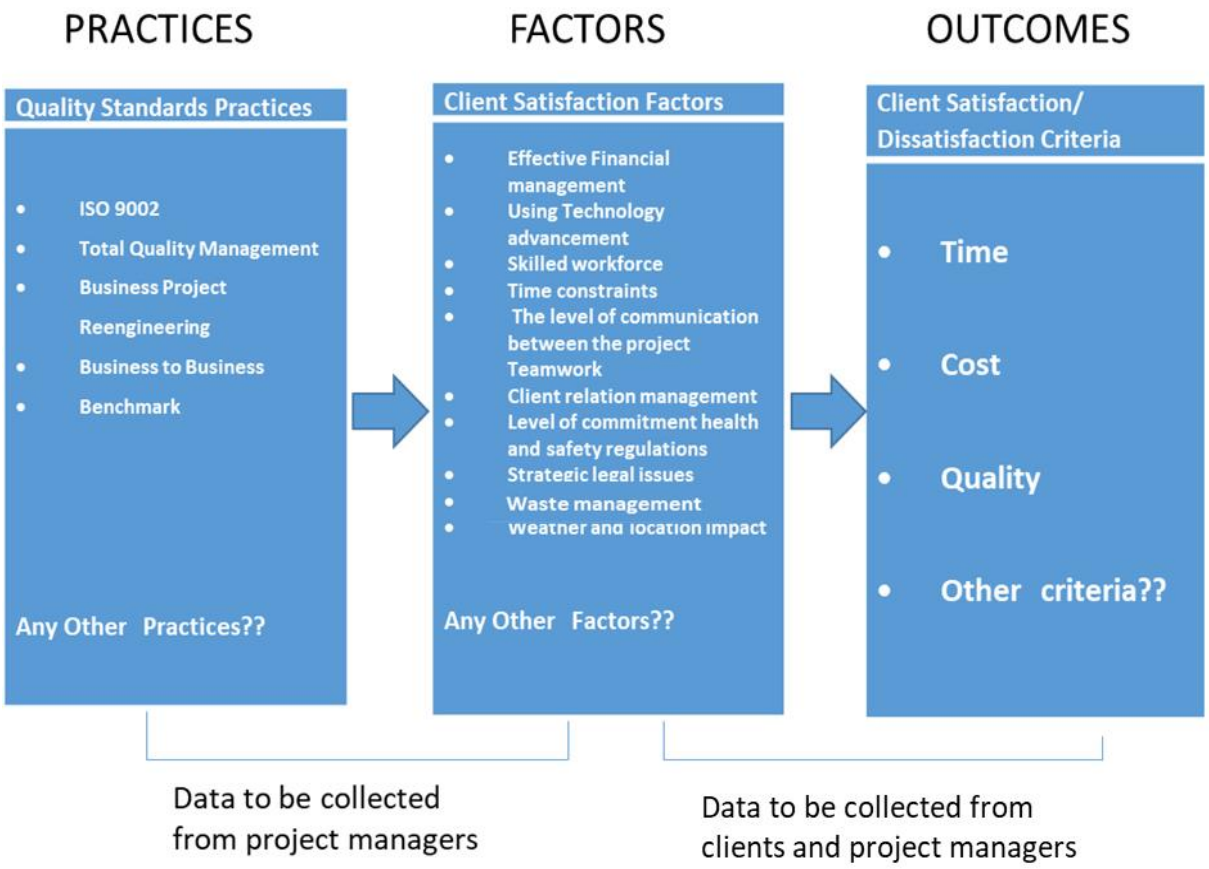

Figure 3.2: Conceptual framework for client satisfaction with construction projects

As shown in the conceptual framework, the three most important factors have interrelations which all lead to client satisfaction. For example, quality standards practices lead to client satisfaction by taking into consideration factors that could cause either client satisfaction or dissatisfaction. This ensures that the practices adopted by contractors will ultimately lead to client satisfaction. Based on the review of the literature on client satisfaction and the nature of the construction industry, the different factors in each layer of the framework were identified, and these are explained further in Sections 3.3 to 3.5.

In designing the framework, the antecedents and outcomes approach was undertaken, where the antecedents to client satisfaction were identified as the practices of construction

firms and the outcomes were the basis for measuring client satisfaction. The factors identified as mediators formed the basis for determining the extent to which the practices led to the outcomes (satisfaction). To test the framework (that is, find the answers to the research), the data collection was expected to discover the applicable practices, factors and outcomes in the case of Saudi Arabia. A brief description of the three main phases of the framework is presented below.

3.3 Quality Standards Practices

Box 1 of the conceptual framework involves relevant practices such as ISO 9002, Total Quality Management, Business Project Re-engineering, Business to Business, and Benchmarking. These are the widely accepted management practices that help in strategically managing and controlling business affairs (Silverman, 2015).

Box 2 of the conceptual framework contains the client satisfaction factors identified from the review of literature presented in Chapter 2, such as financial management, technological advancement, and project management (Silverman, 2015).

Box 3 contains the outcome that will result from the application of relevant practices in the business, which will determine the level of satisfaction or dissatisfaction from the perspective of the client. The contents of Box 1 and Box 2 helped the researcher in preparing the questions for the interview with the project managers, while Box 3 assisted in preparing questions for clients or customers.

3.4 Quality standards practices and client satisfaction factors in construction projects

For the purpose of research work, it is essential to understand the relationship between the practices as prescribed in Box 1 with the factors as prescribed in Box 2. With regard to ISO 9002, it has been ascertained that it provides guidelines for quality assurance in production, installations and servicing (O'Brien, 2012). This standard covers the organisation from end to end, which implies that every aspect related to quality is included. ISO 9002 also provides guidelines for improving the quality of information technology in organisations. Thus, following these guidelines, the management can bring advancement in their organisation’s technology by replacing the old systems with upgraded ones. Moreover, ISO 9002 helps in tackling the legal issues related to the use of information technology by providing compliance requirements (O'Brien, 2012).

In addition to the above, ISO 9002 requires implementation of the auditing of the systems and processes, and this reduces the risk of failure significantly. This auditing works as a controlling mechanism and helps to increase the quality and efficiency of production and services (O'Brien, 2012). However, despite the benefits of the ISO 9002 guidelines, there is little empirical evidence to show that applying them will lead to client satisfaction in the Saudi construction industry.

Apart from ISO 9002, another popular and universally accepted practice in the field of quality management is Total Quality Management(TQM). It is the concept that focuses on producing goods or providing services with the aim of zero defects (Kanji, 2012). Therefore, it can be inferred that by implementing the TQM philosophy, effectiveness in project waste management can be achieved (Kanji, 2012). Another crucial aspect of TQM is communication within an organisation. TQM places an emphasis on establishing effective communication between the organisation's employees at all levels, which helps in improving product and service quality (Kanji, 2012). Thus, by implementing TQM in a project, the communication between the team members of the project will be improved. Moreover, TQM initiatives involve preparing a team of skilled employees, which is also essential for improving the quality of products and services (Kanji, 2012). Further, one of the focus areas of TQM is customer satisfaction; thus, client relationship management is also achieved by implementing TQM. It is therefore best described as an integrated system of management that involves all employees in improving the quality with a focus on customer satisfaction (Kanji, 2012).

A number of studies have focused on TQM as a means of improving performance in the Saudi Arabian construction industry (See Bokhari and Qureshi, 2016). Sarhan et al. (2017) report that many construction companies have adopted TQM and lean construction methods to help improve their performance. Al-Otaibi et al. (2015) report that there is evidence from Saudi Arabia to suggest that the adoption of TQM practices has also led to increased competitiveness by some construction companies. This suggests that even though there is the likelihood of a link between quality management practices and client satisfaction in the Saudi Arabian construction industry, not much has been researched in this regard.

Business Project Re-engineering, also known as business process re-engineering, involves optimisation of the business processes so as to add value to the business. This management practice endeavours to redesign the manufacturing processes in such a way that the non-value-added activities are eliminated. The elimination of these activities helps

in improving the financial position by reducing the cost and wastage of resources (Walker, 2015; Nikakhtar et al., 2015; Evans and Lindsay, 2014). Further, it helps in achieving a significant improvement in quality by streamlining the work process. However, there is no empirical evidence to show that this management practice could help in achieving client satisfaction in the Saudi construction industry. Although re-engineering of the business processes is quite effective in quality management (see Dale et al., 2016), it is a time-consuming process. Thus, in spite of being highly effective, it is rarely used in organisations due to time constraints. Time constraints are one of the main limitations of business process re-engineering, and deter organisations from implementing it (Mohapatra and Choudhury, 2016).

Business-to-business (B2B) implies the business that an organisation conducts with another organisation. Under the B2B model, the goods are sold or the services are rendered to a business organisation rather than to individual consumers (Zimmerman and Blythe, 2013). The pricing and marketing strategies are framed differently in the B2B model: since the goods are sold to business concerns, the individual customer is not a focus area of this model. However, it is crucial for B2B that the business relationships are built through professional interaction to ensure sustainable growth (Zimmerman and Blythe, 2013). The benefits of B2B include: helping firms to define their strategic positioning to retain a competitive advantage; ensuring continuous improvement; and improved efficiency (Sharma and Kumari, 2016; Mohapatra and Choudhury, 2016). Despite the benefits of this practice, there is no empirical evidence that its application in the Saudi construction industry could be used to enhance clients' satisfaction.

Benchmarking is the process of comparing an organisation's business practices with the best practices from anywhere in the world (Stapenhurst, 2009). However, it is pertinent to note in this regard that while selecting the organisations to be used as a benchmark, the location and scale of operations should also be considered. It is essential for a business organisation to improve its processes continuously to survive and remain competitive in the business world. The benchmarking could be done in any area of the business whether it is marketing or finance. Its primary aim is to adopt the best practices and improve the financial performance of the business (Stapenhurst, 2009). The benchmarking could be applied in the management of finance to achieve effectiveness and efficiency in the utilisation of financial resources. In this regard, it should be kept in mind that after performing benchmarking it is essential to implement the required changes in the business processes. Carrying out the changes by redesigning the processes is a time-consuming

process; thus, the time constraints involved are a problem with benchmarking (Stapenhurst, 2009). However, as reported in Saunders et al. (2016) and Hwang and Zhao (2015), benchmarking brings advantages such as performance improvement, improved competitive advantage and – as discussed in Kärnä and Junnonen (2016a) –promotes quality improvement, customer orientation and collaboration between participants.

Despite the benefits reported by several studies on the benefits of benchmarking, however, there is no empirical evidence to show that its application in the Saudi construction industry will lead to greater client satisfaction. This calls for research to explore which tools could be adopted or avoided to satisfy the Saudi Arabian construction industry clients.

Project managers for construction companies have the responsibility of planning and managing the progress of projects as well as ensuring that the key deliverables of the project are met (Kerzner and Kerzner, 2017). Jaeger and Adair (2016) report that the perceptions of project managers on quality management practices such as TQM influence the level of adoption. For this reason, project managers will be in the best position to provide information on the practices adopted and the level of attention given to those practices which are likely to influence client satisfaction.

3.5 Factors for satisfying the client

After understanding the relationship between the practices described in Box 1 and factors described in Box 2, it is also essential to be conversant with the relationship between the factors and client satisfaction. The primary goal of adopting the quality management practices such as ISO 9002, total quality management, business process re-engineering and benchmarking is to increase client satisfaction. Elements such as timely delivery, reduced cost and better quality are used to assess this satisfaction (Kanji, 2012). Factors such as a skilled workforce and effective communication help to achieve better quality in the goods and services. Further, the use of a skilled workforce is also crucial for reducing wastage and thereby reducing the cost of goods and services.

Using advanced technology is helpful in delivering goods or services on time to the customers. Organisations in different sectors and industries use advanced technology in integrating various business processes such as marketing, finance, and human resources. The integration of marketing and finance has helped organisations to complete the procedural formalities on a real time basis, which has made it possible to execute sales orders instantly (Kanji, 2012). Further, effective project waste management helps in reducing the cost of goods or services on the one hand, while on the other hand, it also

assists in maintaining good quality. In addition to this, customer satisfaction is increased by the level of commitment shown by the organisation regarding the health and safety of the employees. Further, the most crucial factor that affects the customer satisfaction level is the client relationship management (Kanji, 2012; King and Burgess, 2008); Kumar and Reinartz, 2018). This refers to the practices and strategies employed by the management to maintain healthy relations with the customers (Kanji, 2012).

With regard to the construction industry, it has been observed that quality remains a substantial issue. The quality standard ISO 9002, mentioned above, plays a major role in quality assurance in the construction industry. Organisations engaged in construction work are required to possess certification of the quality of their services. ISO 9002 provides an overarching framework that covers all the primary as well as secondary concerns pertaining to quality. Further, it is essential to note that the work in the construction industry is carried out based on client specifications, which increases the quality related concerns of the organisation even more (Chung, 2002).

A construction project involves various activities such as defining the tasks, estimating the time for completion, selecting teams, and selecting technology. The guidelines in ISO 9002 provide the standardisation of all processes and specify that the activities must be conducted in such a manner that the quality does not deteriorate (Chung, 2002). Further, the ISO 9002 guidelines are helpful for managers working in the construction industry, as they can learn different controlling tools and techniques by referring to these guidelines. The ISO 9002 is a complete guide for these managers for every type of job in the construction industry, from the purchase of raw materials to the final delivery of the product. Therefore, organisations engaged in the work of construction should follow its guidelines, which are intended to result in increased customer satisfaction by providing a better quality product at a reduced cost (Chung, 2002).

3.6 Client satisfaction/dissatisfaction criteria

In construction projects, various factors influence the satisfaction level among clients, such as time, cost and quality, as mentioned. It has been shown that quality standard practices significantly affect client satisfaction factors, and that key quality practices employed in construction projects include business project re-engineering, total quality management, benchmarking and ISO 9002 (Kärnä, Junnonen and Kankainen, 2004; Yang and Peng, 2008). Further, it has been noted that proper management of factors such as financial management, a skilled workforce, level of communication among team members working on the project and client relationship management contribute towards the success

of the project. Additionally, customers consider factors such as strategic legal issues, weather and location, as well as the use of advanced technology and waste disposal, while reviewing the success and quality of the project (Yang and Peng, 2008). Moreover, time, cost and quality are three critical areas of consideration by clients, as these factors strongly affect their satisfaction level and are mainly responsible for the success of a project (Williams et al., 2015).

It has been stated that timely completion of the project, meeting deadlines, adhering to the project budget and taking into account quality practices while completing the projects result in satisfying clients to a great extent (Williams et al., 2015; Yang and Peng, 2008). On the other side, lack of consideration of time, cost and quality concerns may result in project failure and induce a high degree of dissatisfaction among clients (Williams et al., 2015; Yang and Peng, 2008).

Measuring client satisfaction requires a greater understanding of what measures client deem more important and how these important factors contribute to client satisfaction. Aside from finishing on time, within cost and to the required level of quality, there can be other factors which can contribute to client satisfaction. This research will therefore seek to identify any other factors that influence client satisfaction and the extent to which the efforts of construction companies target achieving such factors.

3.7 Summary of Chapter 3

This chapter has discussed the main themes and concepts of this research and defined the interrelationships among the concepts. As mentioned in Section 3.2, the concept of client satisfaction is complex and the use of a conceptual framework helps in aligning and identifying the links between the concepts and factors, and thus to identify the key areas that will form the basis for data collection and interpretation. As shown in this chapter, achieving client satisfaction is concerned with aligning the practices of construction firms to offset the factors leading to client satisfaction while ensuring that the practices achieve the results that lead to satisfaction.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 Introduction to Chapter 4

Following the literature review, which has identified the gap in knowledge and the main issues to be investigated by this research, the next step is to identify and develop an appropriate methodology for the collection and analysis of relevant data. As discussed in Denzin and Lincoln (2011), it is necessary to ensure that the adopted research design can achieve the aim of the research by ensuring the data collection and analysis processes lead to the desired results. This chapter therefore considers various research tools and methods in order to select an appropriate method to achieve the research objectives (Hart, 2018). The chapter presents the methodology employed to ascertain the best practices that enhance client satisfaction in the Saudi construction industry and it provides justification for each method and analysis used in this research.

The chapter is divided into five main sections. The first section reviews the different research philosophical paradigms to identify the most appropriate one for the research design. This is followed by the approaches to research and how the appropriate one was selected for this research. The third section discusses the data collection methods used for this research and the processes involved in collecting the data as well as the sampling methods used. The fourth section of this chapter discusses the processes and techniques used in the analysis of the data, while the final one covers the ethical considerations for this research.

4.2 The research design

Research design refers to the mechanism that provides a suitable structure to the research. As a key part of any scientific enquiry, research design serves as the link between the results of any research work and the research questions (Yin, 2013). As analysed by Wimmer and Dominick (2010), a research design illustrates the strategy applied to the research in order to integrate the various components of the research in a logical and simplified way. For this reason, the choice of research design is very important in any piece of research if the findings are to be reliable.

Research design helps in addressing the research problem in an appropriate manner by directing the methods for collection, assessment and evaluation of the data. It is a comprehensive structure within which the research data is collected, observed and

interpreted (Hair et al., 2011). It functions as a suitable plan that aligns the research problem with empirical and theoretical data to meet the research objectives. Different designs are available to any researcher, and include descriptive, exploratory and diagnostic research designs (Marczyk, DeMatteo and Festinger, 2010). The choice of a research design is influenced by a number of factors which include: the questions to be answered by the research; the research philosophy or paradigm; the resources available to the researcher; the extent of knowledge about the phenomenon being studied; and the depth of knowledge the researcher is seeking to achieve (Maxwell, 2012; Creswell, 2013; Yin, 2013; Lewis, 2015).

The question to be answered by this research was identified in Section 1.5 with the aim of seeking to identify the best practices in construction that could be adopted for accomplishing client satisfaction within the Saudi construction industry (see Section 1.5). The next section of the present chapter will seek to discuss the other factors influencing the choice of research design so that an appropriate design can be chosen for this research.

4.3 The research philosophy and paradigm

According to Corbin and Straus (2008), a research philosophy represents a worldview that underlies and informs methodology and methods as well as the theoretical influences on the whole research process. This suggests that the main purpose of a research philosophy is to guide the researcher in choosing the methods for collecting and analysing the data while informing the design of the research (Creswell, 2013). It is therefore important to ensure that the philosophy adopted for this research enables a method to be selected that can lead to answers regarding best practices for improving client satisfaction in the Saudi Arabian construction industry.

Research philosophy provides a particular philosophy of a set of beliefs and ideas, along with practices, in order to achieve the research objectives. It relates to the development of new knowledge, which can be helpful in developing a new theory or addressing some emerging problem. In this regard, epistemology is concerned with the constituents of acceptable knowledge within a particular field, and includes the positivist and interpretivist philosophies (Howell, 2012). Ontology is concerned with the nature of reality and includes subjectivism and objectivism. In addition, axiology is another branch of philosophy that examines the judgements about value (Howell, 2012).

4.3.1 The research paradigms

A research paradigm is a crucial part of a research methodology and helps in providing a broader perspective for conducting the research in a successful manner by establishing an appropriate set of beliefs, practices and views that guides the overall research (Levers, 2013). It is a matrix of related approaches and beliefs that explains the nature of the enquiry. It provides a specific direction to the research that helps in examining the subject of research in a more explicit manner, and thus it is the primary step in conducting the research (Wolgemuth et al., 2015).

A research paradigm reflects the structure of investigation and the appropriate research methods chosen for conducting the research in an effective manner. It serves as the fundamental underlying assumptions and the intellectual frame upon which the research is based and facilitates an effective examination of the research problem (Wolgemuth et al., 2015) . There are two kinds of research paradigms most commonly and traditionally applied: positivism and interpretivism (Bryman and Bell, 2012; Hart, 2018). To ensure a choice between the two paradigms is made, it is important to analyse their relevance for the purpose of this research.

4.3.1.1 The positivist paradigm

The concept of a positivist research paradigm is based on natural science and involves hypothesis testing after a careful examination of the prevailing theories and measuring observable social circumstances (Creswell, 2013). It considers human behaviour to be passive and controlled. For the positivist researcher, validity and truth form the fundamental foundation of research and the emphasis is on the facts obtained through primary observation, statistical analysis or empirical measurement (Wolgemuth et al., 2015). For this purpose, it uses empirical methods of observation and experimentation to examine facts, quantify the collected data and determine the cause and effect relationship between the identified research variables (Walliman, 2015). A positivist paradigm applies scientific methods and approaches to systematise the knowledge generation process involved in the research. It rejects abstractions, follows the rule of normalisation, distinguishes facts and values and aligns scientific approach to derive logical conclusions (Mack, 2010). According to Fellows and Liu (2009), positivism seeks to answer questions about what, how much and how many.

4.3.1.2 The interpretivist paradigm

The interpretivist approach assumes that the world is subjective and socially constructed (Yin, 2013). It deals with people's experiences, and meanings constructed by them, as well as descriptions and other temporary matters such as feelings that cannot be quantified (Mathew and Ross. 2010. Further, it believes that reality is based on the subjective experiences of the external environment, and the conclusions are obtained with the help of personal interpretation that may be based on perceptions, expectations and individual experiences (Thomas,2017). The key principle of this paradigm is that the research cannot be undertaken through objective observation, but rather that the direct experiences of the participants are essential to obtain the conclusion. It uses research methods that emphasise the relationship between the researcher and the research subject (Bernard, 2017).

4.3.1.3 The pragmatist paradigm

Even though interpretivism and positivism are generally regarded as opposing views, a number of researchers suggest that the two paradigms can be combined in a single study through a pragmatic approach to investigate a chosen phenomenon (Creswell and Creswell, 2017). The use of the pragmatist paradigm suggests that both positivist and interpretivist paradigms can be adopted in a single study based on what fits best for the research and that the two approaches should not be seen as opposing each other (Creswell and Creswell, 2017).

4.3.3 Choice of research paradigm

Since the main aim of this research is to identify best practices that could be adopted by the Saudi Arabian construction industry to improve client satisfaction, it is imperative to have a deeper insight into client satisfaction and the extent to which such best practices can influence the level of satisfaction. From the conceptual framework developed by this research in Chapter 3, different factors from the literature have been identified as influencing client satisfaction (Cohen, Manion and Morrison, 2015). In other words, different factors and practices are relevant in influencing the extent to which clients are satisfied with their projects in terms of time, cost and quality.

From the conceptual framework, the use of practices such as ISO9002, Total Quality Management, Business Project Re-engineering, Business to Business, and Benchmarking are expected to influence factors such as: effective financial management; technology advancement; a skilled workforce; time constraints; level of communication in project teamwork; client relation management; commitment to health and safety regulations;

strategic legal issues; and effective waste management of. All these factors will lead to client satisfaction by ensuring that performance in terms of time, cost and quality are maintained. The adoption of an interpretivist approach helps to investigate qualitatively the extent to which these factors contribute towards client satisfaction in the Saudi construction industry.

This paradigm was effective for this research because it facilitated a detailed examination of the problem of research by allowing in-depth observation and investigation of the prevailing factors and practices influencing client satisfaction. In this research study, the interpretivist paradigm helped in identifying the extent to which the best practices by the construction companies influence client satisfaction in the construction industry of Saudi Arabia. Doing this required a detailed investigation into the factors or practices by firms that influence client satisfaction and, in the context of Saudi Arabia, the extent to which these factors can lead to the satisfaction of construction clients.

4.4 Research strategies

Research strategies or methods can be identified and referred to as those methods and techniques that are used by researchers in conducting their research operations (Bryman, 2012). The positivist and interpretivist paradigms discussed above relate to the two traditional methodologies adopted for the purposes of research: qualitative and quantitative methods. Interpretivism goes with qualitative methods, while positivism relates to quantitative ones (Creswell, 2013; Yin, 2013).

4.4.1 Qualitative methods

Qualitative methods aim to produce rich, detailed data which usually maintain the participants' views, (Denscombe, 2012). Generally, qualitative research is identified as relating more to interpreting and understanding the phenomenon under investigation through the meanings that research participants attach to the phenomenon. For this reason, qualitative methods are used for answering questions such as why and how, which can lead to an in-depth understanding of the phenomenon (Bryman, 2012). It generally seeks to use non-numerical means to address research questions, by opting for explanatory approaches. Common methodologies include grounded theory, ethnographies, case studies and action research (Yin, 2013; Creswell, 2013; Bryman 2012).

4.4.2 Quantitative methods

The quantitative strategy, on the other hand, is concerned with seeking answers to questions such as what, how much, and how many, and entails the numerical representation and manipulation of observation for answering research questions (Bryman, 2012). Quantitative research philosophy utilises numerical and objective measurements to address questions (Yin, 2013). Popular methodologies for quantitative research are experiments and surveys, which are useful for testing theories (Saunders et al., 2016). The quantitative type of research utilises statistical models, mathematical practices and testing theories to address the research problem. In order to carry out a quantitative type of research, it is essential to gather data that can be quantified and analysed using statistical models (Bergh 2009; Naoum, 2012).

4.5 Research approach

The research approach indicates a fundamental reasoning that is followed in the research to reach appropriate conclusions. It exhibits the sequence of tasks that are required to be conducted within the research process to facilitate the appropriate research analysis (Hart, 2018), and it allows examination, evaluation and analysis of the research problem in a manner that enables the objectives of the research to be met in an appropriate way. There are two types of research approaches: deductive and inductive (Holloway and Galvin, 2016). In the next few sections the two different approaches are discussed and the appropriate approach for this research is selected.

4.5.1 Deductive approach

The deductive approach is based on positivist methodology which facilitates the researcher in developing the essential assumptions that will be helpful for conducting the research effectively. Such assumptions facilitate the collection of data that is more pertinent and appropriate for the research (Jonker and Pennink, 2010; Fellows and Liu, 2015). The stages involved in the application of the deductive approach are: development of the theory, development of assumptions based on that theory, and collection and analysis of data in a given situation. The deductive approach moves from general to specific information and is termed the top-down approach (Jonker and Pennink, 2010). It helps in the development of an appropriate theoretical framework by synthesising the ideas and concepts examined from the literature, and facilitates hypothesis testing. It focuses on the deduction of factual information and the development of a rational structure for the analysis of the findings of the research. It also facilitates the examination of the

different aspects of the research problem and generates conclusions based on general theories and concepts (Crowther and Lancaster, 2012).

4.5.2 Inductive approach

The inductive approach, on the other hand, moves from the specific to the general and is known as the bottom-up approach. It is also referred to as the reasoning method, because it helps in attaining a generalised view of the overall research findings and seeks to develop a new theory. It is associated with the interpretivist approach, and its stages include data observation, identification of the changing patterns in the data and the development of a hypothesis and theory (Holloway and Galvin, 2016). This approach is preferred because it is highly flexible to apply. It allows a detailed examination of the research subject and facilitates the development of alternative explanations to meet the research objectives (Pathirage, Amaratunga and Haigh, 2008; Fellows and Liu, 2015).

4.5.3 Choice of research approach

Considering the two approaches discussed above, this research adopted an inductive approach to study the research problem (Holloway and Galvin, 2016). This approach is more appropriate for this research because it moves from the specific (factors associated with client satisfaction in the construction industry in Saudi Arabia) to the general (client satisfaction in the construction industry). This approach was helpful in providing a specific direction to the flow of information in the research to obtain a logical conclusion. Further, this approach is more suitable for this research because the inductive approach is in alignment with the qualitative research method and the interpretivist paradigm (Pathirage, Amaratunga and Haigh, 2008). Thus, an adequate and appropriate in-depth insight regarding client satisfaction in the construction industry in Saudi Arabia was obtained through this approach. It also provides greater flexibility in addressing the results derived for the research study (Hart, 2018). The nature of the research demanded a more in-depth analysis of the topic being researched. Considering the need to have an in-depth understanding of client satisfaction in the Saudi Arabian construction industry and to produce a guide that helps to improve client satisfaction, it was deemed necessary to ensure that an interpretivist approach – which goes beyond the surface so as to unearth the reasoning behind the results – was adopted. This made the choice of quantitative research not applicable.

The inductive research approach entails the strategy employed to integrate the various components of the research in a logical and coherent manner. The research approach takes

into account the research problem and stipulates a logical means of providing answers to the research questions, thereby offering a solution to the research problem (Cohen, Manion and Morrison, 2015).

4.6 Choice of research design

Exploratory research design seeks to obtain a general overview of the problem of research. It is primarily applied in research when there is less awareness or knowledge about the research problem or additional information is required to address the research question. The exploratory design allows the consideration of information of qualitative and quantitative data in order to gather in-depth information relevant to the research subject (Creswell, 2013). It is an informal approach to research because it seeks to obtain additional information on the research problem and postulates a research hypothesis. It is used to determine a general overview of the research problem and might not provide a final answer to it (Creswell, 2013). Exploratory design aims to identify the research problem and gain familiarity into the subject of the research by developing a hypothesis, establishing research priorities and defining the terms of research. It makes use of methods such as case studies, surveys and interviews (Supino and Borer, 2012).

Descriptive research design seeks to explore and describe the various themes that are developed to address the research objectives in a more appropriate way by gathering meaningful information in an effective manner. It involves identification, examination and interpretation of the given circumstances for developing a suitable theory (Edmonds and Kennedy, 2012). It allows interpretation of the data and determination of the relationship between the research variables. It describes the characteristics of the entities or group, such as population census, statistics for crime or economic indicators, and its major purpose is to determine the various factors and variables in the research (Marczyk, DeMatteo and Festinger, 2010). Descriptive design helps to identify a pattern of the variables that behave in a specific manner, in order to determine a relationship between them. The third type of research design is diagnostic research design, which is used in scientific and medical research, where experimentation is required for addressing the research objectives (Edmonds and Kennedy, 2012).

For the purpose of this research work, exploratory research was considered suitable and it enabled the gathering of generalised information regarding the research topic. The main advantage of the exploratory research design is that it enables the researcher to conduct an

in-depth examination about the research topic and also facilitates the collection of data through both qualitative and quantitative methods (Fellows and Liu, 2015; Supino and Borer, 2012). In this research study, exploratory research design helped in conducting an in-depth examination regarding the main factors influencing client satisfaction and the best practices adopted by construction companies to satisfy their clients in the construction industry of Saudi Arabia. This research therefore explored the different factors and practices that impact on client satisfaction. From the above, a qualitative method was deemed appropriate for the research as an in-depth knowledge on the extent to which the identified factors and practices influence client satisfaction was sought.

4.7 Sample size and sampling technique

To ensure the validity of research findings, it is always important to ensure that the participants of any research are representative of the study population. A large population makes it difficult for the researcher to analyse all the members of that population. In order to facilitate this study of members, the researcher drew on a small sample carefully selected to represent the entire population (MacDonald and Headlam, 2011). The sample size was determined by taking into consideration the requirements of the research problem. For this research, the selection of the sample size was based on the demands of the research and the need to ensure representative information was captured for analysis. The sample size helps to determine the total number of respondents that are interviewed for the research purpose (Daniel, 2011). A large sample represents the population more accurately but increases the efforts required on the part of the researcher in the terms of energy, time, money, equipment and vice versa.

Sampling methods can be classified into two: probability and non-probability sampling (Whitley and Kite, 2012). Probability sampling ensures that every individual in the population possesses an equal chance of being selected. These include stratified sampling, random sampling and systematic sampling. On the other hand, under non-probability sampling the samples are drawn on the basis of convenience to the researcher, and include judgement sampling, quota sampling and convenience sampling (MacDonald and Headlam, 2011). The strengths of probability sampling notwithstanding, non-probability sampling methods become very important where the use of probability sampling is not possible. For the purposes of this research, the type of respondents and their experience in the industry was very important. For this reason, there was a need to be selective in the sample used for gathering data, and so a non-probability sampling was used to ensure the right kind of people were purposively selected.

4.7.1 Sampling of research participants

Based on the area of research under consideration, a total of 60 project managers and clients within the construction industry were interviewed. The construction professionals/ respondents for this research worked for small, medium and large scale (first class) companies and were mainly project managers. Based on Canton et al. (2012), small size firms consist of 1 to 40 employees, medium size firms have 50 to 249 employees, and large size firms consist of 250 or more employees. The disaggregation of firms on the basis of size ensured that views were captured from firms representing all sizes within the industry. In terms of years of experience in the industry, this varied from seven months to 19 years, thus reflecting views from different perspectives. The respondents had experience of working on projects around residential homes, towers, hotels, palaces, and in the public sector. All the different projects had different types of clients representing different satisfaction requirements. These respondents were chosen because they had sufficient experience and relevant information regarding this research study. For the client respondents, efforts were made to ensure that clients from different sizes and types of organisations, and also individual clients, took part in the research. The choice of the number of respondents was based on the need to have a representative number. The amount of time needed for collecting data and analysing it was also taken into consideration (Fowler, 2013).

4.7.2 Sample size

A total of 30 project managers from small, medium and large construction companies in Riyadh and 30 construction industry clients were interviewed for the purpose of collecting data for the completion of the research. Before conducting the interviews, an informed consent form was sent to each respondent to obtain their consent for the interview. This helped to ensure that the participants for this research understood the requirements of the research and were willing to participate in it before commencing interviews.

4.7.3 Sampling technique used

This research adopted the use of a convenience sampling technique, which is a non-probability sampling method. This technique is useful for selecting respondents for interview, because it allows the researcher to have the flexibility and convenience of selecting the respondents according to their availability, geographical accessibility and agreement to share their knowledge and perceptions on the subject of the research (Lim and Ting, 2013). However, the major drawback of this sampling technique is that it

introduces bias into the research (Lim and Ting, 2013). The key bias that is involved in this research is that the selection of the sample is based on the convenience of the researcher, which can eliminate some prospective respondents who could have provided more useful information for addressing the research problem. This notwithstanding, it was identified that the purposive sampling was the appropriate technique for this research. Efforts were however made to reduce the level of bias on the side of the researcher. This was done by ensuring respondents were selected based on their suitability for research. In selecting respondents, attention was paid to the relevance of their experience to the aim of this research.

4.8 Data collection methods

Data collection methods play a significant role in developing a strong, informative foundation for the research. These methods are used for constructing a fundamental framework for this by facilitating the collection of meaningful and pertinent data from a large number of sources that can be refined and re-processed for the research (Mahfoud et al., 2015). Research requires a vast range of sources that need to be explored and exploited in order to meet the research objectives (Palinkas et al., 2015). The collection of relevant and closely related data is not only useful in addressing the research questions appropriately but also in increasing the quality and content of the research study. The application of appropriate data collection plays a highly significant role in the accomplishment of valid outcomes of the research (Wetcher-Hendricks, 2011). There are primarily two kinds of data collection methods used in research: primary data collection methods and secondary ones (Crowther and Lancaster, 2012).

4.8.1 Primary data collection methods

Primary data is the first-hand gathered data that needs to be interpreted and evaluated with the application of appropriate data analysis methods such as thematic analysis or statistical evaluation. There can be various ways of collecting primary data, such as observation, surveys, interviews and experiments (Crowther and Lancaster, 2012). Primary data is highly significant for research because it facilitates the collection of the latest data which is directly related to the research problem. This method is very effective because it helps in collecting original data from the wide range of population required for the research. However, primary data collection methods are time-consuming and involve high costs (Berthold and Hand, 2013).

Primary data will be helpful for this research in gathering pertinent and most recent data from project managers about their opinion on client satisfaction in construction projects.

4.8.2 Interviews

Interviews are an important aspect of qualitative research. This is due to the advantage of providing in-depth analysis and views of the phenomenon under investigation. In this regard, the interview method can be regarded as an effective method of data collection. Considering that satisfaction is quite subjective, it is important to find out from the views of the participants and from the clients the extent to which the practices of the firms influence the factors leading to satisfaction. For this research work, face-to-face semi-structured interviews were conducted for the purpose of enhancing understanding regarding the research context. In the interviews, the respondents were asked some open-ended questions and their detailed responses were retrieved (Olsen, 2011). With the help of well-structured interviews, detailed viewpoints of the respondents were collected and understood in relation to the topic concerned (Crowther and Lancaster, 2012). An advantage of the face-to-face interview is the ability to clarify questions where participants are not very clear (Denscombe, 2012). In the interview process, both the interviewer and respondents can share their knowledge and experiences, in order to learn more about the research topic (Nardi, 2018).

In designing the interview guide, recommendations from Yin (2013) and Merriam and Tisdell (2015) were taken into consideration, which require the questions to be easily understandable, not misleading and not tilting the responses of the interviewees in a particular direction. This is necessary so as to ensure that the data collected through the interviews is reliable. The interview guide (see Appendix 1) was designed to capture the subject views of the participants concerning client satisfaction and practices that can help achieve the level of satisfaction required by clients in the Saudi Arabian construction industry.

In order to collect adequate and effective data, two different interviews were designed: one for the clients and the other for project managers. In both cases, the interviews were divided into two parts. The first part of the interview was designed to collect data relating to the interviewees' background, while the second part collected data on the research objectives. While most of the questions were open-ended, a few of them used a Likert scale to collect information in a ranking format. The ranking question in the project managers' interviews included question 29, for example, relating to their commitment to

health and safety. Similarly, the ranking questions in the clients' interviews (Questions 11, 14, 18, 19, 23 and 27) related to the level of satisfaction with performance in terms of cost, quality, financial management and client relationship management and communication. Although the views were ranked in numbers, the Likert scales were only for ordinal measurement. The intervals between the values were not and will not be assumed to be equal (Denscombe, 2012). In this research, this data was used to identify the frequencies of the responses and differences among respondents. The numbers only represent opinions and verbal statements.

4.9 Data analysis

Data analysis is one of the most significant components of a research study. This research is comprised of effective data collection methods from relevant sources in order to ensure that the required amount of data is available for research (Lim and Ting, 2013). Straus and Corbin (2008) report that data analysis is the process of examining data to determine what it is and how it works. The purpose of data analysis in this research is to assist with highlighting the major issues and concerns in relation to client satisfaction in the Saudi construction industry.

4.9.1 Types of analysis applicable to qualitative data

For qualitative data analysis, techniques can include: thematic analysis; conversational analysis; critical discourse analysis; ethnography; frame analysis and grounded theory (Miles, Huberman and Saldana, 2013). For this research, a thematic analysis was deemed appropriate.

4.9.2 Use of thematic analysis

Thematic analysis is mainly used for the research purpose in which different themes are prepared and data is analysed with the help of these themes. The data collected is analysed in detail in order to find the best solution (Flick, 2014). It helps to convert the raw data collected from different sources into a meaningful conclusion of the research study. According to Vaismoradi et al. (2016), thematic analysis is a qualitative data analytical method that is convenient for identifying, analysing and reporting the different themes within a body of the data. It enables the researcher to categorise the qualitative data into recurring patterns and developed themes. Although analysing qualitative data is seen by some as a complex and unclear process (Alvesson and Sköldberg, 2017), Vaismoradi et al.

(2016) suggest that thematic analysis is a flexible approach that enables the researcher to bring out rich and detailed meaning from a large volume of data.

In order to conduct the analysis of qualitative data through thematic analysis, this research study made use of NVIVO software, which enables a researcher to analyse the rich text gathered with respect to the research study, which helps in deep analysis of the data (Bazeley and Jackson, 2013).

Data analysis for qualitative research, according to Ngulube (2015), involves a dialectic process of description, analysis and interpretation. The description process of the data analysis for this research began with the identification by the interviewees of the main factors that influence client satisfaction. This process forms the basis for having a more detailed analysis of the data by pointing to the key issues to which attention needs to be paid. Descriptive analysis gives a general overview of the results. The next step was the identification of the interrelationships between the factors affecting client satisfaction, which formed the analysis stage. Finding these interrelationships was based on the factors identified in the descriptive phase of the data analysis. The third stage in the process was to identify the reasons for the interrelationships between the factors. Finding these reasons required going beneath the surface to discover why the particular results were achieved. This helps with the interpretation of the data and answering the question of 'why', which is a key aspect of qualitative research. Wang and Geale (2015) suggest that, as part of the process of analysing qualitative data, the researcher should initially collect some data, but not all, and begin the analysis. Based on the initial results, the researcher can then collect more data to keep refining the interpretations of the results being obtained. Accordingly, the data analysis began with one of the transcripts from the interview which helped to set the tone. As more and more interview transcripts were analysed, the outcomes of the research were developed, leading to the formation of categories which subsequently became themes. In this process, the qualitative data analysis software QSR NVIVO was used as an enabling tool. This software helped in the coding, searching for and retrieving of the data which formed the basis for the development of the themes, and it helped with the description and analyses of the main themes identified from the research.

From the conceptual framework developed (see Chapter 3) a number of main themes were identified, which served as the basis for building on the themes for this research. These themes mainly involved practices of construction firms, factors influencing client satisfaction, and determinants of client satisfaction, which were time, cost and quality.

The process of generating codes, building categories, themes and sub-themes is presented in the next chapter.

4.10 Ethical considerations

The basic ethical considerations that need to be considered during the process of research include honesty, integrity, subjectivity, objectivity and social responsibility (Bernard, 2011). It is important for the researcher to adhere to ethical considerations in the research study, so as to achieve the relevant research aims and objectives with proper ethics and values (Bernard, 2011). In this regard, for the purpose of maintaining a high degree of ethical viability in the research, there is a need to keep in mind the principle of anonymity and confidentiality in the work, and in this regard, before conducting the survey, a written consent of the respondents must be obtained. For this purpose, a written consent form (Klier, 2009) was given to all participants to ensure they fully understood the requirements of the research. All respondents were given the opportunity to indicate their willingness to participate by signing the consent form (see Appendix 2). This form also assured the participants of anonymity in terms of the information they provided.

Ethical considerations provide a base for the research study, ensuring that the research is conducted in a correct manner (Flick, 2015). This enhances the reliability of the research work for future researchers. To ensure that ethical considerations were met, the University of Wolverhampton's ethical committee was contacted for approval before data collection began. The purpose was to ensure that the following conditions were met: minimising of any form of research bias; ensuring confidentiality of the data; validity; and reliability of the results.

4.10.1 Reducing bias in the research

It is essential to ensure that any form of research bias is minimised as much as possible. For the present study, no discrimination was made on the basis of colour, religion, caste or culture of the respondents selected for the interview. All the respondents were given an equal chance to answer the questions and the opportunity to opt out at any time they wished.

Before collecting data for this research, an application was made to the University of Wolverhampton's ethical committee by submitting the research aim, objectives, approach and interview questions for review and approval. The essence of the ethical approval was

to ensure confidentiality of the data collection process and the appropriateness of the analytical procedures.

4.10.2 Confidentiality of the data

It is important to maintain the confidentiality of the data collected from various primary and secondary sources (Heppner, Wampold and Kivlighan, 2008). The privacy of the information collected through primary sources can be assured by the proper consent procedures, but the researcher has to take steps to ensure confidentiality (Cohen, Manion and Morrison, 2015). For this research, the steps taken in relation to confidentiality ensured that the research respondents felt safe when providing their views, and no personal information that could easily link the respondents to their views was collected. Interviewees were coded with different labels to ensure information received was confidential. In line with this, every effort was made to ensure that raw interview transcripts were not passed to third parties who did not form part of the core research team.

4.10.3 Validity and reliability

Validity and reliability are crucial aspects of research (Baumgarten, 2013). Validity refers to the extent to which the findings gained with the help of the research tools provide true and correct answers to the questions of the research study. This authenticity and trustworthiness is essential to ensure that the findings of the research reflect a true picture of the research conducted. To ensure the validity of this research, a pilot test was conducted with five interviewees to test the correctness and feasibility of the questions developed for the interview. With the help of the pilot test, the main drawbacks and loopholes in the questions, as well as their language and content, were determined, all of which were helpful in gathering correct and appropriate data.

Reliability refers to the degree to which the tools used for the assessment of the research findings produce consistent results every time they are used. This reliability can be ensured by collecting data from authentic and valid sources (Lodico, Spaulding and Voegtle, 2010). For the purpose of maintaining the reliability of the research findings, efforts were made to ensure that all the secondary data for the research were gathered from authentic and reliable academic and scholarly sources so that correct and logical conclusions could be drawn from the research (Heppner, Wampold and Kivlighan, 2008). In order to maintain the validity of the research, the entire set of information was

presented in the participants' own language and the reliability was maintained through having data from authentic and relevant sources. As a part of the reliability of the research, the ethical guidelines of the University were met to a good level (See Appendix 1), in accordance with the completed ethical approval form from the university ethics committee.

Reliability is also affected by the process by which the collected data is manipulated. If the researcher manipulates any data for their own convenience, it will not only affect the reliability of the findings but will generate the wrong results, which will result in the failure of the research purpose (Whitley and Kite, 2012). In this research, the data analysis process adopted ensured that the correct processes were undertaken so that the correct results would be produced. (A detailed analytical process for this research is shown in Chapter 5).

4.11 Research limitations

There are various limitations in a research study, which are analysed to complete the research in the most appropriate manner. A major limitation of research, according to Creswell (2013), is the limitation of confidentiality. To ensure this was not the case in this research, all participants were made aware of the measures in place to ensure anonymity of the interview data. In analysing the interviews, all participants were coded with names that made it difficult to link particular respondents to the outcomes or results. As explained by Bryman and Bell (2015), it is the duty of the researcher to ensure that the respondents are clear about the questions they are asked. To ensure that respondents provided appropriate responses, efforts were made to ensure that they clearly understood the demands of the research and the questions being asked. This prevented the research from going in the wrong direction and harming the results of the study.

The next limitation is related to the changes in the viewpoints of the respondents. The views of some respondents may differ from those of others, and this may make it difficult to arrive at a common conclusion. There is also the possibility that the views of respondents may change from time to time depending upon changing situations and conditions (Jackson, 2011). In other words, respondents provide answers on the basis of their past experiences and knowledge and current situations, which may change in the future. Therefore, in the analysis process efforts were made to ensure that the different viewpoints of the interviewees were presented. This helped to prevent what O'Connor (2015) refers to as tunnel vision.

4.12 Summary of Chapter 4

The research methodology chapter of the research study is considered the most significant chapter. It is intended to provide all the information regarding the research philosophy, design, approach and sampling techniques, and methods. The data in this study was collected through a qualitative method approach in which primary data was used. It is essential to ensure that the overall research study has been presented in a systematic and appropriate manner. The present research study applied an interpretivist research paradigm because it focused on the use of qualitative research, along with the use of primary and secondary sources of data, collected from interviews as well as from books, journals and articles. The inductive research approach was used in this research study to understand the research problem. This approach was helpful as it moves from the specific to the general, and so a specific direction was provided with the help of this approach.

The information was collected from both primary and secondary sources. In the case of the primary data collection method, an interview format was prepared, containing all the relevant questions related to the topic. The data collected was analysed with the help of a thematic analysis. The development of the conceptual framework helped with the initial themes of the research which formed the basis for the analysis. The limitations of this research, including unwillingness of respondents, consumption of excessive time, problems with respondents understanding questions, and a lack of clarity in questions, are all discussed in this chapter. The other limitations were the problem in identifying reliable and valid sources of data collection. Ethical considerations were also considered in this research work, which included ensuring that the research work had attempted to limit any potential bias or manipulation of data that could occur, and also maintaining the confidentiality of data collected, avoidance of plagiarism, ensuring credibility and using only authentic sources of data collection.

The next chapter presents the analysis of the data collected for this research in order to provide an in-depth understanding of client satisfaction within the Saudi Arabian construction industry.

CHAPTER 5: PRESENTATION OF DATA COLLECTED, ANALYSIS AND RESULTS

5.1 Introduction

In order to be able to identify best practices that could lead to client satisfaction in the Saudi Arabian construction industry, this research collected qualitative data from both clients and construction project managers in Saudi Arabia. The method of data collection, justification and the process of analysing the data were presented in the previous chapter (Chapter 4). After the collection and reduction of data with the help of QSR NVIVO, this chapter presents the analysis of the results.

Section 5.2 presents an overview of how the analysis of the data was conducted. The outcome of the analysis is then presented in three key sections: Section 5.3 presents general information on the research participants and how this is likely to affect the results. In Section 5.4, the results of the data analysis from the construction project managers are shown, and finally Section 5.5 provides the data analysis and results from client respondents who took part in this research. The analyses from both the client respondents and project managers cover issues such as: the views of the two groups on client satisfaction; the factors used to measure satisfaction and the extent of satisfaction within the industry; and best practices for achieving satisfaction. Throughout the analysis, a conscious effort was made to ensure that the general views of the interviewees as well as any divergent views were presented.

5.2 Data collection process

To ensure that the data collected was fit for purpose and met all the requirements of the research, the design of the interview questions took into consideration the overall aim of the research and concentrated on the key objectives to be met by this research. Interview questions were reviewed for bias, clarity and a logical order. To ensure interviewees could relate easily to the questions, pilot studies were conducted with five client interviewees and five construction personnel to determine whether the questions were correctly focused on the aim and objectives of the research. Based on the outcome of the interviews and the feedback from the pilot, the interview guides were revised to ensure clarity. Some questions were rephrased, leading to a redefined interview guide. In redesigning the questions, attention was paid to ensuring that they could lead to an in-depth understanding of the concept of client satisfaction within the construction industry.

The selection of research participants took a purposive approach to ensure that the participants in the research would have the right levels of experience. Using the convenience sampling method mentioned in Section 4.8.2, clients ranging from private to corporate were contacted and invited to take part in the research. A total of 30 clients agreed to do so and formed the client participants. A similar approach was applied to contractors, with the emphasis on ensuring that contractors or project managers taking part in the research would be those with enough experience in the industry. A total of 30 project managers with different levels of experience ultimately responded to the research and took part in the data collection process.

The interviews were conducted on construction sites and at clients' offices. On average, the interviews lasted for thirty minutes and the interviewees were reminded of their right to opt out of the research at any time. Interviews were recorded during the data collection process and notes were also taken where necessary. The notes and interviews were transcribed, and this served as data for the research.

5.3 Data analysis

After collecting and transcribing the results of the interviews, the data was entered into the qualitative data analysis software QSR Nvivo version 11, to facilitate the coding and retrieving as well as compounding of the data encoded. In general, a thematic analysis was conducted to ensure the research extracted the relevant information from the data with the emphasis on meeting the objectives of the research. The development of themes began with open coding of the data, which resulted in grouping the views of the interviewees under different sub-sections. This was later refined to ensure that sub-sections with related concepts were put together. After putting these together, the data analysis process proceeded to form categories out of the data. These categories included practices of firms, focus of clients, and perceptions of satisfaction.

From further grouping of the categories, sub-themes were identified, and these formed the basis for the presentation of the data. The sub-themes included reasons for client dissatisfaction; means for determining client satisfaction; and common issues faced by clients. Where similar sub-themes were identified, they were grouped under major themes. The main themes produced in this research included satisfaction with the three key measures for project performance; factors for improving client satisfaction; and levels of client satisfaction.

To aid the presentation of the results from this research, the use of NVIVO provided a graphical representation of the data in the form of charts that showed the interrelationships between themes and sub-themes, as shown in Figures 5.1 and 5.2 below.

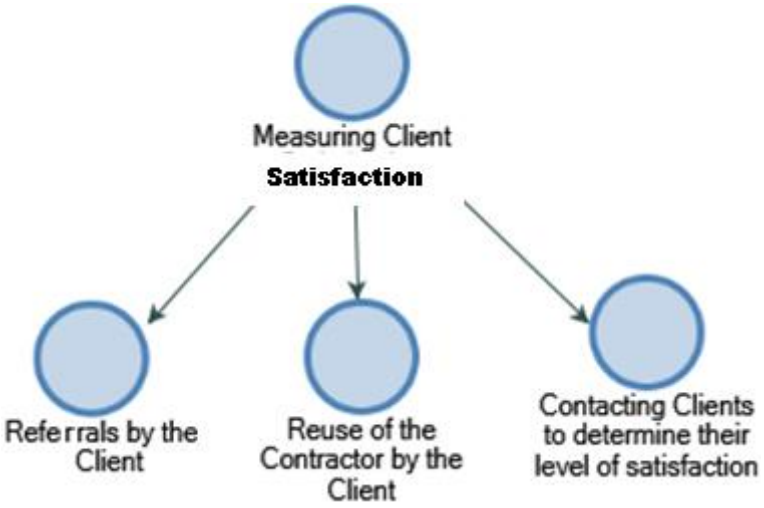

Figure 5.1: Methods of measuring client satisfaction

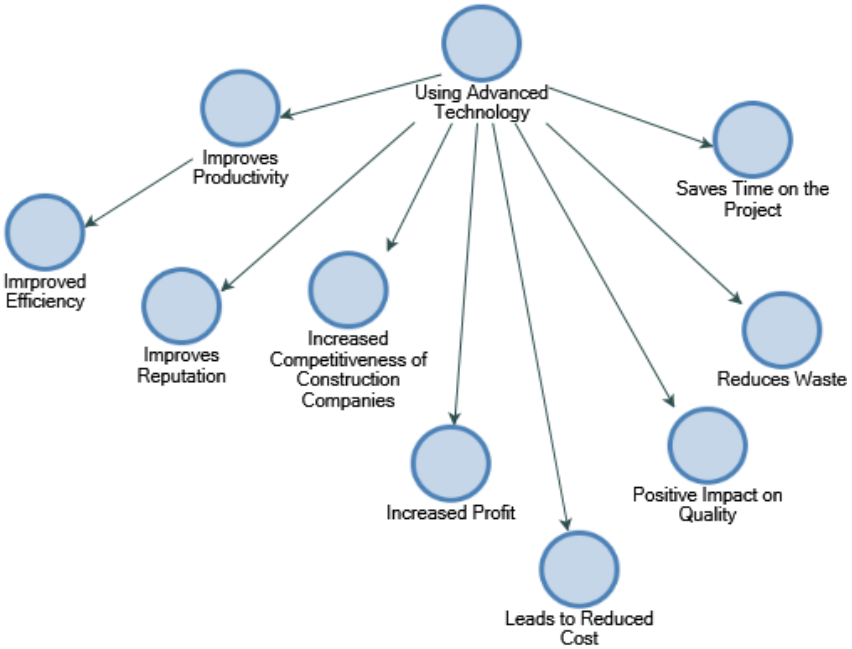

Figure 5.2: Influence of use of advanced technology on client satisfaction

5.4 Background of the research participants

As discussed in Section 4.8, a total of 60 interviewees, consisting of 30 construction clients and 30 construction project managers, were purposively selected for this research. The reason for selecting different groups, as shown in Section 4.8.2, was to ensure that different perspectives on the same issue were provided with the potential of leading to in-depth views about client satisfaction. The backgrounds of the interviewees are presented below.

5.4.1 Background of the interviewees: client

The 30 clients interviewed for the purposes of this research had different characteristics in terms of the nature of their business, the type of projects they had been involved in, their level of experience in the construction industry, and the number of projects they had commissioned and completed. The purpose of obtaining this demographic information was to establish a setting for their responses to the interview questions.

5.4.1.1 Type of client

For the purposes of this project, the clients were grouped into two main types: private individual clients and clients representing an organisation. The classifications are based on how the clients procured their projects. The result is produced in Figure 5.3.

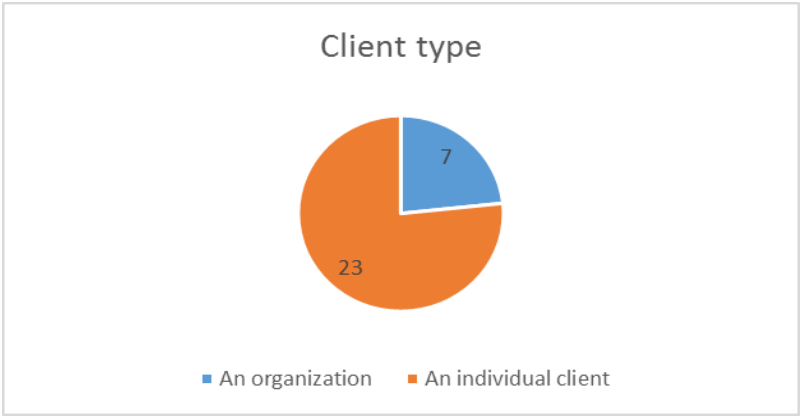

Figure 5.3: Types of interviewees

As shown in Figure 5.3, the majority of the 30 client respondents (77%) who took part in this research were individual clients, representing either individual home owners, business people or even developers who procured projects within the Saudi Arabian construction industry. To be precise, while 77% were independent clients, 23% were employed in organisations.

5.4.1.2 Project characteristics

To determine the perspectives from which clients presented their answers to the interviews, it was necessary to identify their level of experience with the construction industry. This was done through ascertaining the number of projects they had undertaken, the duration of their projects, the size of their projects, and whether or not they were the end users of the projects.

The number of projects procured by the clients ranged between one to three buildings or projects. Of these, 12 (40%) reported that they had completed only one project, while 6 (20%) of them had done only two projects, and among these 6, it was found that 5 worked independently and only 1 worked with an organisation. Of the 4 clients (13.3%) who reported that they had completed three projects, one was working with an organisation and the rest were working independently. The highest number of projects completed was 90, which was reported by only 1 client. The remaining 7 clients were working on their first project.

The most common types of construction schemes were villas (30%) and homes (17%), which were carried out by independent clients, while homes were procured by clients working as organisations. 13% percent of the projects were residential buildings and these were carried out by clients who worked independently or with an organisation, whereas apartments made up 7% of the projects and were carried out by clients working either as individuals or as organisations.

As well as these types of projects, there were others mentioned by the interviewed participants, including towers, a hospital, commercial buildings, charity building projects, a private school building, a mosque and hotels.

In terms of duration, the different projects cited above took between 1 to 20 years to complete, depending on the nature of the project. Overall, 63.3% of the clients indicated that their projects were completed within 1 to 7 years, while 20% stated that their projects took between 8 to 14 years to complete. For the remaining 16.7% of the clients, their projects took 15 to 20 years to complete. A summary of all project characteristics is provided in Table 5.1 below.

Table 5.1 Background information on clients and their projects

Characteristics	Freq.	Percent
Total no. of projects completed		
1	12	40.0
2	6	20.0
3	4	13.3
5	1	3.3
6	2	6.7
20	1	3.3
30	2	6.7
70	1	3.3
90	1	3.3
Types of Projects		
Villa	9	30.0
Homes	5	16.7
Residential buildings	4	13.3
Flat	2	6.7
Towers and Homes	1	3.3
Towers	1	3.3
Hospital	1	3.3
Flats and a villa	1	3.3
Commercial buildings	1	3.3
Charity building projects	1	3.3
Commercial and private buildings	1	3.3
Commercial and residential building	1	3.3
Home, schools and mosque, hotels	1	3.3
Duration of projects		
1-7 yrs	19	63.3
8-14 yrs	6	20.0
15-20 yrs	5	16.7
Size of projects		
Small sized projects	4	13.3
Medium sized projects	19	63.3
Large sized projects	7	23.3

End user or other users		
End user	23	76.7
Other users	7	23.3

One of the key measures of client satisfaction is the timely completion of projects. To provide a background for discussing the satisfaction of the clients who participated in this research, the interviewees (clients) were asked to indicate whether or not their projects had finished on time.

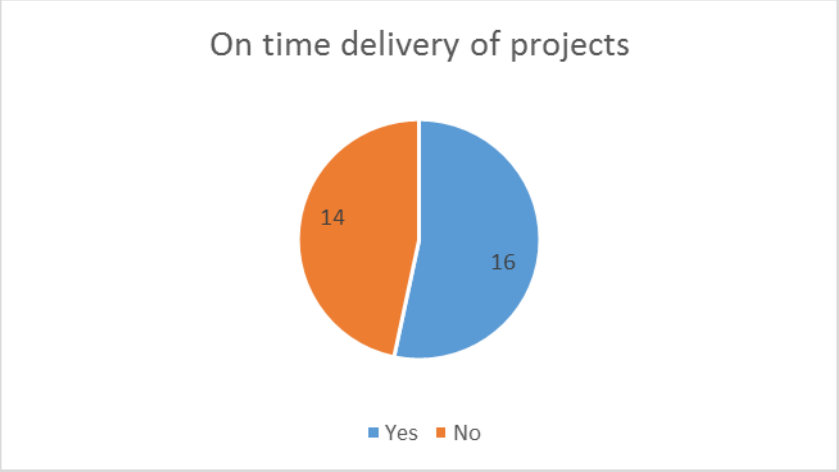

Figure 5.4: Satisfaction with the timely delivery of projects

As can be seen in Figure 5.4, a little over half of the clients (16 interviewees, making 53.3%) indicated that their projects were delivered on time, whereas the remaining 14 (46.7%) indicated that their projects did not finish on time. The extent of delays and the reasons for delays are presented in this chapter (see Section 5.3).

Experience of working in the construction industry was the last piece of demographic information requested from the clients. The essence of this question was to determine the extent to which the clients knew about the nature of the construction industry. Answers to this question suggested that 50% of the interviewees had a considerable amount of previous experience with the construction industry, while the remaining 50% did not have much experience of dealing directly with the industry.

This background forms the lens for analysing the answers to the interview questions.

5.4.2 Background of the interviewees: project managers

As indicated at the beginning of the chapter, 30 construction project managers who were purposively selected for this research were interviewed. This section provides information

on the background of these participants and how this would be likely to affect their responses to the interview questions. The background information included: their years of experience in the industry; the types of projects they had been involved with; the size of companies they worked for and the annual turnover of these; the size of the projects they worked on; and the types of projects their organisations were involved with.

5.4.2.1 Experience in the construction industry

The experience of the professionals in the construction industry was measured based on the length of time they had worked in the construction industry. The results indicate that their experience varied from 7 months to 20 years.

5.4.2.2 Size of construction companies

In terms of the types and sizes of companies the participants worked for, three main groupings were identified in terms of small, medium and large construction companies. As shown in Figure 5.5 below, the majority of the professionals (project managers) interviewed belonged to medium-sized companies (66.7%) and most of them had 1 to 7 years working experience (60%). Regarding construction projects, 47.6% were engaged in large projects, 42.9% in medium sized projects and only 9.5% in small ones.

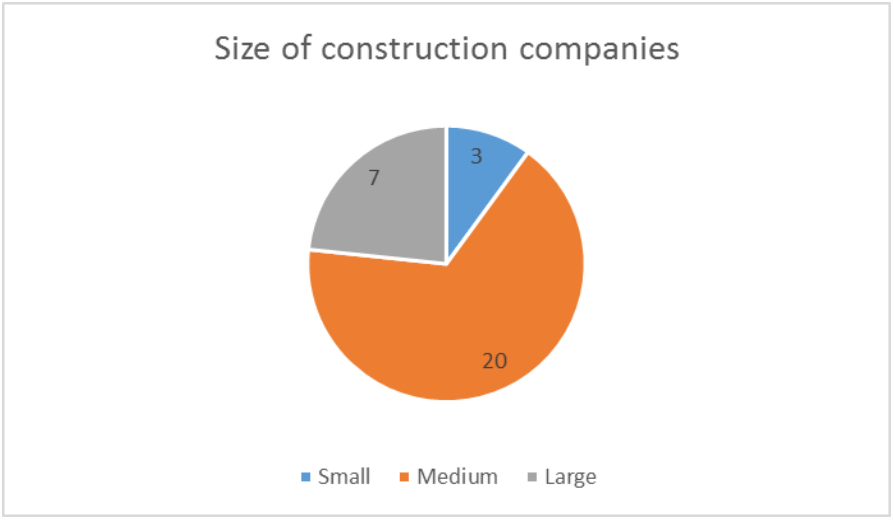

Figure 5.5 Distribution of clients by the size of their construction companies

5.4.3 Size and price range of projects studied

The price of the projects these participants had worked on ranged from 2 million to 100 million Saudi Riyals. The demographics and background of the project managers presented above formed the basis for the responses given to the interview questions.

5.5 Analysis of data from clients

This section of the analysis presents information on the views of the clients regarding satisfaction and the factors that influence satisfaction with construction projects in Saudi Arabia. The section is divided into six main parts: level of satisfaction with construction projects; relationship between satisfaction and key project success factors; factors influencing client satisfaction; reasons for dissatisfaction; common issues faced by clients; and measures to improve client satisfaction.

5.5.1 The Level of client satisfaction with construction projects

Client respondents were required to rate their level of satisfaction with the construction companies who undertook their projects. This was to ascertain the extent to which clients were satisfied with the services provided to them by the construction industry in Saudi Arabia. From a scale of 1 to 10, going from the least to the greatest amount of satisfaction respectively, the answers generally suggest that the majority of the clients gauged their satisfaction to be 5, 6 or 7 out of 10. There were, however, three clients who suggested their satisfaction was 2 out of 10 whereas another three clients suggested that their satisfaction was 8 or 9 out of 10. In terms of percentage, these results suggest that the level of client satisfaction was between 50% and 70% satisfaction levels with the performance of the contractors they used for their projects.

The clients were further asked to suggest the reasons for their level of satisfaction. The responses generally indicate that client satisfaction is linked to a range of factors that relate to the performance of the contractor during the process of executing the project as well as factors related to the finished project.

Some comments from the research interviewees are presented in this section to support the analysis of the results.

Client 23, who ranked his satisfaction as 4 out of 10, stated:

In the past, construction companies used to construct high-quality buildings. But at the present time, companies don't care about quality. They only care about profit. Clients often experience problems in the building after delivery.

Another interviewee (number 12) made a similar statement. To him, the satisfaction had everything to do with the honesty of the contractor: "*It's very important, because honesty and truthfulness are the most important factors. They also have a tremendous effect on a client's personality."*

From the interviewees, different levels of client satisfaction were identified with the different measures of project success. The levels of satisfaction with these measures are discussed in the next section.

5.5.2 Clients' Satisfaction with the achievement of three key project requirements

All construction projects are expected to meet three key requirements: time, cost and quality. This section of the analysis sought to determine the extent to which the contractors used by the clients met these key requirements for project success.

5.5.2.1 Satisfaction with quality

This section of the analysis investigates whether or not clients were satisfied with the performance of their projects in terms of quality and what factors influenced their level of satisfaction. From the perspectives of the clients interviewed for this research, meeting the required level of quality on their projects was very important and led to satisfaction. In terms of client satisfaction with quality, it was identified that to a large extent, the clients were satisfied with the achievement of their projects regarding quality. Generally, there was a consensus that the contractors normally performed well in terms of the level of quality of the projects they completed. When requested to state their level of satisfaction between 1 and 10, the answers suggested that generally clients rated the quality of their projects as 8 or 9. Performing well on quality alone, however, did not indicate full satisfaction with the overall outcomes of the projects, as other factors also influenced overall client satisfaction. This suggested that even when clients were satisfied with the quality of their projects, it did not result in overall satisfaction. This is because the quality was related to the completed project but clients' satisfaction was intended to cover both the end product (completed project) and the process of completing the project.

There were, however, four clients who shared a different opinion. They indicated that their level of satisfaction with the quality of their projects was 2 out of 10. When requested to indicate the reason for their level of dissatisfaction, one of them stated that the contractor used for the last project had employed personnel who had very little experience, thus leading to poor quality work. In the words of this interviewee: "*They don't have any experience.*"

5.5.2.2 Quality management practices and client satisfaction

With quality being one of the key determinants of project success, the research sought to explore the role of quality management practices adopted by the contractor to the satisfaction of the clients. Analysis of the results suggest that for the majority of the clients who took part in this research, quality management practices were very important, as clients related these practices to the overall level of satisfaction with quality. The analysis of the link between client satisfaction and quality management practices identified different factors that could influence client satisfaction. The results are shown in Figure 5.6.

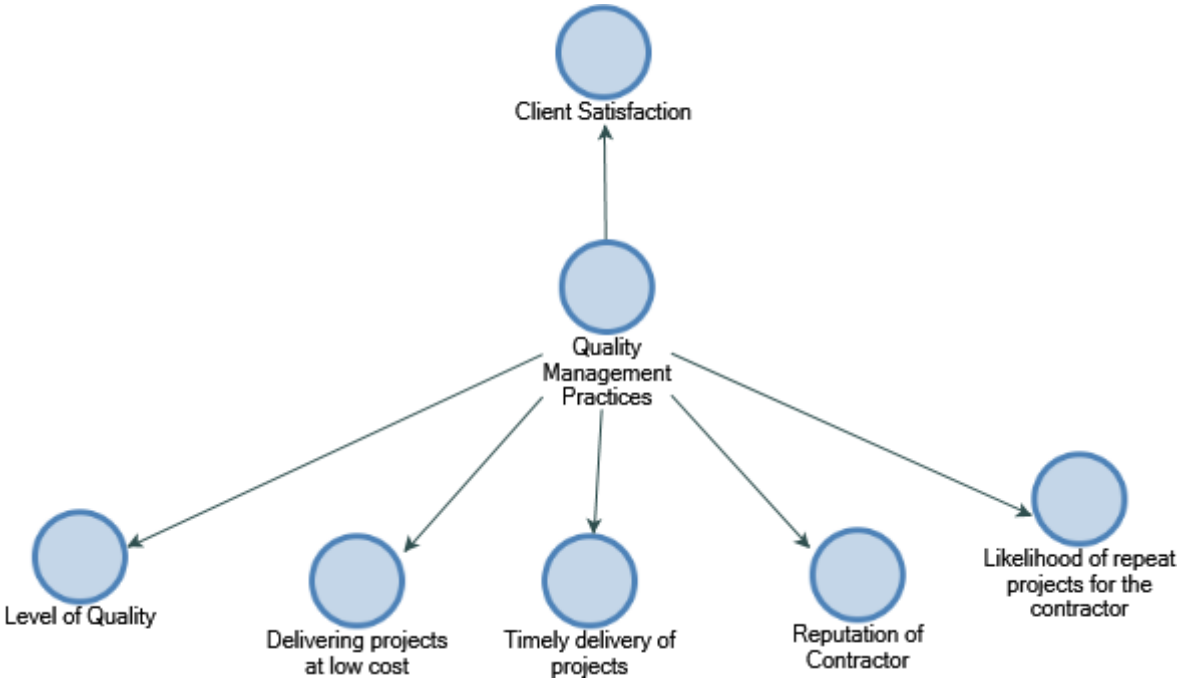

Figure 5.6 Quality management practices related to client satisfaction

According to the responses of the interviewees, quality management practices have a good link with delivering projects according to the contract and specification, by ensuring that projects are delivered on time and costs are kept low. Interviewee 17 simplified the

relationship between quality management and client satisfaction as: *"Clients always look for high quality and good price. So quality management practice can help do this."*

Similar comments were made by other interviewees. Interviewee 11, for example, remarked:

It's very important. Through quality management practice, constructing companies can deliver high-quality projects at a lower price. Clients are looking for high quality combined with lower prices. So, it improves the client's satisfaction.

From this client's comments as well as those from other interviewees, it was identified that having appropriate quality management practices was deemed very important to clients. This is because these practices have the potential to lead to the delivery of projects at high quality while keeping prices down, which were very important requirements for the satisfaction of the clients. According to Interviewee 12, quality management practices *"…can improve the level of accuracy in the project. This also urges workers to perform their work efficiently."*

Other interviewees suggested that quality management practices were important when selecting experienced contractors. This is due to the potential for waste reduction and minimising the cost of projects. It was also identified that for clients, quality management was a hallmark of good contractors and represented a high likelihood of delivering projects to the required standard. According to Interviewee 15:

…good contractors have a skilled and well-trained workforce who are able to deliver projects precisely as it was stated in the contract. Good contractors also care about all minor and major details of the project. They want to boost their reputation.

Quality management practices were identified as also boosting the reputation of the contractor, which was seen as a good requirement by the clients. It contributed to client satisfaction by ensuring that clients were comfortable with the type of contractor they were working with. Quality management practices were identified as having a relationship with the decision to re-use a particular contractor. Interviewee 18 suggested that quality management practices "*…also boost the reputation of the company due to the high-quality project that was done. Clients admire high-quality projects. It is the main goal of construction companies and clients as well*."

The significance of quality management practices to the client was identified as being linked to the level of experience of the client. From the interviews, it was identified that for clients who had many years of experience with the construction industry, there was a general perception that quality management practices have a key role to play in ensuring high quality is met. The more experienced a client was, the more important the quality management practices were to that client.

5.5.2.3 Satisfaction with time

The research also sought to identify the extent to which clients were satisfied with the performance of their contractors in relation to time management and delivery of the project on time. The results suggested that many clients were dissatisfied with their contractors in relation to completing projects on time. Out of the thirty interviewees, the results for performance of contractors in relation to project time shows that the majority of projects did not finish on time. From the results, only 10 of the 30 clients stated that their projects finished within the agreed time. However, 14 of the clients suggested that their projects generally finished within a reasonable time. Some of the main comments made for dissatisfaction with time performance are cited below.

According to Interviewee 29, "*the project was delivered two months after the deadline."* Others made similar comments, including Interviewee 16, who stated that the design issues led to very late completion of their projects. In his words, "…*they didn't deliver the project on time. There were mistakes in the design and schemes. This resulted in delaying the project".* Some clients also suggested that while the contractor might finish one project on time, this was no guarantee that they would finish others on time too. One of the clients who had this experience commented: "*They completed one of them on time, while the others were not delivered on time."*

In terms of rating this level of satisfaction on a scale of 1 to 10, the majority of the clients rated their satisfaction as between 5 and 8 out of 10. One of the problems cited for lack of satisfaction with the performance in relation to time was lack of experience on the part of the contractor. It was deduced from the analysis, however, that although clients were not always satisfied with the performance of their contractors in relation to time, satisfaction with cost (at an average of about 70%), was generally better than satisfaction in relation to time.

5.5.2.4 Satisfaction with cost

In terms of satisfaction with the performance of their contractors and projects in relation to the cost of delivering their projects, the client interviewees generally indicated that projects hardly ever finished within the initial cost. In rating contractors based on their experiences, the clients generally rated their satisfaction with cost to be between 2 and 6 out of 10. This suggests that of all the three main factors of project performance, clients were the least satisfied with performance in terms of cost. According to Interviewee 29,

The contractors will always find a way to increase the initial cost of the project. Any time you are starting a project, you know the cost will almost certainly increase. This makes it difficult if you have not planned for extra spending on the project.

There were about 14 more interviewees who supported this view and suggested that the contractors did not always perform well in terms of cost.

5.5.3 Factors that improve client satisfaction within the Saudi Arabian construction industry

The aim of this research, as stated previously, is to identify ways to improve client satisfaction within the construction industry of Saudi Arabia. In achieving this, various opinions of clients were sought out, and the data obtained from the interviewees were categorised into factors that influence client satisfaction and those factors that lead to client satisfaction. These two classifications are discussed below:

5.5.3.1 Factors that influence client satisfaction

In the context of this study, the word 'influence' simply denotes those factors that cause significant impact without direct or apparent effort. Thus, twelve influential factors were identified by the respondents, which were then tabulated in a hierarchical order to show those factors that were more important to the clients than the others (see Table 5.2 below). These factors were identified to be important from the emphasis placed on them by the interviewees. They were then ordered, based on the views of the clients. In some instances, the clients were asked to determine which factors were more important and which factors they considered to be the most important. In other instances, some clients mentioned factors they found had more importance and ranked these factors. The overall ranking was achieved by taking into account all factors identified to be important in ensuring client satisfaction and determining the relative importance of the factors based on

the number of clients that mentioned the factors (occurrence) and the level of importance placed on those factors by them. The factors are discussed in detail here.

Table 5.2: Factors that influence client satisfaction

Factors that influence client satisfaction	Occurrence	Ranking
Honesty of contractors	29	1st
Effective financial management of the project	28	2nd
Proper planning and organisation	26	3rd
Adequate provision of quality materials and workforce	26	3rd
Maintaining good communication between client and project team	24	5th
Efficient customer services	22	6th
Clarity of words and statements in contract	20	7th
Cooperation with the client	17	8th
Health and safety	15	9th
Good logistics	13	10th
Hygienic environment	10	11th
Using advanced technology	8	12th

Although the twelve factors above were identified as having an influence on client satisfaction, the five most important among them – honesty of the contractor, effective financial management of the project, proper planning and organisation, adequate provision of quality material and workforce, and maintaining good communication between client and project team – are discussed below.

Honesty of Contractors

Honesty is not just about charging a client fairly, but also means conducting oneself and one's business beyond reproach: *"A dishonest contractor means shoddy workmanship, unexpected delays, amenities that never get installed, hiking of prices and many more. Who would want to work with such a person?"*, exclaimed Interviewee 15. According to Interviewee 7, *"I put honesty and credibility before all other considerations when working with a contractor or consultant."*

Most of the clients interviewed in this study were also of the opinion that honesty is the best policy for achieving satisfaction. Working with a dishonest contractor could affect all the project work in terms of cost, quality and time, as stated by Interviewee 3, and this was also confirmed by other interviewees in this research. Honesty leads to a good reputation which in turns helps contractors to win more projects. Thus, this is seen as an important factor that could influence client satisfaction.

Effective financial management of the project

All factors relating to the cost of a project from inception to completion need to be managed effectively. This is a very important factor for a client and therefore makes an important contribution to their satisfaction level. Interviewee 8 stated that

the most important thing to me is when a project is completed within a budget cost, and I am presently working with a contractor who is different from others because he applies an un-conventional method to achieve cost savings.

The researcher asked for clarification on what technique it was, and he responded that the contractor employed every means possible to minimise every kind of construction waste, and this made the client very happy. Clearly, no client would want to work with a contractor who had a bad reputation for poor financial management, and this explains why most of the interviewees saw the effective financial management factor as very important.

Proper planning and organisation

According to many of the interviewees in this study and the results from the literature review, planning by a service provider (consultant or contractor) is one of the most important factors that influences client satisfaction. Emphasising the importance of planning, Interviewee 19 revealed that *"most savings opportunities and quality controls to reduce poor workmanship and defects in construction projects are identified during the planning stage."* Planning involves different dimensions including material planning, workforce planning, plant planning, and the planning and co-ordination of sub-contractors. All these have a direct impact on client satisfaction.

Adequate provision of quality materials and workforce

The focus of many service providers such as contractors and consultants in the construction industry should be to satisfy the client's needs on a project by meeting all or

the major expectations. Quality is often seen as an antecedent of client satisfaction, and is therefore a very important factor. Adequate provision of materials and a good workforce was agreed by many of the interviewees to be the backbone to their satisfaction regarding projects. As stated by Interviewee 24, *"we are very keen on working with people who put quality first before anything else. I agree that quality means spending more but what most people fail to consider is that, from a whole life cycle point of view, the project is relatively cheaper."* Similarly, Interviewee 30 said that he felt more satisfied spending a little more on quality materials and good workmanship than buying mediocre materials and paying cheap labour which could result in a poor building.

Maintaining good communication between clients and project team

From the interviews conducted, all respondents were in agreement that effective communication is an important factor that enables project teams to deliver projects to the clients' desired level of satisfaction. Communication is a two-way process that involves keeping clients informed in a simple way that they can understand and listening to what they have to say. The finding of the literature review has shown that clients can only obtain higher levels of satisfaction when the service providers (the consultants or contractors) achieve higher levels of performance in communications. This was confirmed by the interviewees who agreed that maintaining good communication between a client and the project team could influence the client's satisfaction. Interviewee 23 explained that *"one of the major problems that causes disputes and delays in construction projects, particularly in Saudi Arabia, is poor communication and collaboration among project participants."* This statement was also confirmed by Interviewees 16, 18, 20, 22 and 29, who indicated that a lack of good communication among the clients and contractors has affected the success of most projects in Saudi Arabia. In line with these statements, delays in project and unsuccessful delivery of projects will invariably lead to client dissatisfaction.

Efficient customer services

It is clear that maintaining a good relationship with clients brings more benefits to the end receiver. In the construction industry, efficient customer service means keeping communication open, delivering on time, keeping to promises, always thinking of quality, and going the extra mile to make a client happy even if it means offering free services once in a while. Thus, the respondents from the interviews were all in agreement that good

relationship management with the client is a key factor to consider in order to improve the level of client satisfaction. Interviewees 7, 16 and 19 were of the opinion that cooperation should be used as a determinant of a good relationship with the client, while Interviewee 13 mentioned credibility as a determinant of this. This assertion was confirmed by Interviewee 9, who commented:

You see, I have been procuring construction projects for the past 20 years, and among the things I admire about a contractor is keeping to his word and treating his clients well and with the greatest respect. With this kind of attitude, you can be sure that clients will definitely come back because they'd rather work with trusted contractors than new ones.

Clarity of words and statements in contracts

Ambiguity in contracts leads to disputes among project participants. Thus, clearly articulated contracts with simple wording that can be understood clearly will instil confidence in the parties and promote transparency in project execution. As Interviewee 26 noted,

Contracts are supposed to be clear and understood by everyone. However, the style of drafting and subjective phrases within contracts make them hard to comprehend, which in turn leads to dissatisfaction of both the service providers (contractors and consultants) and the client himself.

Interviewee 9 complained that some contractors take advantage of knowing the "get-out" clauses in a contract to cheat inexperienced clients. Thus, much work needs to be done to tackle this issue as it has become rampant and has affected projects in a negative way.

Cooperation with the client

An open, non-confrontational and cooperative environment that entails sharing knowledge and information among contractual parties is of the utmost importance in achieving the project objectives and building a long-term relationship. The need for a cordial relationship between the project team members and the client was seen as very important by the majority of the respondents, as it was a determinant for achieving a good level of client satisfaction on projects and guaranteed a good relationship with the client . According to Interviewee 18,

It is important to work with a contractor who knows what he is doing, but what is even more important to me is a contractor who keeps me involved in the project, particularly where it involves making changes, either minor or major.

Interviewee 11 explained:

A good relationship with the client will increase his psychological comfort, reassurance and satisfaction, and sometimes make him overlook minor mistakes that can be modified because of this good relationship.

Interviewee 20 observed that maintaining collaboration among contracting parties so as to achieve mutual objectives is what is lacking nowadays in the Saudi Arabian construction industry and therefore projects usually come to an end with unsatisfactory results. Similarly, Interviewee 1 considered that a cordial relationship between the team members and the client tended to depend also on the client:

It depends on the clients. There are clients who consider the relationship is very important to achieve satisfaction and there are other clients who do not care about the relationship. They only care about receiving the project according to the contract specifications.

Nonetheless, as advice to improve cooperation between the clients and contractors, Interviewee 2 suggested that duties and responsibilities have to be transparent for all parties, and that the contracting parties have to be linked in such a way that information remains open, clear and fast.

Health and safety

The majority of the respondents agreed that health and safety requirements are highly effective and have a direct impact on the level of satisfaction that a client derives from a project. Interviewees 5, 13, 17, 20, 24 and 29 mentioned that the health and safety of workers is important in influencing their satisfaction with a construction project. This is because accidents create work such as long investigative processes, writing reports, providing explanations and even litigation. *"Nobody likes additional work",* as Interviewee 17 exclaimed. Interviewee 13 stated:

My conscience is never at ease when I hear that an incident has occurred during construction works, and that is why I go out on my way to ensure that the contractors I hire have a good safety record.

Interviewee 13 further noted that most contractors nowadays do not strictly adhere to health and safety measures on site and it was right to also blame the Government for not doing enough to foresee and enforce it accordingly. The commitment of various organisations to health and safety is generally of average level, with the majority of the respondents' organisations scoring 5 out of 10, which shows there is need for organisations in the Saudi Arabia construction industry to examine the area of health and safety and see how this key factor affecting the construction industry can also be used to improve the satisfaction level of clients.

Good logistics

Construction logistics are simply the procedures for designing and managing the supply chain, which includes purchasing, storage, manufacturing and transport. These factors could influence client satisfaction. From the point of view of the interviewees, the management of upstream and downstream relationships between suppliers and contractors to deliver high customer value at minimum cost to the supply chain is essential. As Interviewee 24 put it, *"we value a good relationship between the contractors and the suppliers because it is vital to the successful delivery of the project."* Good logistics helps to reduce waste, shortens time, reduces on-site storage of materials, reduces the risk of accidents, reduces rework and even reduces the risk of damage to materials and other items.

Hygienic environment

Interviewees 5, 11, 25, 27, 28 and 30 were of the opinion that a clean and well organised construction site is very satisfying because there is a free flow of movement and reduced possibility of accidents. This was further confirmed by Interviewee 13, who stated:

I am always happy to see a construction site well organised and free from waste lying everywhere and this gives me the opportunity to look around the site for any defective work or make observations where I see it is necessary.

However, Interviewee 6 complained that most contractors did not care about organising the site and making it physically appealing, and he added that their only agenda was to maximise profit and finish up the project.

Using advanced technology

Only a few of the interviewees mentioned the use of advanced technology as a factor that could influence satisfaction. According to one of them (Interviewee 7),

using advanced technology is usually costly and when most clients are not familiar with it, they would not allow for its application, but for me I wouldn't mind if the application of such technology is effective.

This statement confirms the views found in the literature, that not all stakeholders would agree to the use of advanced technology which they are not familiar with. This response is similar to those of the rest of the interviewees, who agreed that innovative technology could make a positive impact but that they were concerned about the cost of implementation, and also they had no knowledge of it.

5.5.3.2 Factors that lead to client satisfaction within the construction industry in Saudi Arabia

This section reports on the views of clients on the factors that lead to or result in client satisfaction within the construction industry. Six factors were identified from the interviews: paying attention to detail, highly trained and skilled workforce, perfection, aesthetics, commitment to services and duties, and offering a high quality project (see Table 5.3). These factors are tabulated in order of priority, and then discussed under each section accordingly.

Table 5.3: Factors that lead to client satisfaction

Factors that lead to client satisfaction	**Occurrence**	**Ranking**
Paying attention to detail	26	1st
Highly trained and skilled workers	20	2nd
Commitment to services and duties	19	3rd
Offering a high quality project	15	4th
Striving for perfection	13	5th
Aesthetics	10	6th

Paying attention to detail

Paying attention to detail involves providing a definition of work tasks, strict adherence to project details and specification, checking for accuracy, checking for consistency, estimating the required resources needed, checking for completion, and remembering the client's and project details, no matter how insignificant or small they may be. According to Interviewee 15, *"I couldn't be more satisfied to work with a contractor or consultant who possesses the quality of paying attention to detail, because this results in the successful delivery of the project"*. Interviewee 6 also commented on service providers (contractors and consultants) who have an eye for detail:

As an estate manager, our firm's aim is to provide our clients with a good livelihood. Therefore, contractors or consultants who follow project details and specifications to the letter are highly needed in our type of business.

Interviewee 10 also stressed that *"contractors who adhere to the details lead to a win-win situation"*. In line with the above comments, it may suffice to note that paying attention to detail is a fundamental factor that could lead to the satisfaction of both clients and contractors.

Highly trained and skilled workforce

As the name implies, a skilled workforce means that people are perfectly trained for a particular assignment. According to Interviewees 7, 9, 14, 18, 19, 24, 26 and 30, employing a skilled workforce is essential for achieving the objectives of both the clients and the project. However, Interviewee 19 lamented that most contractors at times evade paying much to hire skilled workers to undertake technical assignments, and this usually causes problems and leads to rework. Interviewee 17 observed that *"with a highly skilled workforce at the contractors' disposal, the project stands a chance of being completed without much waste of time, cost and resources as a result of rework due to error or mistakes"*. This clearly shows that having a skilled workforce to execute the project will lead to the satisfaction of the client.

Commitment to services and duties

A committed consultant or contractor always performs tasks and responsibilities that will help satisfy the client and achieve the goal of an organisation. In addition, Interviewee 7 defined a committed contractor as one who does not wait to be told before undertaking the

required rework, corrections and adjustments. According to Interviewee 11, *"commitment involves dedication in order to carry out a given task, and this is a particular quality we always hunt for when selecting a construction firm to undertake our projects"*. Similarly, Interviewee 14 recognised that *"when a contractor or employee feels personally responsible for his job performance, he puts in all his best effort, shows up on time, and completes the project to the best of his ability"*. According to this interviewee, working with such a person is very beneficial and satisfying. Furthermore, most of the interviewees noted that working with a dedicated contractor will lead to a satisfying outcome.

Offering a high quality project

According to Interviewees 14 and 20, most contractors only do the bare minimum, just enough to keep their work intact and produce merely what is needed. These contractors show that they do not have a strong work ethic that means they care about the quality of their work. Consequently, clients tend to avoid such contractors. This leads to the comment by Interviewee 26, who categorically stated: "*I completely shy away from working with construction firms that don't do better to produce great qualitative work".* This statement is backed up by the finding of the literature review that contractors that do not carry out high quality work are often avoided and as a result pushed out of business. On the other hand, contractors or consultants that strive to exceed their clients' expectations at all times so as to make them happy are sure to be recommended to other clients.

Striving for perfection

The success of every construction project depends on various elements that must be adopted by all its participants. The participants must not only understand their own roles and execute them successfully, but also have an understanding of the roles and responsibilities of all the other participants. Thus, only an experienced contractor or consultant with a reliable workforce can attain top quality. This notion was confirmed by Interviewee 8, who stipulated that *"our complete satisfaction comes when a contractor employs reliable and experienced team players who are determined to achieve excellence"*. From the viewpoints of Interviewees 5, 17, 20, 24 and 29, it has become rare to identify contractors who would work hard to achieve a perfectly successful project' without one complaint or another. According to Interviewee 17, *"perfection in construction is overrated, particularly now that contractors only aim to maximise profit by*

any means necessary". However, Interviewee No 8 argued that perfection can be attained through dedication, applying innovative technology, thinking of quality, and employing highly skilled workers.

Aesthetics

Naturally, good-looking and aesthetically inclined projects lead to client satisfaction. This statement was confirmed by Interviewees 3, 7, 9, 11, 14, 18, 21, 25 and 27, who considered that it is very fulfilling when a project is completed successfully and looks appealing. Furthermore, Interviewee 25 enthusiastically stated that *"we feel a sense of completeness and satisfaction when a project is handed over successfully and is looking very beautiful."*

5.5.4 Reasons for client dissatisfaction

As there was not a very high level of client satisfaction, this research sought to identify the factors that had led to this. According to the views of the clients, the major issues that led to dissatisfaction were: late completion, cost overruns, lack of proper communication between project team and client; lack of commitment to agreed designs; use of an inexperienced workforce, leading to poor implementation practices; negligence in planning; and lack of commitment to health and safety issues.

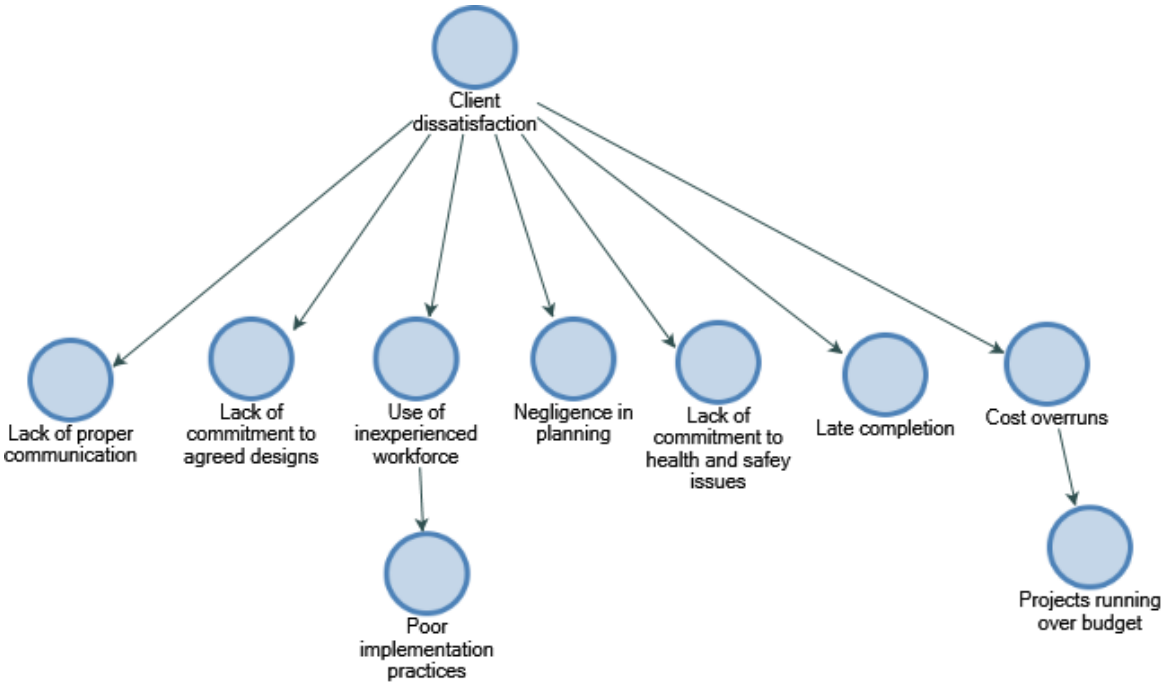

Figure 5.7: Factors leading to client dissatisfaction

From the analysis, the clients were generally dissatisfied with the services provided right from the design stage to the construction stage. Client 12, for instance, said, *"Hiring [an] unskilled workforce and offering bad designs are the most major concerns."*

Moreover, most of the respondents highlighted negligence in planning related works like health and safety measures and sanitation, as well as sub-standard plumbing and electrical works. Client 24 explained:

The company failed to meet the client's requirements. They neglected health and safety measures concerning the building planning. The electrical works were done incorrectly which reflects the low experience the company has. The plumbing pipe positions were completely wrong. One of the plumbing pipes was put in the middle of the gate, which meant it could be broken by cars.

Furthermore, paying more attention to financial aspects and neglecting other factors such as low pricing and accuracy commitment, and lack of attention to clients' requirements, also made some clients dissatisfied. In this context, Clients 10 and 20 made similar remarks: *"Lack of commitment to agreed-upon designs"* and *"The contractor doesn't have experience. The pricing was not acceptable. It was expensive."*

The key factors that contribute towards dissatisfaction for clients as identified from the interviews are lack of transparency of the contractors and lack of communication between the contractor and the client. The results suggest a link between the communication efficiency and overall quality of the project, which are dependent on the ability of the contractor to understand the requirements of the client.

Lack of communication can be associated with a closed relationship between clients and organisations, leading to the perception by clients that their needs are not being addressed. This can further stimulate an opinion that the overall quality standards are not met, and this contributes towards greater client dissatisfaction.

5.5.5 Common issues faced by clients

As part of the analysis of the level of satisfaction within the industry, clients were required to indicate some of the common issues they faced in relation to their projects. The issues raised by the clients related mainly to quality (both in workmanship and in materials), lack of experience and knowledge about building materials, personal problems of the workers influencing the project, having a bad contractor relationship, poor time and quality

management, lack of accuracy in the construction process, problems with issuing licences, dealing with contractors who do not commit to contract terms regardless of the conditions of the contract, lack of honesty and transparency, and poor communication between client and contractor.

5.5.6 Measures for improving client satisfaction

From the perspectives of the client interviewees, this research sought to identify ways in which client satisfaction with construction projects in Saudi Arabia could be achieved or improved. The analysis of the responses suggest that on average, about six main factors can be identified as the means to achieve or improve the extent to which clients are satisfied with the services received from the participants in the construction industry. These factors, as shown in Figure 5.8, suggest that one of the best ways for clients to be satisfied is honesty on the part of the professionals.

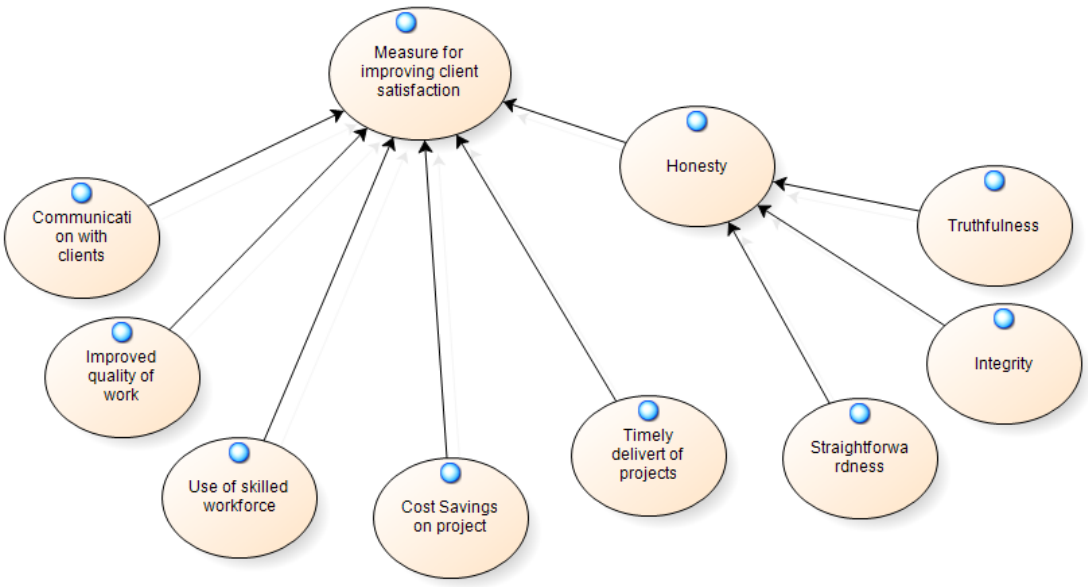

Figure 5.8: Clients' views on measures for improving client satisfaction

This factor can be deemed of great importance, considering that the majority of the clients suggested that dishonesty in terms of progress and issues relating to their contracts had a great deal to do with their satisfaction levels. Honesty, as used in the context of this research, refers to positive and virtuous attributes such as integrity, truthfulness, straightforwardness (including straightforwardness of conduct), along with the absence of

lying, cheating and theft. For the clients who participated in this research, honesty was of great importance to them, in terms of contractor selection. At least 9 out of the 30 clients who participated in this research cited honesty as an important quality that a contractor should possess, as it was linked with satisfaction. It was identified, however, that clients who linked honesty to satisfaction were largely individual clients rather than organisations.

Another factor leading to dissatisfaction of clients was identified as delays in the delivery of projects. Mainly for organisational clients, the need for the projects to be handed over on time was a very important factor, and where such delays occurred there were many implications for those organisations. This led to dissatisfaction.

Another common comment identified from this research was made by a number of the interviewees regarding the importance of time for commercial purposes:

They say that time is money. Saving time can affect the client's profit. Commercial projects should be delivered as soon as possible. Residential buildings have a priority because rent costs a lot of money.

For some of these clients who had commercial interests, the monetary loss due to delays was a very important factor in their dissatisfaction. One of the clients, who procures projects for the purposes of building towers and shopping malls, made this comment:

Clients have obligations and duties which may be affected by any delays in the project. If it's a commercial project such as malls, any delays will cause a loss of profit for the client.

5.6 Analysis of data from project managers

As indicated earlier in the chapter, this research collected data from both clients and project managers. The aim was to ensure that the views of both clients and project professionals regarding satisfaction were captured. The analysis of the data from project managers is presented under four main themes: the extent of client satisfaction with their projects; measures for determining the level of client satisfaction; factors influencing the achievement of client satisfaction; and practices adopted by the contractors to improve client satisfaction.

5.6.1 Perception of the level of client satisfaction

The first part of the analysis was to determine the perception of the project managers regarding the extent of client satisfaction. All the project managers considered that to a large extent their clients were satisfied with the services they provided. There were some contractors, however, who indicated that they had no means of identifying whether or not the client was satisfied with the services provided.

The research therefore investigated how contractors measured the level of satisfaction of the clients with whom they worked.

5.6.1.1 Means for determining the level of client satisfaction

Whereas some contractors did not have a means to determine whether their clients were happy with their services, some other contractors suggested three main ways of doing so. These were: re-use of the contractor by the client; referral by the client; and surveys conducted by the contractor to identify the level of client satisfaction (See Figure 5.9). From the analysis, it was identified that specifically contacting the client to determine their level of satisfaction was not a common practice between the contractor and the client.

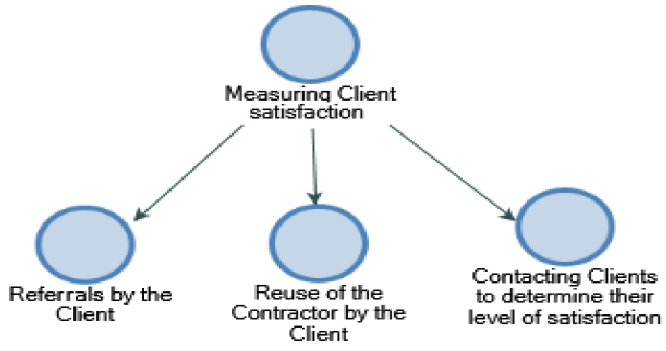

Figure 5.9: Methods for measuring client satisfaction

For many of the project managers (PMs) who took part in this research, their companies did not have a specific means for identifying the level of satisfaction that their clients received from the projects they embarked on. As shown in the figure above, the main way by which contractors gauged the satisfaction of their clients was based on repeat jobs. According to PM interviewee 7, "*Ordering our services again is the most important factor"* to determine that a client is satisfied. This, according to the same project manager, was the easiest way to tell if a client was satisfied with their services. Other contractors

had similar comments indicating that being reused by the client was their number one option for determining if the client was satisfied with their service.

About 15 project managers cited another very important factor for determining client satisfaction: referral by the client. For the project managers, a client referring their services to an acquaintance was a key means of determining whether the client was happy with the services of the construction company. According to PM interviewee 19, *"There is not a specific standard. But if the client is satisfied, he orders our services again and nominates us to his acquaintances."* A very similar comment was made by PM interviewee 25, who stated: *"...referring his acquaintance to work with us is an obvious indicator that he's satisfied."* Interviewee 28 made a similar statement, saying that "*…referring our company to his acquaintance is the most important indicator of satisfaction."*

The third means for determining the level of satisfaction of the client was cited by a few of the project managers, who indicated that their companies specifically contacted the client to enquire about the level of satisfaction with the services they received. PM interviewee 3 made this remark in relation to measuring client satisfaction:

…contacting clients is the criterion we use. We give them surveys in order to determine the extent of their satisfaction. This also enables us to determine our strengths and weakness in order to avoid these later.

This approach represented the most direct means adopted by the contractor to determine the level of client satisfaction. This was identified to be adopted by the construction company of PM interviewee 12 who explained that *"after finishing the project, we contact our clients in order to ask about the extent of their satisfaction."*

There were some project managers who stated that their construction companies adopted all three measures as a means of determining the level of satisfaction of the client with their services. PM interviewee 15 remarked:

Referring our company to his acquaintance is the most important indicator of satisfaction. Ordering our services again is another indicator that he's satisfied. We also call him after delivering the project in order to ask about the level of satisfaction.

It is very important for contractors to have a means of identifying how satisfied their clients are with the services they provide them. This can be seen in the comment from PM interviewee 3: "*This helps the contractor to identify their strengths and weaknesses."*

5.6.2 Factors impacting on the extent of client satisfaction

The research further investigated the perception of the contractors (project managers) on the possible factors that were likely to influence the level of client satisfaction. The results indicated that from the perspective of the contractor, three main factors had both direct and indirect influences on the level of satisfaction. An analysis of these factors indicated that they related to improvements in the cost of delivering the construction projects.

The three main factors that influenced client satisfaction directly and indirectly were identified to be: effective financial management; the use of skilled labour; and the use of advanced technologies. As shown in Figure 5.10, these three factors affected, to a varying extent, the performance of the project in terms of time, cost, quality, client-contractor relationship, and communication, which were the main criteria for determining project success and ultimately, client satisfaction.

The relationships between the different factors were identified based on the thematic analysis conducted on the data. With the help of the Nvivo software, factors relating to similar themes were grouped by consolidating similar categories from the analysis process. The outcome of the initial groupings of the categories were further refined through the complex query function of the Nvivo software to ensure the right relationships were created. In some instances, very similar concepts or categories were combined to create single titles or sub-themes. For example, the sub-theme of effective financial management was created from combining the sub-categories of all codes and sub-categories relating to the financial performance of project participants. This combination helped in the development of the figures presented, as Nvivo creates a link between the different categories by indicating how they relate to the other categories in the research. After identifying the three overarching themes, all other factors were linked to them, based on which of the three main themes they were closely aligned with. The use of the Nvivo software again helped the researcher to easily identify these relationships.

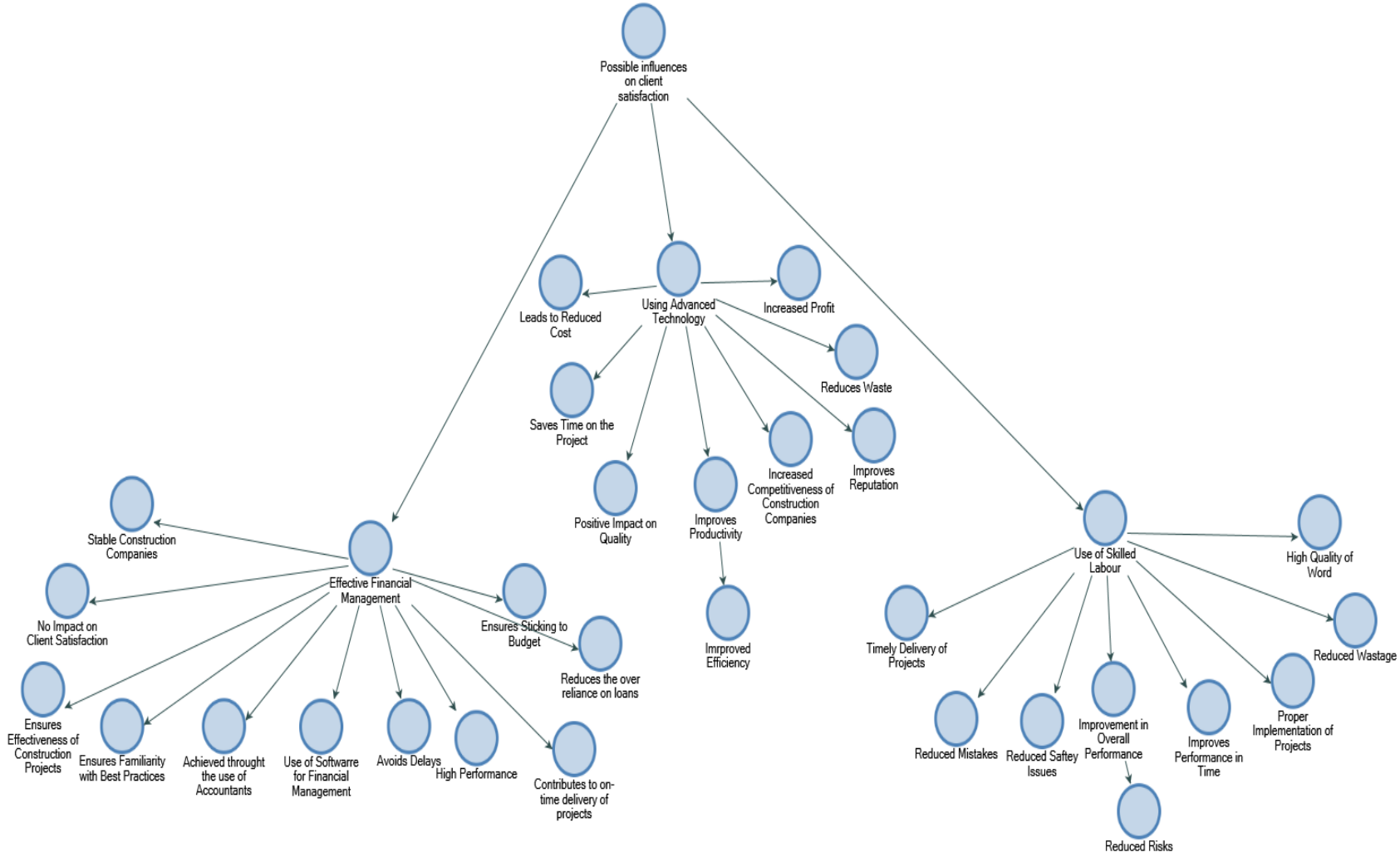

Figure 5.10: Contractors' views on factors impacting on client satisfaction

5.6.2.1 Effective financial management

From the analysis of the data, effective financial management was identified as having an influence on the performance of the contractor and ultimately on client satisfaction, as shown Figure 5.11.

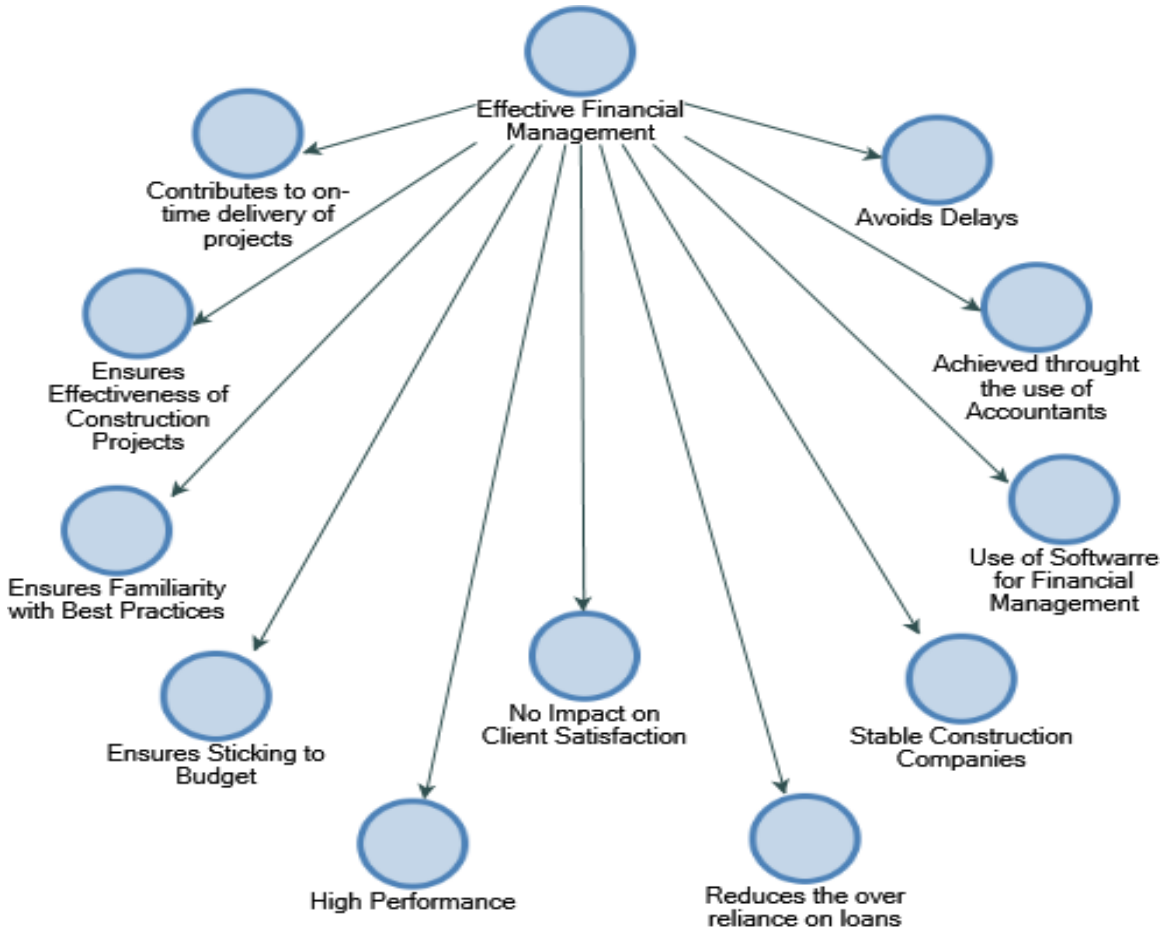

Figure 5.11: Relationship between effective financial management and client satisfaction

As can be seen from Figure 5.11, effective financial management influences project performance through various means, including leading to stable construction companies, ensuring on-time delivery of projects by avoiding delays, ensuring the effectiveness of construction projects, ensuring the contractor adheres to the budget, reducing the overreliance on loans, and leading to high performance. The interviewees made several references which

alluded to the indirect impact of these factors on client satisfaction, as they ensure the achievement of project success.

PM interviewee 7 made a direct remark indicating the link between effective financial management and client satisfaction. According to him, *"...of course, effective financial management affects the client's satisfaction".*

He further explained that the client is interested in ensuring the project is managed properly so that it is completed within the budget, and that effective financial management was a sure way of achieving this. According to PM interviewee 18,

Clients care about their investment and money. They need to be assured that their project will be handled properly and effectively. This also avoids the company having any delays or troubles due to insufficient financing for the project. This ultimately can lead to convincing more prospective clients to trust this company.

As shown in the extract above, effective financial management in the first place is very important for the construction company as ultimately it influences the success of the project and leads to client satisfaction. A similar comment was made by PM interviewee 9, who indicated that effective financial management led to stable construction firms which in turn were able to pay their workers, thereby leading to improved project performance:

It guarantees the stability of the company and the projects. If the company lacks effective financial management, they may face difficulties paying salaries. They can also exceed the project budget. This can affect the company's profit.

Other comments shown below indicate the relationship between effective financial management and project performance with a subsequent influence on client satisfaction. A selection of comments from various interviewees are shown below:

> *"..The financial management may cause delays and troubles if not handled properly."*
>
> *"...It makes everything in the project go according to plan."*
>
> *"...It affects the satisfaction of construction clients indirectly."*

"…It has a positive impact on the client, because he wants to be assured that his money is in good hands."

"…Effective financial management is so important because it saves money and effort. Investors also want to make sure that they get a profit at the end of the project. If there is a problem regarding financial management, the project runs into deficit and trouble."

"…it affects client satisfaction indirectly, because it ensures that all project aspects are done accurately as they should be. It also guarantees the efficiency of the project."

"…It has a tremendous effect. It controls each aspect of the project. It also improves the entire quality of the project. This has a great effect on client satisfaction. Effective financial management prevents any delays in the project."

There were, however, some interviewees who thought that effective financial management had no effect or influence on the satisfaction of clients. According to these interviewees, the main importance of effective financial management is for the contractor and not the client. Comments made in relation to effective financial performance not affecting the satisfaction of the client are shown below.

PM interviewee 13 suggested that: *"There is no relationship between them. Client satisfaction has nothing to do with efficient financial management. The most important factor for client satisfaction is quality."*

A similar comment was made by PM interviewee 2, who suggested that what the clients cared about was getting their projects completed on time, within budget and to the required quality. From his perspective this had nothing to do with effective financial management:

You're asked to deliver the project on time and to a high quality. Clients are not responsible for any delays. It's our responsibility to deliver on time. Effective financial management affects our company and not the clients.

Two other interviewees also believed that effective financial management was about the company and not the client:

> *"It doesn't affect clients. It affects our company and earnings."*

"There is no relation between clients and the financial management practices. Any disorder affects the company itself and the company budget."

From the analyses conducted, it can therefore be seen that three main views existed concerning the perception of contractors (PMs) on the relationship between effective financial management and client satisfaction. These were: direct connection between effective financial management and client satisfaction; indirect connection between effective financial management and client satisfaction; and no connection between effective financial management and client satisfaction.

5.6.2.2 The use of advanced technology

Another factor identified as having some form of relationship with client satisfaction is the use of advanced technology. Like effective financial management, it has direct and indirect impacts on the performance of the contractor leading to client satisfaction. All interviewees indicated they could see both a direct and indirect relationship between the use of advanced technology and client satisfaction.

The impact of advanced technology on client satisfaction occurs through improved productivity as a result of increased efficiency; time saving on projects; reduction in the levels of waste; positive impact on quality; and reduced cost due to improved processes. Advanced technology was also identified as having a positive impact on the contractor through improved reputation, increased competitiveness, and increased profit for the contractor. These impacts on the contractor were also identified as indirectly influencing the satisfaction of clients with the performance of contractors, as shown in Figure 5.12.

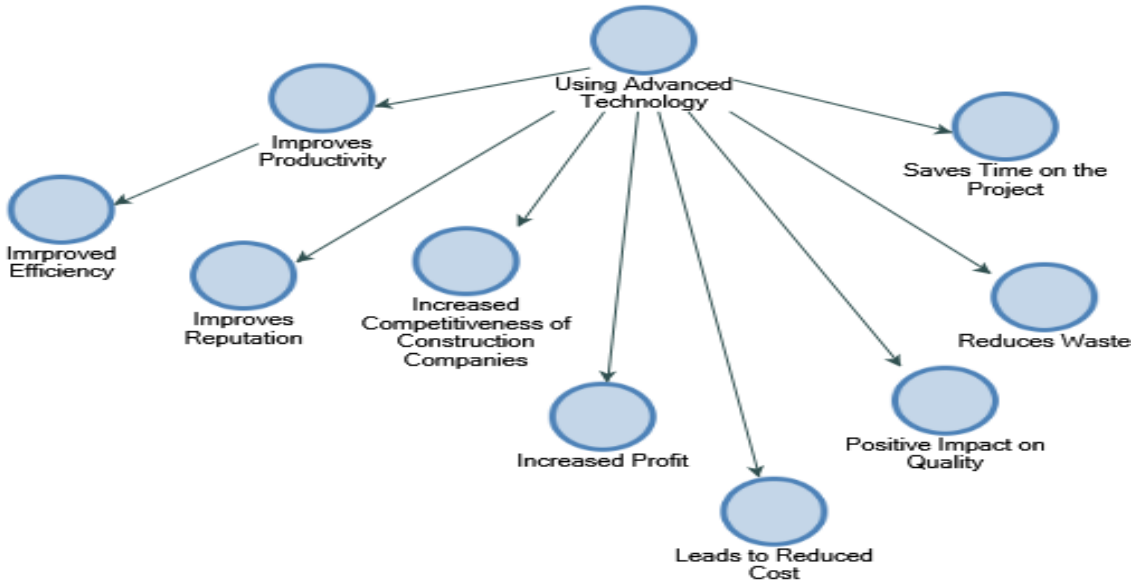

Figure 5.12: Influence of the use of advanced technology on client satisfaction

PM interviewee 29 stated that they adopted advanced technologies relating to materials and equipment:

Equipment and materials change and develop every day. Using them is very important. Using equipment shortens the project delivery duration and gives us quality work. Its cost is what matters most. They're sometimes expensive. But on the other hand, they can cover their initial high cost.

PM interviewee 11 also pointed out that the company had adopted advanced technology and this had led to time savings which ultimately resulted in client satisfaction:

Technology can affect the building materials used. We use modern construction materials in order to impress clients and obtain their satisfaction. We also utilise technologically advanced machines which help us achieve high-quality projects in a short time. These machines save time and effort. They can also boost our reputation.

According to PM interviewee 15, the use of advanced technology leads to savings in time and labour, and improves the quality of the projects they execute: *"Advanced construction technology saves waste, labour, time. It also provides quality work. High technology machines have a high initial cost which can be covered through the years."*

Another PM interviewee commented:

Technology has now come into all walks of life, including construction, and is a very useful and great way which can save time, effort and money. Using technologically advanced machines, we can double our work and productivity.

Advanced technology was identified as having a positive influence on the construction companies, in the form of improved performance, good reputation, and increased competitiveness. PM interviewee 23 made this comment, relating advanced technologies to improved status of the contractor and resulting in improved project performance:

Some technological systems have an excellent result, but their cost is high. For example, if the project is on a large scale, we use expensive equipment, because the project size covers its cost. When we constructed the tower project we bought costly equipment. On the other hand, if the project is small, we tend to use cheap equipment, because we can't recover what we paid for.

The use of equipment is very important and they should have all that is needed.

For instance, we used to complete four roofs per month, each with a surface area of 6,000m. After purchasing the Doka system, this enabled us to complete 4 roofs monthly. Technology is very useful but at the end, we go back to cost.

Other comments relating to this include the following:

Technologically advanced machines are used extensively in Saudi Arabia. This technology gives the construction industry in Saudi Arabia strength and good performance. Technology doesn't just include machines; it also includes software which helps in financial management. This saves effort, time, and money.

Technology affects all aspects relating to the project. They help deliver the project in a short time. Technology affects building materials, machines, and software. [It] helps us to be competitive in the Saudi market. Contractors have the freedom to pick what they want depending on their project needs.

In order to be a successful project engineer, we have to stay in touch with every technology which emerges in the market. Technology can make construction easier, quicker and more

efficient. [It] is not only about machines, but also includes the building materials. Although technology is expensive, it gives us more profit and efficiency.

The main concern of the contractors regarding the use of advanced technology was the cost implications of adopting it. PM interviewee 21 made this comment relating to advanced technology and cost:

There is a revolution in technology which affects all minor and major details of our projects. Our company pays a lot to get technologically advanced machines in order to get more done using fewer resources.

PM interviewee 22's view on this cost was:

Using technology means paying a high cost at the beginning, but they can get a lot from it in the long term. For software, we use BIM [Building information Modelling]. It's excellent software, but it's expensive. It also means training is needed. We only use it to reduce manual mistakes in the project. Project owners don't trust BIM. They want traditional methods.

As can be seen from the analysis presented in this chapter, using advanced technology has a positive impact on client satisfaction and also on the contractor.

5.6.2.3 The use of a skilled workforce

A skilled workforce was identified by all the interviewees as having a direct influence on client satisfaction as it improved project performance. The effect of a skilled workforce on project performance can be seen in the form of ensuring high quality of project delivery, reduction in waste practices, timely delivery of projects, reduction in mistakes, proper implementation, reduced risks, and reduced health and safety issues. This relationship is shown in Figure 5.13.

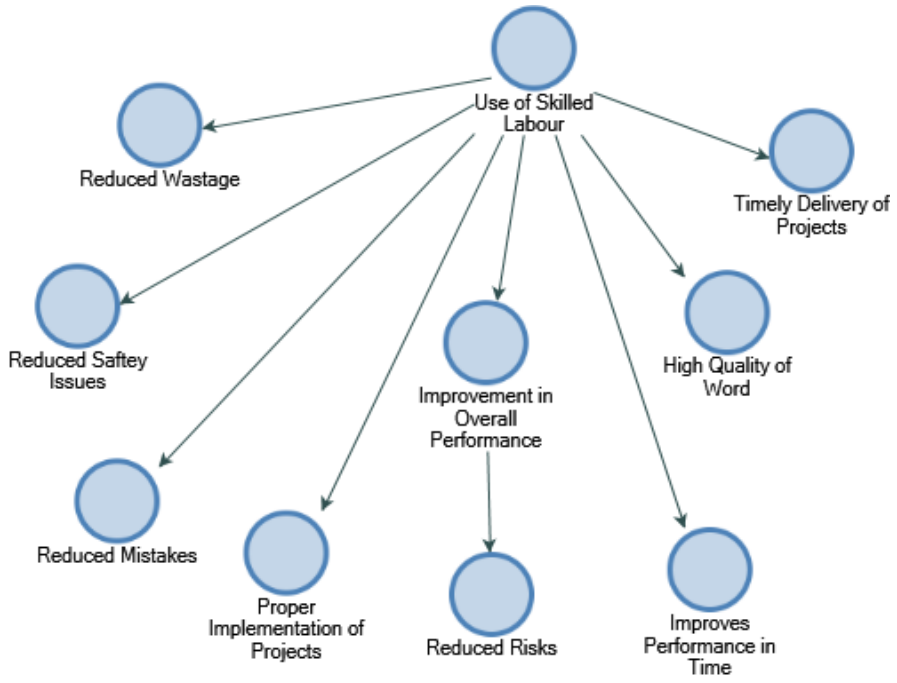

Figure 5.13: Effect of using skilled labour on client satisfaction

The use of a skilled workforce ensures that the construction companies are able to meet the requirements of their projects. The project managers interviewed for this research all believed that a skilled workforce has a direct influence on client satisfaction. For example, PM interviewee 3 pointed out that:

Skilled labour can finish the project in record time. They do their job efficiently. That is what we need as a company, and clients as well. A skilled workforce doesn't commit mistakes relating to health and safety. This is very important for us.

Some interviewees suggested that using skilled labour saved them from health and safety troubles. PM interviewee 7 indicated that:

Skilled labour can avoid safety troubles for us. They have experience regarding waste and saving raw materials. They also don't need training, so this saves trainers' wages. They can offer high-quality work at a lower price.

Some PMs saw the use of a skilled workforce as a means to impress the client. PM interviewee 19, when commenting on the impact of a skilled workforce on client satisfaction, said:

Yes, the workforce is the core of the project. Hiring a skilled and well-trained workforce is very important in order to impress clients. Word of mouth can spread between clients about a specific company according to the quality of projects constructed by the company.

Some other comments made by the interviewees were :

"Well-trained employees are important because they can save time, effort, and money. They also care about the quality of everything. A trained workforce is the basis for implementing the project the right way. The skilled workforce can deliver the project on time and to a very high standard. This has an important effect on the company's reputation."

"Of course, skilled labour contributes toward raising the overall performance of the company. There is a direct link between the quality of the project and the skills of workforce hired."

"Clients want their project to be delivered as stated in the contract. A skilled workforce helps us do that."

"Using technology raises the quality of work in the project. Skilled labour improves the satisfaction of clients due to the quality. They also care about their project schedule. They respect time. They are also very committed to the company."

"The presence of a skilled workforce within the construction project increases the satisfaction of my clients to a great extent."

"The worker is the one who's responsible for executing the work and achieving a good quality. The customer cares about quality and price. So, it's very important for all of us to get a project which is accomplished to a high standard."

"They finish high-quality projects in a short time. Clients always need to know that their projects are under care and being monitored. Skilled labour impacts the level of satisfaction to a great extent"

These findings indicate that the use of a skilled workforce can lead to improvements in the performance of the contractor and thus it enhances client satisfaction and also the reputation of the contractor.

5.6.2.4 Commonly mentioned factors influencing client satisfaction

The project manager interviewees were asked to name the five most important factors that contributed to client satisfaction, based on their experience. The results are shown in the Word Cloud (Figure 5.14) below. From this, it can easily be identified that quality remained the most important factor, based on the perspective of the contractors (project managers).

Figure 5.14: Contractors' views on the most important factors influencing client satisfaction

Next to quality were time, cost and rate of site accidents. Commitment and honesty were also identified as very important factors that influenced the level of satisfaction of the clients. These factors relate to the ones for client satisfaction discussed in the previous sections.

5.6.3 Measures and practices adopted by contractors to improve client satisfaction

To ensure clients are satisfied, a number of measures are adopted by contractors to lead to improved client satisfaction. These include the training of employees, ensuring better financial management, training of the workforce, and better communication between clients and contractors, as can be seen in Figure 5.15.

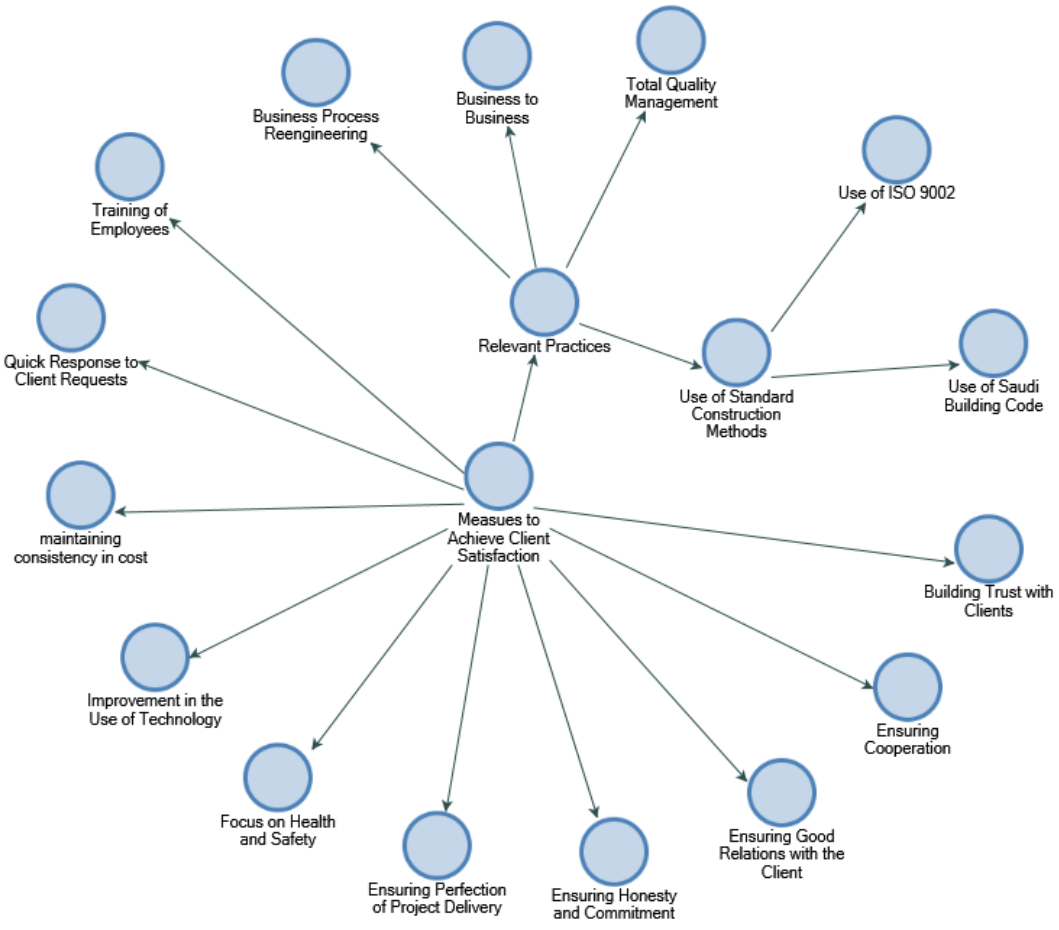

Figure 5.15: Measures adopted by contractors to improve client satisfaction

The analysis of the data reveals that financial management practices have great importance in project management in construction companies of Saudi Arabia. A wide range of the participants were in favour of good financial management practice as it helps in generating

client satisfaction. PM interviewee 26 stated: *"if the financial management is not effective, your project will be messed up."*

Thus, it can be said that a "messed up" project may lead to dissatisfaction among customers. Thus, financial management is essential in generating client satisfaction. Moreover, another PM interviewee stated that *"Effective financial management impacts on good practices."*

Thus, the good practice of project management ultimately leads to satisfaction among customers. Furthermore, a PM interviewee stated that *"Existence of a stable cash flow*" is important in financial management as it ultimately leads to client satisfaction. In contrast, some other participants answered that there are certain other aspects which also have importance in generating client satisfaction. These are: ensuring effective communication, quality, and the use of a skilled labour force on the projects. In this regard, one of the participants stated that "*the availability of a skilled workforce*" and "*hiring skilled workers*" are essential aspects in generating client satisfaction. However, the majority of the participants were in favour of financial management as an essential aspect for effective project management as it helps in managing resources, stabilising the cash-flow and managing the budget in order to execute the project successfully, and then this will generate client satisfaction. Thus, financial management is the most essential factor among all those that lead to client satisfaction.

The findings also show that technology is considered another essential aspect that generates client satisfaction. In support of this finding, one of the project managers stated that, "*"using advanced technology has an impact on good practices",* and these may ultimately lead to the client being satisfied.

Along the same line, another project manager stated that *"The project manager should care about the client's satisfaction and needs. Being aware of the technologically advanced machines and programs is also important."*

Thus, it is suggested that technology helps in enhancing the project management and delivery of projects successfully to the clients, which in turn leads to client satisfaction. Some other aspects such as time, communication, location and safety were also considered important by other participants. In this regard, one of the participants stated that "*the level of*

*communication between the project team impacts on good practices", w*hile, another participant stated that the *"Time challenge is very important."*

However, 19 out of the 30 project managers were in favour of technology being the most important measure of client satisfaction.

In the context of labour in the construction industry, it has been evaluated in this research that there is a high requirement for a skilled workforce in order for the project to be managed successfully. In this regard, one of the project managers stated that "*the workers who work in the project should have the necessary skills".*

Moreover, in a similar context, another participant answered that there is a need for *"the availability of a skilled workforce."* In contrast to the importance of a skilled workforce, factors such as quality, coordination and supervision of the workforce are also important. One of the managers stated that project management can be affected if there is "*no coordination between contractors, workforce, engineering supervisor, and the client."*

However, it has been seen that the majority of the participants (20 out of 30) were in favour of the statement that there is a high requirement for a skilled workforce for managing the project successfully. Thus, it is regarded as one of the most important factors for measuring satisfaction.

It has also been discussed from the findings that there is a high need for dealing with time constraints for managing the projects successfully in the field of construction. In the support of this discussed finding, one of the participants stated that "*in order to succeed in the contracting industry, any company should estimate the time accurately to implement their projects according to the contract terms."* Another respondent added that *"Of course, if the contractor fails to deliver the project on time, he may face fines and obligations. Time is a big challenge for contractors."*

In contrast, other participants asserted that cost and labour had great importance in client satisfaction. In favour of this finding, it was stated by other participants that the major issues that arise in project management were "*lack of experienced contractors or workers*" and "*absence of workers*". However, there were 16 interviewees who were in favour of the need for time constraints for the successful management and delivery of the project to the client.

However, some of the project managers believed that honesty, loyalty, obligation and quality were the best ways to gain clients' satisfaction, with PM interviewee 2 stating that *"They should care about honesty, devotion, commitment, and quality"* and PM 18 reiterating that *"Quality, time, and honesty are the most important factors".*

This view on honesty was consistent with the clients' views on the best way to improve their satisfaction, where honesty was chosen by the majority of the clients as the best way for contractors to earn and improve customer satisfaction.

Thus, as can be seen from the findings, honesty plays a key role in the process. A culture of honesty results in more than simply workplaces, and a deep-seated respect and expectation of honesty makes companies more successful and more profitable. To do this, as PM interviewee 8 said: *"They should build bridges of trust and communication with their clients. This has a tremendous effect on their profit and reputation."*

The interview findings have shown that effective communication plays a vital role in project management in the construction industry. In support of this statement, one of the project managers stated that:

The flow of communications is necessary from the administration to the employees and workforce in order to help the project go according to the contract terms and the client's requirements. The company should also follow the workforce up and monitor their performance.

Moreover, another participant stated that ***"****the level of communication between the project team impacts on good practices".*

In contrast, some other participants focused on availability of resources, quality and cost for the management of projects in the construction industry. In this regard, the participants indicated that the most needed aspects were "building materials" and "costs".

Designs and schemes poorly presented or implemented, neglect in the planning of related business such as health and safety measures, poor sanitation and plumbing, sub-standard electrical work, lack of attention to financial aspects, and neglect of other satisfaction factors such as low pricing all emerged as the most important factors leading to customer dissatisfaction.

As demonstrated in the literature review, most customers perceive that bad contractors, poor quality materials and badly managed unskilled manpower affect the quality of management activities. From the perspective of the clients, the use of high quality building materials and the recruitment of a skilled workforce are the most important factors that control pricing. To achieve this, the construction industry needs to utilise advanced technology methods. In this context PM interviewee 5 stated:

Technology can affect the building materials used. We use modern construction materials in order to impress clients and get their satisfaction. We also utilise technologically advanced machines which help us achieve high-quality projects in a short time. These machines save time and effort. They can also boost our reputation."

Most customers believe that the quality of construction materials, the size of the company or project, and the skilled manpower costs are the main determinants of price variance. In this context, PM interviewee 11 said that *"they should offer high-quality work."*

Attention to the needs of the project at all stages and the availability of financial resources and building materials along with skilled and experienced manpower, including engineers and supervisors, are the most important factors in order to deliver the project on time.

The quality and reputation of the project are essential to cost-effectiveness, which is an important factor that reflects the honesty and commitment of the company and ensures that the project is completed in accordance with the required specifications. The project managers who participated in this study emphasised the importance of customer relationship management (CRM), where they stated that client management relations are very important in order to achieve a successful completion of the project, improve the level of client satisfaction and gain client loyalty.

The majority of respondents – 20 clients and 19 project managers – emphasised the link between CRM and client satisfaction. The clients believe that it establishes an honest and credible link between the construction company and themselves, with one of the clients claiming *"It boosts cooperation between all team members and clients."* Another client focused on repetition of services, stating *"If the contractor is honest, the client will order his services again in the future"*.

On the other hand, the project managers believe that CRM allows them to effectively understand the requirements of the clients and communicate with them throughout the project. A project manager claimed *"CRM allows us to stick to the contract",* with another, focusing on customer satisfaction, stating that *"CRM improves the level of client satisfaction"*.

5.6.3.1 Relevant practices adopted towards improving client satisfaction

In addition to the measures adopted, a number of relevant practices were undertaken by the contractors to ensure client satisfaction was achieved. These practices included the adoption of standard construction methods such as the use of the Saudi Building Code and ISO 9002; the adoption of total quality management (TQM); the use of Business to Business; and Business Process Re-engineering. From the views of the project managers who took part in this research, the use of building codes or standards helps to ensure that the practices undertaken by their companies result in the required level of quality being achieved. From their viewpoint, improving quality remains the best way of achieving client satisfaction and this is the reason for adopting total quality management (TQM) practices. TQM, according to the project managers, helps them to monitor their processes and practices and ensure that quality is also placed as the most important aspect of their processes. The Saudi Building Code, according to PM interviewee 16,

helps us to ensure the buildings we put up meet all the quality requirements of Saudi Arabia. If a client can see you meet the requirements of the code, it gives them some level of assurance about your work.

The use of the Building Code was seen by many of the project manager interviewees (17 in total) as a means of convincing clients of the equality of the project they were receiving, which could lead to satisfaction.

According to the PM interviewees, TQM is recognised as a management process or set of practices that is tried and tested as a means of ensuring that quality is achieved on projects. Hence the adoption of TQM as a means of achieving client satisfaction. According to PM interviewee 9,

Especially for clients who are aware of TQM due to their familiarity with construction processes, once they can see that your processes are in line with the requirements of TQM,

they are well convinced that you will deliver the project to their satisfaction as your processes ensure quality is put at the forefront of all your projects.

Other project manager interviewees agreed with this and pointed out that adopting TQM has benefits not just for client satisfaction but also for the construction company, as their processes will meet the demands of clients and also improve their performance, thereby leading to cost savings. According to some of the interviewees, the importance of TQM therefore makes the need for the training of employees on TQM necessary. According to PM interviewee 24, "*Adopting these practices such as TQM is very important, but more important is the need to ensure we train the staff to understand the demands and also work towards achieving them."*

This view was supported by 13 other interviewees.

Business Process Reengineering and Business-to-Business as strategic management practices were identified as being widely adopted in the construction companies due to their perceived advantages in terms of better management of the companies and the resulting performance on projects.

As gathered from the results of this research, all these practices are directed at meeting client demands which can ultimately lead to satisfaction, especially with the finished construction project in terms of meeting the client's quality expectations, as well as those of cost and time. For the majority of the project manager interviewees, meeting the quality target remains the ultimate determiner of project success. Many different practices and standards are expected to result in better management of construction companies and better performance on projects. There were, however, two project managers who suggested that the adoption of standards can only result in client satisfaction if the contractor understands the demands of these standards and invests in the right processes. This view suggests that just adopting the standard may not automatically result in better performance or client satisfaction, but the right commitment also needs to be made by the contractor. The right commitment was identified as including having systems in place for the education and training of staff in these processes.

As can be seen from the discussion, there are many different practices and measures undertaken by the contractors to help achieve or increase client satisfaction. These measures contribute to different levels of satisfaction depending on the amount of effort put in by the contractors.

5.7 Summary of Chapter 5

This chapter has presented the findings of the data gathered from both the clients and the project managers on their views concerning satisfaction, the measures undertaken to achieve client satisfaction, and the measures adopted to improve the levels of client satisfaction. From the findings of the data, there is generally an average level of client satisfaction and this is due to the level of performance of the contractors and construction professionals who provide the clients with the needed services.

From the results discussed in this section, it was seen that different levels of satisfaction were achieved relating to the project outcomes of time, cost and quality of the construction. Furthermore, the clients identified other factors that could improve their satisfaction, and these were categorised into two types: factors that could influence client satisfaction and those that could lead to client satisfaction within the construction project. The key factors that were identified by clients as having a direct influence on their satisfaction were: honesty of the contractors, effective financial management on the project, and proper planning and organisation, while those important factors that have the most potential to lead to client satisfaction were: paying attention to detail, use of a highly trained and skilled workforce, and commitment to services and duties. From the perspectives of the contractors (project managers), there was a perceived high level of satisfaction with their performance from their clients. However, their organisations did not always have a means to measure the level of client satisfaction. The general methods employed were the reuse of the contractor by the client and referral of the contractor by their clients. There were a few companies which specifically contacted clients to determine their level of satisfaction. Different measures were adopted by the contractors to ensure they met or increased the level of client satisfaction with their projects.

The next chapter discusses the results obtained from this chapter and compares the results to the current literature on client satisfaction.

CHAPTER 6: DISCUSSION OF THE RESULTS

6.1 Introduction to Chapter 6

As stated in Chapter 1, the aim of this research is to identify best practices that could lead to improved client satisfaction in the Saudi Arabian construction industry. Following the findings of the interview data collected from the clients and project managers, this chapter discusses the results of the analysis in line with the extant literature to determine how the results sit within the existing literature on client satisfaction within the construction industry. The discussion in this chapter offers a significant contribution towards understanding the overall context and gaining precise but clear information regarding the overall research work. As part of the discussion, this chapter seeks to identify how the results of the study contribute to the aim and objectives of the study.

In the chapter, efforts are made to identify the ideal practices that should be adopted for greater client satisfaction in the construction industry of Saudi Arabia. In discussing the results, every effort has been made to ensure the views of the interviewees are maintained and biases from the researcher are reduced as far as possible, in order to prevent any distortion of the interviewees' views. The discussion presented in this chapter is divided into six main themes: the perception of client satisfaction; level of client satisfaction; factors influencing client satisfaction; factors to improve the level of client satisfaction; practices adopted to improve client satisfaction; and measures to be adopted for improved client satisfaction based on the results.

6.2 Perception of client satisfaction

The results show that having a better understanding of client satisfaction is in the first place an important requirement for achieving this satisfaction. From the results, a common outcome is that although both contractors and clients knew that there was a need for client satisfaction, there was to some extent a difference between them regarding the satisfaction required by the clients. As reported in Alrashed and Muhammed (2014), both clients and contractors desire some sort of satisfaction both from the construction process and the success of the finished product. Having a common understanding of the requirements for satisfaction between the client and the contractor is the first step to achieving that satisfaction. Zeithaml (1988)

believes that the satisfaction of customers depends on the value derived by them from the products and services. Thus, understanding value from the perspective of the client is a very important step towards client satisfaction.

Omonori and Lawal (2014) consider that the needs of the client should be anticipated and met by the contractor to ensure satisfaction. The construction professionals who were interviewed for this research were all of the view that there is a need for client satisfaction. As reported in Webber (2010), client satisfaction is essential for maintaining client engagement with stakeholders and prospective customers. Clients generally felt satisfied where the contractors they used had taken the effort to ensure their needs were met (Webber, 2010). It was evident from the present research that client satisfaction is influenced not just by the outcome of the project, but by the process involved in bringing the project to completion. In some situations there was a disparity between what clients expected and what contractors thought that clients expected. The clients who took part in this research placed more emphasis on issues such as honesty and having a good relationship with the contractor in addition to the requirements of time, cost and quality. The results from this perspective imply that the low level of client satisfaction is likely to be as a result of misconception on the part of the project managers (who represent the contractors) on the main requirements of the clients in relation to satisfaction. This suggests that even though construction companies may be pursuing measures towards improving the level of satisfaction required by their clients, these efforts may not result in the needed level of satisfaction, as the clients have different expectations in terms of satisfaction. The results of this research therefore present an avenue for contractors (project managers) to have a better understanding of the expectations of their clients, especially in terms of satisfaction, and to channel their efforts appropriately, with the potential to lead to satisfying existing clients.

6.3 Levels of client satisfaction within the Saudi Arabian construction industry

As captured from this research, the satisfaction of construction clients is not only about the finished product; satisfaction with the process is also considered an important measure. The implication of this in relation to the levels of client satisfaction was identified from the analysis conducted. This analysis showed that the level of client satisfaction differed depending on the criteria being considered. Satisfaction was generally high in terms of the quality of construction work. This was not the case, however, in terms of time, cost and client

relationship management, where there were generally low levels of client satisfaction, especially in the area of the relationship between the client and the contractor and how this relationship was managed during the execution of the project. From the interviews with the project managers, it was identified that quality was the priority for the construction industry so far as client satisfaction is concerned. This implies that the emphasis of contractors in the Saudi Arabian construction industry regarding satisfaction may need to change, since satisfaction is not based solely on the technical factors of the project.

As pointed out by Stan et al. (2013), satisfaction is an emotional response towards a product or service with regard to the expectation from such a product or service. In the construction context, Omonori and Lawal (2014) suggest that client satisfaction is determined by the extent to which the construction process and product meet the customer's expectations. This implies that client satisfaction is achieved through the process and the end product. From the results of this research, there was a clear indication that the level of client satisfaction within the Saudi construction industry is generally low, especially in terms of satisfaction with cost and time performance. Kanji (2012) presents research results showing that elements such as timely delivery, reduced cost and better quality were used to assess client satisfaction. The results of this present research imply that it is not only these elements of time, cost, quality that are important; there are other factors or measures that influence the levels of client satisfaction too. From the data presented, different levels of satisfaction are achieved with different aspects of the projects. In terms of time, cost and quality, the research results suggest that there is a greater satisfaction with quality than with cost and time. This may be a result of the level of importance that construction firms give to quality, on which they place great emphasis.

Thus the results from this research suggest that the measures adopted by contractors in the Saudi Arabian construction industry towards client satisfaction are centred on quality. This is responsible for the focus on the use of advanced technology and quality materials, as identified in this research. As discussed in Ahmad et al (2012), there is a direct relationship between client satisfaction and quality. This suggests that ultimately, clients will be satisfied when the required levels of quality are met on their projects. Rumane (2013) also indicates that continuous improvement with the quality of construction work contributes to client satisfaction. The results from this research suggest, however, that although quality is very important to clients, there are other areas of the project to which clients pay attention in terms

of satisfaction. The results from this research share some common grounds with Hill and Alexander (2017) who consider that the level of satisfaction may range from very high to very low according to the requirements and preferences of respective customers. From this present research, even though client satisfaction is quite high in terms of quality, this is not the case in terms of cost and time. Overall, the results of this research indicate that increases in the cost of construction projects and finishing projects beyond the completion date were found to be common among the construction clients in Saudi Arabia. This is due to a large extent to how the contractors manage the process of getting the project completed. As mentioned earlier, the process of completing the project comes with expectations from the clients which are not found in the end product but in the process. Similar results are highlighted by Rashvand and Majid (2014), who indicate that a critical criterion for client satisfaction is the issue of performance management. As identified from this research, clients want to be sure about the relationship between themselves and the contractor and are happy to work with a contractor who has a good relationship built on trust and good communication.

From the research results, it was identified that client satisfaction may not be the same for two different clients and so contractors need to identify which factors would lead to the satisfaction or dissatisfaction of their respective clients. Customers obtain satisfaction when the perceived performance is higher than the standard, while dissatisfaction results when the performance fails to meet the standard. In finding an approach to improve client satisfaction, the results imply that contractors should therefore have in place systems to measure the satisfaction of their clients and the factors that lead to dissatisfaction. This will serve as an avenue for identifying from the client the key areas to be managed to ensure improved satisfaction.

6.4 Factors leading to client satisfaction

From the research, it was identified that various factors are responsible for ensuring the satisfaction of clients. These ranged from contractor or construction team factors to factors that are characteristic of the projects. From the results, factors leading to client satisfaction can be linked to technical as well as non-technical aspects of construction. Technical aspects relate to factors such as quality of construction, management of time on the project and measures that influence the cost of projects. Non-technical aspects of construction include factors such as honesty on the part of contractors, having a good relationship between the

contractor and client, and good communication between the contractor and the client. The implications of the results are that to satisfy clients, emphasis should be put on both technical and non-technical competencies. This section discusses the two key sets of factors and their implication for improving client satisfaction.

Whereas Langford and Male (2008) suggest that technical knowledge and providing quality in the work are the main requirements for client satisfaction, the results from the present research suggest there is more to client satisfaction than technical know-how and the quality of the finished project. From the exploration of stakeholders' decisions leading to client satisfaction, Langford and Male (2008) reported that the various decisions made by construction stakeholders have either positive or negative influences on the level of client satisfaction. The decisions and how they influence client satisfaction were identified from the present research as being rooted in how the relationship between the client and the contractor.

From the data analysis presented in Chapter 5, Section 5.4.3, two main themes were identified in relation to client satisfaction: (1) factors that could influence client satisfaction; and (2) factors that lead to or result in client satisfaction. For the former, the key influential factors were: honesty of contractors, effective financial management of the project, proper planning and organisation, adequate provision of quality materials and workforce, maintaining good communication among project participants, and efficient customer services, among others. For the latter, those factors having a direct impact in leading to client satisfaction included: paying attention to detail, a highly trained and skilled workforce, commitment to services and duties, offering high quality projects, and striving for perfection. This implies the need for a conscious effort to meet these requirements, as the means to achieve greater client satisfaction.

Various authors have presented research results which identify some of these factors responsible for influencing client satisfaction. For example, Mazher et al. (2015) suggest that quality improvement can be achieved through the use of experienced employees who understand the demands of the process. They argue that the use of a highly skilled workforce can lead to client satisfaction because of the level of experience and expertise they bring to the project (Mazher et al., 2015). Their argument is in agreement with the findings of this research, as the majority of the respondents agreed that skilled labour in the Saudi construction industry contributes positively to the overall performance of projects, which in

the long run increases the satisfaction level of the client. About 20 project management respondents agreed that a skilled work force saves time, effort and money. According to one of them:

A trained workforce is so important in order to get high quality work. This also prevents and reduces waste. Reducing waste means that we save money. A trained workforce affects the entire company profit.

This implies that the training of the workforce in the industry is a very important requirement for improvement in the performance of construction companies as well as client satisfaction. In their book on modern construction management, Harris and McCaffer (2013) indicate that the training and education of the workforce remains one of the main requirements for the success of a project. Similar results are presented by Maloney (2002), Langford and Male (2008), and Naoum (2016), who all suggest that training the workforce, especially in the use of modern technologies and in better practices on site, is a key element in improving performance. Thus to ensure the Saudi construction industry meets the levels present in other advanced economies, the need to improve the training and education of the workforce in the Saudi Arabian construction industry is a very important one.

In addition to having a skilled workforce, other factors such as communication, making time to listen to the needs of the client and being transparent in dealing with the client remain a good basis for ensuring satisfaction. Rumane (2013) also reports that factors such as meeting bidding requirements, timely completion of projects, quality of materials used, and delivery and communication methods are all important when considering the best practices that would influence contractor selection and enhance client satisfaction. These factors reported by Rumane (2013) were also highlighted in the findings of this study. The results of this research imply that communication was seen as the most influential factor in ensuring client satisfaction on projects, as interviewees highlighted the need for maintaining good communication between clients and the project team, which should lead to a cordial relationship between them, and ensure a good level of client satisfaction.

6.4.1 Basic elements of quality

As the project manager interviewees placed most emphasis on the quality of the completed project as the main factor influencing client satisfaction, this section of the chapter discusses the extent to which quality links with the other factors leading to improved client satisfaction. According to the responses of the clients who participated in this study, the basic elements of quality are the use of quality construction materials, the use of highly advanced machines, and highly skilled or experienced workers under the supervision of skilled engineers and supervisors, as well as a focus on internationally agreed quality standards, and hence the training of TQM staff, participation of senior management in decision-making, support of senior management, identification of standards of quality measurement, and fair remuneration of staff.

The main advantages of quality management practices are that they create synergies, enhance quality, lower costs through effective and efficient use of resources, attract more customers, raise profits, ensure accuracy and thus enhance client satisfaction. This is supported by the research participants, with the majority of clients focusing on quality construction materials and a skilled workforce. One client observed that *"using quality building materials for the project is essential",* while another stated: *"It is important to train employees and the workforce from time to time to gain work efficiency"*. Some clients, however, focused on cost effectiveness, but their percentage was significantly lower.

On the other hand, the project managers stated that effective financial management helps achieve financial stability in the Saudi construction industry. Factors conducive to financial stability include a stable cash flow, a balance between actual and expected spending, and the responsibility of contractors to pay for the cost of the project. With regard to the positive effects of effective financial management and the practices to be followed by project managers to ensure this, the majority of them used various programs to help them solve financial problems, programs to calculate the various budget elements, and inputs of quantities and costs needed for the project, as well as experience-based learning.

The majority of project managers acknowledged that the aspect of financial management was critical to project success, with one respondent claiming: *"If the financial management is not effective, your project will be messed up"*, and another expressing the view that *"effective*

financial management is necessary to overcome all obstacles which may be encountered by the company".

A small percentage of project managers also emphasised the importance of internal control of financial resources in order to maintain effective financial stability and balance. One expressed the view that *"We should have our own financial resources in order to succeed in that field*," while another stated: *"Financial management is necessary to overcome all obstacles which may be encountered by the company"*.

High impact practices such as effective financial management, using advanced technology, the use of skilled manpower, time management on the project, the level of communication between the project team, the relationship of customer management, the level of commitment to health and safety systems, and consideration of strategic and legal issues have a considerable effect on good project-building practices and ultimately on client satisfaction. As the main objective of the current study is to identify the best practices that can be adopted to achieve customer satisfaction within the Saudi construction industry, these results are very important because they discuss the essence of the study objective and the fact that these practices are emphasised from the top of the pyramid in the construction industry in the environment of Saudi Arabia.

Waste management is viewed as part of moderate impact practices, and most participants indicated that it did not affect the project itself and had little impact on the project's profit. Delayed delivery of the project, however, could have a major impact that might lead to a low reputation. PM interviewee 15 commented: *"As long as we don't waste any materials, we're in a good position. If we waste materials, we waste time, money, and effort. "*

With regard to the best and most effective practices to be adopted by the company in order to be successful, according to the project managers, different practices have been adopted including ISO 9002, total quality management, business project re-engineering, B2B, benchmarking and the Saudi Building Code. However, most of the participants mentioned that their company followed the Saudi Building Code, which is a set of conditions and requirements, and the subsequent rules and regulations of the Government, as well as supplements related to building and construction to ensure public health and safety.

As mentioned in Chapter 2, Locke (1970) defines satisfaction as the comparative study between an individual's perception and expectation of the results. Hence for satisfaction to be measured, there has to be an expectation which would be compared with an output and the comparison between expectation and outcome is referred to as satisfaction (Locke, 1970). A company without clients is a company without work. The project managers addressed possible factors to measure client satisfaction in the Saudi construction industry: communicating with their clients in order to ask them about their level of satisfaction; conducting surveys from time to time to ensure clients are satisfied; when a client refers one of their acquaintances to the company it is a strong indication that they like that company's work; when a client orders the company's services again it is a strong indication that they are satisfied. However, a few participants stated that there were no criteria in their company for measuring a client's satisfaction.

As mentioned earlier, there are other factors which may not directly be linked to quality but have a very strong influence on client satisfaction. They influence the quality of the experience of the clients and ultimately improve their level of satisfaction. Of these, the most important ones, such as acceptable cost, commitment to the schedule and delivery of the project as stated in the contract, indicate that in the construction industry, client satisfaction is determined by the extent to which the construction process and product together meet the customer expectations. Elements of this include: training of employees, delivering high-quality projects, keeping good relations with clients, listening to client requirements and good communication.

Regarding the ways for project managers to improve client satisfaction, the qualities of the manager are important, as well as the process or techniques that are considered necessary to ensure satisfaction and success. In addition, training clients, the cleanliness of the location, care about honesty, devotion, commitment, and quality all contribute. According to Omonori and Lawal (2014), in the construction industry, client satisfaction is determined by the extent to which the construction process and product meet the customer expectations.

6.5 Practices adopted for improving client satisfaction

As shown in the findings, great importance is given to financial management practices in the project management of construction companies in Saudi Arabia. Financial management, according to the project managers who took part in this research, has a huge impact on the performance of the construction companies and their profit margins. It is therefore expected that these companies in Saudi Arabia will pay more attention to better financial management practices if they intend to perform better and meet the demands of their clients. Improper management of finances will lead to increased costs, which may result in the need to cut corners on projects. As gathered from the research, honesty is needed if client satisfaction is to be improved. The industry therefore needs to invest more in better financial management. A wide range of participants agreed that financial management practice helps in generating client satisfaction. In this respect, Project Manager 26 stated that *"If the financial management is not effective, your project will be messed up."* In other words, a "messed up" project may generate dissatisfaction among customers. Thus, financial management is essential in generating client satisfaction. Another project manager, as referred to earlier, stated that *"Effective financial management impacts on good practices."* Furthermore, another project manager stated that the *"Existence of a stable cash flow*" is important in financial management as it ultimately leads to client satisfaction.

In contrast, some other participants mentioned other aspects which also have importance in generating client satisfaction: effective communication, quality and skilled labour force. In this regard, one of the participants stated that "*the availability of a skilled workforce*" and "*hiring skilled workers*" are essential for generating client satisfaction. However, the majority of the participants were in favour of financial management as an essential aspect for effective project management as it helps in managing resources, stabilising the cash-flow and managing the budget so as to execute the project successfully and then generate client satisfaction. Thus, financial management can be regarded as the most essential factor among others that lead to client satisfaction.

Attention to the needs of the project at all stages and the availability of financial resources and building materials along with skilled or experienced manpower including engineers and supervisors are the most important factors in order to deliver the project on time.

The quality and reputation of the project are essential to cost-effectiveness and CRM is an important factor that reflects the honesty and commitment of the company and ensures that the project is completed in accordance with the required specifications. The project managers who participated in this study emphasised the importance of client relations management in order to complete the project successfully and improve the level of client satisfaction, gain the client's loyalty and provide greater understanding of all the minor details in the project and the client's requirements.

The majority of respondents, both clients and project managers, emphasised this point, expressing strong opinions regarding the link between CRM and client satisfaction. The clients believed that it established an honest and credible link between the construction company and themselves, with one of the clients claiming that *"It boosts cooperation between all team members and clients",* while another client focused on repetition of services, stating: *"If the contractor is honest, the client will also order his services again in the future"*.

On the other hand, the project managers believed that CRM allowed them to effectively understand the requirements of the clients and communicate with them throughout the project. One project manager claimed that *"CRM allows us to stick to the contract"*, and another focused on customer satisfaction, stating *"CRM improves the level of client's satisfaction"*.

6.6 Legal issues and construction regulations

The project managers interviewed in the current study confirmed the importance of addressing legal issues in order to obtain the required building licence, and of overcoming faulty methods so as to address problems through proper channels. However, for most of the participants, the reason that legal issues had to be dealt with was so that the project could not be delayed, and would be completed on time, and compliance with these rules was in the interest of the two parties and would lead to client satisfaction. As project manager 18 said, *"Because they [legal issues] may delay the project if they are not properly handled."*

Orr and Scott (2008) state that the main issues affecting the Saudi construction industry are the lack of a skilled workforce, technological advancement, project quality, time constraints, finance and budgeting, risk and health issues, legal and strategic issues and the lack of

effective monitoring techniques. As Mazher et al. (2015) point out, quality improvement can be achieved only through experienced employees and its measurement and examination can also be handled only by such employees. To improve the quality management process, therefore, three elements should be considered: quality planning, improvement and control.

The construction regulations in Saudi Arabia are important in order for contractors to satisfy their clients. However, most participants mentioned that it is important to follow construction regulations due to different factors including health and safety, which are a major concern and play an important role in the successful completion of projects. Commitment to health and safety affects the level of client satisfaction. Construction companies should follow health and safety measures to avoid any hazardous incidents or injuries in terms of workflow and project workers, and doing so raises the satisfaction level of clients by giving a good impression to them. In fact, a project cannot start without these regulations, as Project Manager 21 pointed out:

We can't start the project until the owner of the project gets the civil defence licence. It is his responsibility to get it. But we have to implement the necessary requirements in the building in order to comply with the licence conditions.

Effective communication enables the project team to render projects to the desired level of client satisfaction. It has been seen from the literature that the lack of appropriate communication channels between the contractors, partners, employees and clients is one of the key factors for the emergence of disputes among them. Time constraints present a significant challenge to construction contractors in Saudi Arabia. In order to succeed in the contracting industry, a company should estimate the time accurately so as to be able to implement their projects according to the contract terms. The location or site of construction plays an important role, as most participants mentioned, because a location near suppliers gives an advantage as it saves time and money. The implementation of waste management techniques influences the satisfaction of construction clients in Saudi Arabia as well, as companies which follow good waste management techniques perform well in terms of efficient project delivery. Furthermore, most participants mentioned that training plays an important role in skill enhancement and that skilled labour saves time and money as project completion takes place easily and effectively. New technology also plays a vital role in the successful completion of projects.

The current study, which aims to identify the best practices in construction that could be adopted for accomplishing client satisfaction within the Saudi construction industry, is not the only study that has sought to address the problem. A study by Molinari, Abratt and Dion (2008) states that within a business environment, satisfaction plays a significant role in making behavioural decisions leading to business activities. Consumers or customers are attracted either by the display or the price. Repurchase is achieved when the consumer's expectation has been met or exceeded. On the other hand, if the expectation of the consumer is not met, for instance in terms of quality or taste, there will be no repurchase. Hence the best practices within the business environment are geared towards attracting and retaining the consumer who pays for the product or service (Molinari, Abratt and Dion, 2008; Van Beuzekom et al. (2012).

In the same vein, as discussed by Azis et al. (2012), client satisfaction is the main aim of the Saudi construction industry and it can be achieved by avoiding various issues taking place in this industry which have affected the confidence level and loyalty of its clients. The construction industry is regarded as one of the most complicated and uncertain industries because of the complexities and difficulties involved in construction projects. Various innovations and technological changes have contributed to increasing the efficiency of these projects but, at the same time, these changes affect the productivity and efficiency of employees.

All studies on client satisfaction, including the current study, were intended to investigate rather than prove, by discovering what can lead to improved client satisfaction and allow the construction industry to carry out any activity related to the implementation of projects.

The reason studies are conducted on client satisfaction is usually to improve the care of clients by providing specialised advice and enhancing the well-being of clients requiring specific services. This may include ways for improving client satisfaction level, issues that affect quality management practices, factors that control pricing, factors for on-time delivery, cost effectiveness and client management relationship support for change in the construction and planning, including the establishment and consolidation of trust relationships with clients with the aim of maximising good care for clients and the community as a whole.

Client satisfaction has already been defined as the comparative study between an individual's perception and expectation of the results (Locke, 1970). Hence for satisfaction to be measured, there has to be an expectation which would be compared with an output, and the comparison between expectation and outcome is referred to as satisfaction. As discussed, Churchill and Serprenant (1982) postulated that the satisfaction of a customer is dependent on the outcome of results in relation to the expectations of the results. Within this broad definition, client satisfaction can be broadly based or quite specific, and focus on both financial and organisational processes. Zeithaml (1988) viewed client satisfaction as having a direct relation with the value derived by clients from the products and services. In other words, the real measure of client satisfaction is the enjoyment of the quality of the products and services by them as compared to the price they paid.

Loosemore (2016) argues that in the UK's construction industry, variables like client satisfaction play a crucial role in the success of the project, and dissatisfaction in the construction industry can be attributed to a number of factors, such as overrunning of project costs, delays in operations due to lack of data sharing and lack of coordination between the different departments. Thus, client satisfaction is the most crucial issue that contributes towards the success of a construction project (Loosemore, 2016).

However, in construction, client satisfaction does not ensure loyalty. The criteria for selecting a contractor are mostly based on worth, but also on the contractor's financial capability and on previous experiences of the contractor's proficiency. Satisfaction therefore relates to a client's experiences of the contractor's abilities. A dissatisfied client will not work with the same contractor in the future, and even a satisfied client would not necessarily guarantee upcoming projects for the same contractor. This is why the main benefit for a contractor in providing a high level of client satisfaction is the chance to remain their potential partner in the future. Nevertheless, the crucial goal in improving client satisfaction is to achieve customer loyalty, which can lead to using a partnering arrangement if the client is a repeat customer.

6.7 Measures to be adopted for improving client satisfaction

As shown in Chapter 5, Section 5.4.3, different practices are adopted by the construction companies towards achieving or improving client satisfaction within the industry. These practices, as discussed in Section 6.4.1 of this chapter, are based on the perception that meeting the quality requirements of the client will ultimately lead to improved satisfaction. In pursuing measures to improve this, there needs to be a company-wide strategic approach which should be in line with the requirements of the client. Ambroz and Praprotnik (2008) argue that if the organisation culture is not aimed at providing excellent service to the customers, there is little chance that such an organisation will succeed in the long run.

In this study, a range of measures were identified as the means by which construction companies try to achieve client satisfaction. They included: business to business; total quality management; the use of standard codes such as ISO 9002 and the Saudi Building Code; practices aimed at building trust with the clients; client relationship management through honesty and commitment; health and safety practices; improving the use of technology; maintaining consistency in cost; training of employees; and quick response to clients' requests. As shown in the data analysis, construction companies specifically adopt these as an attempt to ensure that the clients they work with are satisfied.

From the literature, different practices have been examined that influence the quality of construction projects and ultimately the satisfaction of construction clients. Kärnä et al. (2004), for instance, indicate that quality standard practices significantly affect client satisfaction factors, and key quality practices employed within the construction projects include business project re-engineering, total quality management, benchmarking and ISO 9002 (Kärnä, Junnonen and Kankainen, 2004; Yang and Peng, 2008). Bal et al. (2013) suggest that construction companies can improve satisfaction by aligning human skills with stakeholders that contribute to attaining success in innovative strategies for client satisfaction (Bal et al., 2013). Achieving such innovative strategies would require an effort to understand the needs of the clients so that the actions of the contractor can be aligned with those needs. The results from this research identify this as being one of the main missing areas in respect of the practices and measures used by contractors.

These practices or measures relate in so many ways to quality as construction companies target this attribute as the key means to improve the satisfaction of their clients. There is also the need to pursue measures targeting the experience of clients throughout the project execution phase. Factors such as bidding requirements, timely completion of projects, quality of materials used, delivery and means of communication are all important when considering the best practices that would influence contractor selection and so enhance client satisfaction (Rumane, 2013).

As shown in the discussion above, the measures of construction firms have been directed at quality, and although this is good, there is in most cases a failure to undertake measures towards improving customer experience through better communication, improved transparency and efforts to ensure that a good relationship is built with the client.

6.8 Summary of Chapter 6

This chapter has presented the findings of this study regarding best practice in the construction industry in Saudi Arabia. The recent increase of interest in the strategic decisions made by clients as to how to arrange and administer their projects has not as yet been subject to any wide and systematic analysis of clients' attitudes and approaches towards project management. The present study attempts to find the best practice that should be adopted by the construction industry to meet client satisfaction requirements. Focusing upon experiences of recently completed, comparatively large and medium-sized projects, the study examines similarities and differences in the ways of improving the level of client satisfaction and assesses the impact of practices on project performance. The main conclusions drawn from the data are that clients' needs must be followed in order to gain their satisfaction. Moreover, experienced clients may establish a closed-minded approach to building, utilising those procurement methods with which they are most familiar. Given the high rate of project failures, companies would be happy just to have their project finished with some degree of success. Thus, this study has proposed and developed a framework to serve as a guideline in achieving client satisfaction throughout the whole-life-cycle of a construction project. Chapter 7 focuses on this framework.

CHAPTER 7: DEVELOPMENT OF A BEST PRACTICE FRAMEWORK FOR CLIENT SATISFACTION IN THE SAUDI ARABIAN CONSTRUCTION INDUSTRY

7.1 Introduction to Chapter 7

After the analysis and discussion of the data gathered for this research, insights from the results have been drawn concerning the level of client satisfaction within the construction industry, the factors that affect or influence client satisfaction, the measures adopted by construction firms to ensure client satisfaction, and the extent to which these measures can lead to client satisfaction.

Based on the insights drawn from this research, this chapter develops a working framework (best practice framework) for improving client satisfaction. The framework considers the clients as key stakeholders, their needs, their views on satisfaction and the actions that can contribute towards improved their satisfaction. The chapter is divided into four main sections: the first one discusses the components of the framework; this is followed by the development of the framework. The third section discusses measures to ensure the framework developed can lead to client satisfaction, while the final section discusses the potential limitations of the framework and how these limitations can be rectified, thus further improving the framework to ensure client satisfaction.

7.2 Components of the framework

Based on the literature reviewed, in Chapter 3 a conceptual framework was designed for this research which sought to connect together different factors relating to client satisfaction. The framework developed in the present chapter is based on the data analysed and results, and builds on the conceptual framework. It therefore serves as a best practice framework for improving client satisfaction within the Saudi Arabian construction industry. It has six main components, the first being the clients and their needs. The second component consists of the main factors that lead to client satisfaction. The third component considers the measures adopted by construction companies to ensure they meet the needs of their clients. The fourth is concerned with the need to ensure that the measures adopted have an effect on the factors for client satisfaction.

The fifth component of the framework requires contractors to have a means in place for measuring client performance and at the same time for identifying factors that lead to dissatisfaction. The final one is about the need for feedback on the measures for improved client satisfaction based on learning (knowledge) gathered from measuring client satisfaction and identifying the reasons for dissatisfaction.

The different components of the framework are discussed below.

7.2.1 Clients and their needs

As discussed in Chapter 2 of this thesis, there are two main kinds of clients in the Saudi Arabian construction industry: those who procure their projects as private individuals and those who do so as an organisation. As reported in Chapter 5, it was identified from the research that clients are satisfied when their various needs are met, and that these needs include: honesty of contractors in carrying out good quality work; effective financial management on the project to save cost; proper planning and organisation; adequate provision of quality materials and workforce; maintaining good communication among project participants; and efficient customer services (see Chapter 5, Section 5.4.3). All these factors identified have a direct influence in delivering the project successfully: on time, within the approved budget and to the required quality standard. As discussed in Chapter 2, clients' needs can be grouped into three main areas, commonly known as the iron triangle, and this covers completing projects within the specified time and cost and to the required level of quality. The data from this research, however, suggests that the needs of the client go beyond just meeting these three requirements; they also include the construction process in terms of the relationships needed in order to complete the project as required. The main types of projects undertaken by the clients include the procurement of projects for building towers, hospitals, commercial buildings, charity building projects, private school buildings, mosques and hotels. It was therefore identified that these clients have needs that include not only the time, cost and quality requirements but also other factors such as health and safety, waste management, transparency and good communication.

7.2.2 Factors leading to client satisfaction

As identified from the research, the clients who took part in this research expressed different levels of satisfaction regarding the time, cost and quality performance of the contractors they used. These levels of satisfaction were related to how well the contractors performed

throughout the process of completing the projects. As also identified from the research, different factors contribute to the levels of client satisfaction, and these include: paying attention to detail, having a highly trained and skilled workforce, commitment to services and duties, offering a high quality project, always striving for perfection and providing satisfactory aesthetics. The research also identified that even though many activities and measures were adopted by contractors, clients were more interested in the effect of these factors on their projects and the process involved in ensuring the projects were completed on time, within cost and to the required standard of quality. As identified from the results of the research, in addition to time, cost and quality, the factors of honesty of contractors, effective financial management of the project, and proper planning and organisation were very important in ensuring the clients were satisfied.

7.2.3 Measures adopted by contractors to ensure that clients' needs are met

As presented in Chapter 5, Section 5.4.3, the construction companies adopt different measures to ensure that clients are satisfied. The measures presented in this section, which form part of the framework, are based on measures identified from the data analysis as well as those identified through the literature. The main practices include: the implementation of total quality management; business process reengineering; use of quality standards such as ISO 9002 and Saudi Building Code; maintaining consistency in cost; quick response to client requests; training of employees; improvements in the use of technology; effective financial management; management of legal issues; and improved health and safety management. As gathered from the data analysis and literature, these measures are intended to improve the performance of the contractor in terms of time, quality and cost leading to the achievement of a successful project. As identified from the data analysis, these measures when well managed have the potential to lead to client satisfaction.

7.2.4 Relationships between the measures and the levels of client satisfaction

A very important requirement is the need to ensure that the measures adopted by the contractors relate to the needs of the client and contribute towards achieving those needs. From the data, it was identified that a number of measures were adopted by the contractors with the hope that these would lead to client satisfaction. From the discussion of the data and comparing the data to the recent literature, it was identified that some of the contractors do not see the link between their practices and client satisfaction. There is a need, therefore, to

ensure that contractors or construction professionals make a conscious effort to satisfy their clients. As the research has shown, client satisfaction results in referrals from the client and reuse of the services of the contractor. This suggests that it is very important to ensure the measures adopted by the contractors lead to client satisfaction. Thus to ensure there is a link between the measures to improve client satisfaction and the actual satisfaction of clients, the adopted measures should improve those factors that lead to client satisfaction.

7.3 A Best practice framework for client satisfaction

The framework presented in this section was developed based on the results from the literature and the data captured from this research. It was developed as a means to ensure that the construction companies understand the needs of their clients and how best to ensure that these clients are satisfied. (See Figure 7.1).

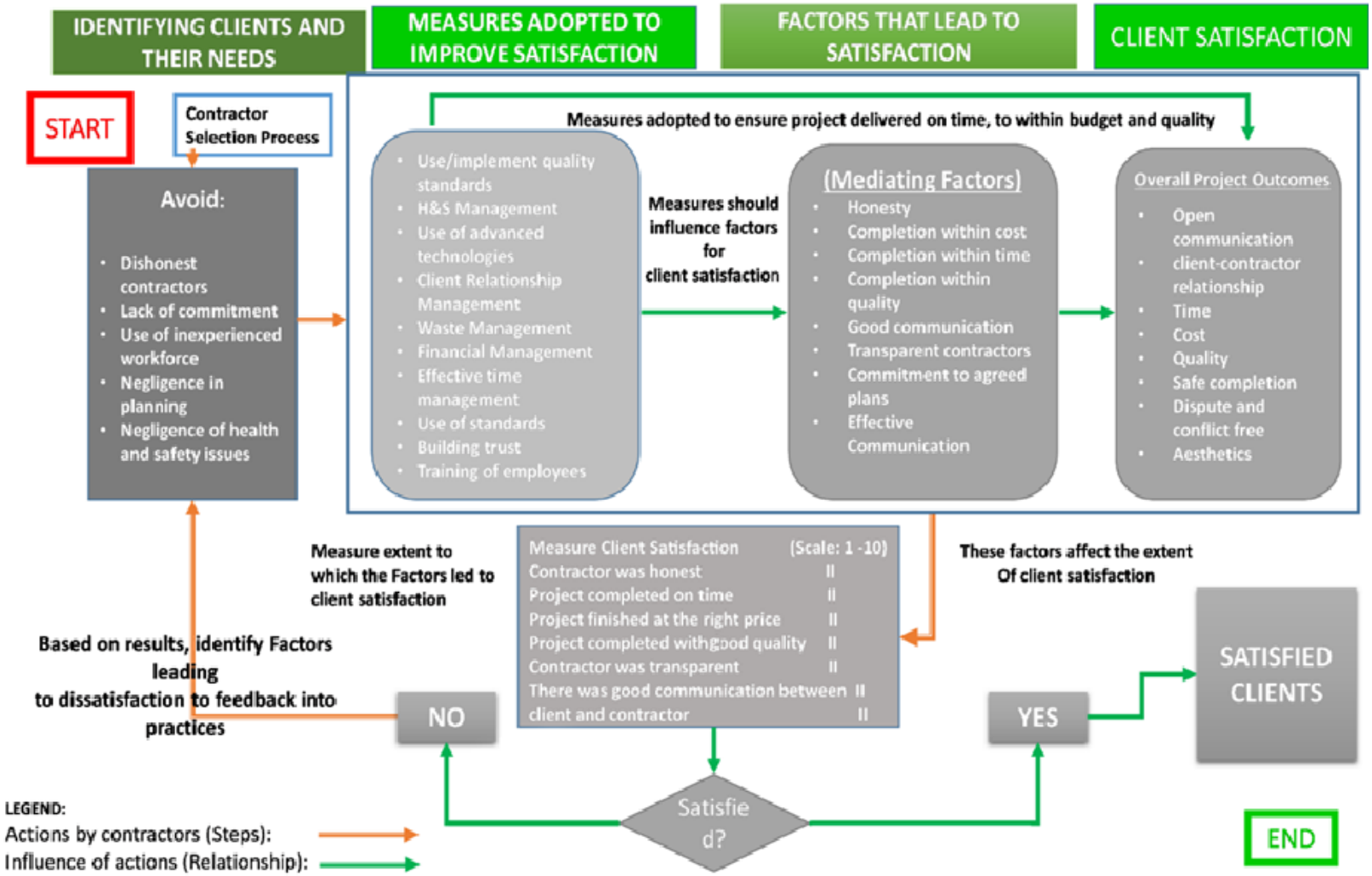

Figure 7.1: A new framework for client satisfaction in Saudi Arabian construction

7.3.1 Implementation of the framework

As shown in the discussion leading to the development of the framework, achieving client satisfaction is very important for construction companies and the clients, as it benefits both parties. Table 7.1 presents a step by step guide to implementing the framework. The table summarises the key requirements of the framework, followed by the main inputs that would ensure construction companies in Saudi Arabia are able to satisfy their clients during the execution of construction projects.

Table 7.1 Summary of implementation guidelines for the framework

Area of Framework	Key requirements	Measure to be adopted
1. Client Requirements	First step in the process: clearly identify the needs of the client for the project in terms of time, cost, quality, open communi-cation between the client and contractor, honesty and transparency on the part of the contractor, good client-contractor relationship management, and paying attention to the needs and requests of the client.	Identifying the requirements of clients requires contractors to put in place efforts to ensure the clients' needs are known from the beginning of the project.
2. Factors leading to client satisfaction	Identify factors that contribute to the satisfaction of clients	This requires contractors to identify the key factors needed to ensure clients are satisfied. These factors are expected to result in meeting the time, cost and quality requirement of clients and include: effective financial management on the project; maintaining good communication between the clients and project team; use of good quality building materials; honesty of contractors; use of a skilled workforce; paying attention to detail; commitment to services and duties; striving for perfection; health and safety; and proper planning and organisation.
3. Measures adopted by contractors	Initiate measures for client satisfaction	Contractors are required to ensure the adoption of specific measures that lead to improved project performance. These measures cover the adoption of standards, business process reengineering, effective financial management and total quality management.
4. Linking measures adopted by contractors to factors	Aligning measures adopted for improvement performance to client satisfaction	To ensure measures adopted for improvement performance contribute to client satisfaction, there is the need to ensure that measures adopted can lead to client satisfaction. A conscious effort should be

affecting client satisfaction		made to identify how each measure can lead to client satisfaction. This can be achieved through communication with clients throughout the process.
5.Identifying measures for dissatisfaction	Construction companies to identify issues that will dissatisfy clients.	Once projects have commenced, there should be communication between clients and contractors to help contractors identify issues likely to dissatisfy clients. Identifying these factors helps contractors to tailor measures to correct them and ensure clients are satisfied.
6.Measuring the levels of client satisfaction on projects	System for measuring level of satisfaction of clients with the performance of the contractor after every project.	Construction companies are required to develop systems for measuring client satisfaction with their projects during and after execution of their contracts (e.g. through a feedback mechanism). The measurement should adopt a scale (1-10 as presented in this framework) where a qualitative or quantitative measure can be established for the project. Where the score on satisfaction for any factor is ranked 7 or more out of 10, this is considered an A rating for satisfaction. Where the score is lower than 7, this is considered below satisfaction.
7.Feedback into measures to improve client satisfaction	Feedback to identify dissatisfaction	Once the contractor has been able to identify the level of client satisfaction with their performance, there should be a mechanism to feed back identified issues into the framework to ensure measures are designed to correct or improve performance so as to increase satisfaction with future projects.

7.3.1.1 Identifying and understanding the needs of clients

As shown in Table 7.1, there are six main steps in this framework and the first step is to identify and know the specific needs of the client. As shown from the research and from the build-up to the framework, although all clients desire to finish their projects on time, within budget and to the required level of quality, the clients may have other requirements from the project delivery team (such as honesty, the use of competent teams, having a good relationship with the contractor, good communication with the contractor and offering advice to the clients) and these factors may well influence the level of client satisfaction. As identified in this research, the different levels of client satisfaction within the industry are due to a lack of clear understanding, by contractors, of the needs of the clients. It is therefore important for construction firms to communicate with their clients

and ensure they clearly understand their needs which in turn will put them in a good position to ensure their efforts are channelled into meeting these needs.

Based on the framework, the first step towards achieving client satisfaction, as mentioned, is for the contractors to understand what their clients seek in the construction process. Identifying the needs of the clients is a very important link to the second step in the framework which concerns the identification of factors that can be used to achieve this level of satisfaction.

7.3.1.2 Identifying factors that will influence the level of client satisfaction

Once contractors know the specific needs of their clients, they need to identify the factors that contribute to meeting those needs. Identifying these factors is very important as these can become targets for the construction companies in terms of the measures they implement. As shown from the research, client satisfaction is linked to factors such as: completing projects within cost time and quality; keeping good client relations; honesty on the part of contractors; paying attention to detail; paying attention to health and safety; effective financial management; proper planning and organisation; commitment to services and duties; use of a skilled workforce; having stable construction companies; familiarity of contractors with best practices; time saving on projects; increased competitiveness of construction firms; having a good reputation as a contractor; reduction in the level of mistakes made by the contractor; and reduced project risks.

The factors cited above were identified from the literature as well as from the data collected and analysed on the Saudi Arabian construction industry, and are pointers to the activities or measures the contractor should adopt to ensure that clients are satisfied.

7.3.1.3 Measures for client satisfaction

Based on the needs of clients identified and the factors that contribute to this, construction companies are expected to ensure the measures adopted and implemented lead to the required level of satisfaction. Based on the research, the main factors adopted by the contractors to achieve this include: the use of skilled labour to ensure high quality workmanship; the use of high quality materials; the use of advanced technologies; effective financial management; the use of standard construction methods; total quality management; use of ISO 9002; use of the Saudi Building Code; business process reengineering; training of employees; building trust with clients; improvement in the use of technology; adopting measures for improved health and safety; proper management of

legal issues; and perfection of project delivery. As some of the construction companies are already implementing some of these measures, the main requirement according to this framework is to ensure that the measures adopted to ensure client satisfaction are able to do so in practice. This can be done by ensuring that construction companies are able to link their measures for client satisfaction to the factors that influence client satisfaction.

7.3.1.4 Identifying measures that lead to dissatisfaction

The research goes on to suggest that there are various factors that could lead to client dissatisfaction aside from the traditional time, quality and cost domains used to measure client performance. Some of the factors identified include: negligence in planning; neglect of health and safety issues; use of an inexperienced workforce; lack of proper communication; and lack of commitment to agreed designs. These factors, according to the research, prevent contractors from achieving the time, cost and quality requirements of projects, which in turn leads to dissatisfied clients. They also prevent clients from being satisfied with the process involved in the construction process. Contractors should therefore ensure a conscious effort is made to identify these factors and any others that could lead to dissatisfaction.

7.3.1.5 Measuring client satisfaction

This research has identified that a large number of contractors within Saudi Arabia do not usually have a clearly established system in place for ensuring the satisfaction of their clients (according to the participants of this research). From the research, only a few contractors had specific strategies for identifying the satisfaction of their clients. These companies relied on calling their clients to ask whether or not they were satisfied with the service provided. For the majority of companies, however, the only means to determine client satisfaction occurs when clients reuse their service or referred them to other clients. This framework proposes that contractors should implement or develop a system for measuring client satisfaction which will identify specific issues with the project that have contributed positively to the satisfaction of their clients as well as those factors that have led to dissatisfaction. Identifying these factors is expected to help the construction companies to identify practices or measures that can be adopted or changed so as to ensure client satisfaction.

Once the factors leading to dissatisfaction are identified, this can help construction companies to develop new measures that can contribute to satisfying the clients and so

these measures can be adopted, in addition to the current measures they are using for improving the quality of construction projects being undertaken by the companies.

7.4 Achieving client satisfaction by using the framework

The framework developed in this chapter for achieving client satisfaction aims to serve as a best practice guide for construction companies, with the potential of leading to improved satisfaction. For best results, construction firms are expected to make a conscious effort to achieve client satisfaction. This will require investing in the workforce through training, investing in technology, improving work practices and making a conscious effort to meet the needs of their clients. A key requirement to ensure the achievement of client satisfaction is to align the measures and practices adopted by the construction companies to the factors that influence client satisfaction. Following the framework, contractors need to be aware of factors other than just meeting time, cost and quality requirements of projects that influence client satisfaction. As identified in the research and framework, there are other factors, such as honesty, client-contractor relations and communication management that on the surface may not have a connection with time, cost and quality, and yet influence client satisfaction. The efforts of construction companies in relation to client satisfaction should therefore consider project level as well as company level measures which can help to give a company success in this regard and contribute to its good reputation.

7.5 Summary of Chapter 7

This chapter has developed a best practice framework for achieving client satisfaction in the Saudi Arabian construction industry. The framework developed combines information analysed from the literature with empirical data collected from industry. From the best practice framework developed, it has also been identified that client satisfaction goes beyond meeting time, quality and cost. There are other factors such as honesty, good communication, client relationship management, reputation, and health and safety issues, which influence the level of satisfaction of the client. The framework developed suggests that construction companies should make a conscious effort in relation to client satisfaction so as to ensure improvement in the extent to which clients are satisfied. From the chapter, it was identified that being able to link measures adopted by contractors to the factors that lead to client satisfaction is a very important requirement. This can be achieved by paying attention to project specific factors as well as companywide factors that would give a good reputation to the construction companies.

This chapter of the thesis includes the summary of the overall findings and ultimately leads to a meaningful conclusion in the direction of achieving the aim and objectives of the research.

The next chapter explains the perceptions of practitioners and potential users about the practice framework and its workability.

CHAPTER 8: RESEARCH VALIDATION

8.1 Introduction to Chapter 8

The previous chapter explained the best framework developed to improve client satisfaction in the Saudi Arabian construction industry. This chapter identifies the validity of the framework together with the research findings. It evaluates the different types of scientific approach for validation and shows the most suitable approach that was found for the study. However, each approach is explained, so as to justify the final choice made. It is considered that the chosen approach was properly implemented, and the outcome was reported.

8.2 The research process and validity

Plonsky (2015) points out that *"It should be the primary responsibility of every good researcher to control all possible factors that threaten the validity of a research"* (p.19). Validity is an important aspect of social and behavioural science research as it is concerned with the accuracy and truthfulness of scientific findings (Hammersley, 2018). It is comprised of an entire experimental concept and establishes whether or not the findings obtained meet all the requirements of the scientific research method (Boddy, 2016). This statement is in agreement with that of Smith (2015), who states that validity is essential in showing how sound a piece of research is, and that it is specifically applied to both the research design and the research methods. According to Denzin (2017), *"Validity determines whether the research truly measures that which it was intended to measure or how truthful the research results are"* (p.21). Therefore, a valid study should be able to demonstrate what actually exists and a valid instrument or measure should actually measure what it is intended to measure (Larson-Hall, 2015). For, instance, validity in data collection means that the research findings truly represent the phenomena that the researcher is claiming to measure. Thus, valid claims are solid claims. In other words, meticulous attention should be given to the research validation process because it can make a difference between good and poor research and thus help to assure fellow researchers that the findings are trustworthy and credible (Mackey and Gass,2015). Some valid points to note are that:

- when a research result is judged to be invalid, then it is meaningless to the study;
- when a research instrument does not measure what it is intended to measure then the results cannot answer the research question, which is essential to the aim of the study; and

- when these two fail, then the results obtained cannot be generalised and thus become a waste of time and effort (Larson-Hall, 2015).

There are many types of validity tests in social science research work, and each of them answers an important question. The most commonly used validity tests are: statistical conclusion validity, construct validity, external validity and internal validity. Statistical conclusion validity answers the question 'Does a relationship exist between the variables in a research?' It focuses on low statistical power, reliability of measures, violations of assumptions, random irrelevances in the experimental design, reliability of treatment and random heterogeneity of respondents (Lewis, 2015). These elements have been examined during the statistical analysis phase of this study as presented in the results and discussion chapter. Construct validity, on the other hand, asks whether a relationship is causal, and what the particular causes and effects are of behaviours or constructs that exist in the relationship. This form of validity is comprised of face and content validity. These two have already been addressed during the questionnaire design and pilot studies (see Methodology in Chapter 4). The two types of validity tests that remain to be applied are the external and internal validity tests. Therefore, this section focuses on them.

8.2.1 External validation of the research process

External validity answers the questions firstly, as to whether there is a causal relationship from construct X to construct Y; and secondly, if there is any, how generalisable this relationship is across persons, settings and times (Campbell and Stanley, 2015). Fellows and Liu (2009) argue that external validity is the extent or degree to which a research can be generalised across a larger group or other research contexts. In essence, if a research lacks external validity, then the findings cannot be applied to situations or circumstances other than the one in which the research is conducted. As Plonsky (2015) explains, *"Findings can be said to be externally invalid because [they] cannot be extended or applied to contexts outside those in which the research took place"* (p.62). According to Plonsky (2015), there are seven factors that significantly affect external validity:

- Characteristics of population or subjects
- The effect of the research environment
- The data collection methods
- The effect of time
- Interaction of subject selection and research

- The researcher and experimenter effects
- Descriptive explicitness of the independent variable

Leung (2015) suggests three approaches for conducting external validation: convergence analysis, replication and boundary search.

8.2.1.1 Replication

According to Diener and Biswas-Diener (2018), replication is the process by which a piece of research is repeated to determine the degree to which the results can be generalised across time, population and situations. The advantages behind research replication are that it protects against false positives, and also increases confidence that the results are actually true and exist. There are two types of replication. The first one is exact replication and the second is conceptual replication. The former attempts to recreate a research study by using the exact research methods employed in the conditions of an earlier study, so as to determine whether the results are the same. The latter employs a different research method or measures to test the same idea or hypothesis (Diener and Biswas-Diene, 2008).

While all of these are important, there are logical constraints and financial issues that discourage researchers from applying this external validation process. The logical constraint is that it is not practical to replicate an entire research process using the same research strategy, design, and even research instruments, just to prove that a piece of research is valid while there are other validation methods that can prove that. In addition, there is a huge cost and time implication in replicating an entire research. Therefore, this study did not employ this method of validation, due to these constraints.

8.2.1.2 Boundary search

This is an external validation method popularly known as discriminant validity. It establishes the conditions under which the results of a research will not hold (Leung, 2015; Bashir, 2013). According to Van den Hoonaard and Van den Hoonaard (2016), the boundary search helps the researcher to identify the limits or boundaries associated with the outcomes of the research. However, Van den Hoonaard and Van den Hoonaard (2016) further explain that the boundary search validation is not properly embraced by researchers because they feel that it is not practical to ignore replication and convergence analysis validation which are better validation process and consciously search for the

boundaries of research findings. Even though there exist some potential boundaries in the results obtained in the present study (for instance, the country of study), the researcher abandoned the idea of using the boundary search process of validation and embraced the convergence analysis method of validation instead. This decision is partly because of the lack of confidence of other researchers in using this method and mostly because of the cost and time factors associated with completing a PhD research study.

8.2.1.3 Convergence analysis

Convergent validity measures the extent to which two or more research constructs are theoretically or empirically related (Trochim, 2008). In other words, convergent validity can be established when different research methods or strategies are employed in different kinds of research, and a significant agreement of research findings is obtained. Similar to replication, convergence validation also employs a repetitive process to identify or confirm whether the results obtained from the validation process converge with the original result. However, as opposed to replication, the research process, design, strategies and instruments are consciously varied. This statement is similar to that of Leung (2015), who stipulated that convergence of research can only be valid or achieved when the agreement between the results are derived from the application of different and independent methods, models and even occasions. With reference to the results obtained from the qualitative methods in this study, one can see an element of convergence or significant agreement between them (see previous chapters). Nevertheless, a more in-depth validation process of research known as respondent's validation was used in this study. This category of convergence analysis involves using participants' opinions to authenticate the validity of the research findings (Creswell and Creswell, 2017). This approach has been adopted in various construction management research studies conducted by e.g. De Carvalho, Patah and de Souza (2015), Anvuur (2008), Tuuli (2009), Manu (2012) and Bashir (2013), and is therefore proven to be effective.

A structured interview was developed that contained questions aimed at verifying the validity of the research findings and establishing the significance of the framework developed to enhance client satisfaction in the Saudi Arabian construction industry. In this attempt, an invitation for validation was sent to 16 potential respondents who had already participated in the interviews that were previously conducted. The invitation letter was attached with the validation questions together with the developed framework, so that interested respondents could study it properly prior to a subsequent interview. After a brief

period, a total of 14 professionals indicated their interest via a telephone call to participate in the validation process.

8.2.1.4 Results of respondent validation

A face-to-face interview was conducted with each participant who agreed to participate in the validity process. These participants consisted of 4 clients and 12 project managers all working in the Saudi Arabian construction industry. For the purpose of confidentiality these 16 respondents have been denoted with the anonymized labels of R1-R16. The respondents' average years of working experience was 30 years. This meant that they were knowledgeable people and therefore capable of making significant contributions and observations regarding the outcome of the research, particularly the framework developed which is intended by the researcher to be the solution to client satisfaction.

The outcome of the validity of the framework was satisfactory (see Table 8.1) in that all the respondents were in agreement that the framework was (very) relevant and thus valid. The table shows the feedback on the relevance of the developed framework. Among the respondents, 10 agreed that the framework was very relevant, while the remaining 6 showed that the framework was relevant.

Table 8.1: Relevance of the framework for improving client satisfaction

Questions	1 No response	2 Not relevant	3 Relevant	4 Very relevant
Is the framework relevant in improving client satisfaction?	0	0	6	10

The respondents were asked whether the framework could improve client satisfaction when properly implemented. Seven “strongly agreed” that the framework could improve client satisfaction, while 8 “agreed” that it could do so. These results indicated that the framework is valid for its purpose of enabling clients satisfaction to be improved. Only one respondent disagreed that the framework could improve client satisfaction (see Table 8.2). According to him, the current practices of contractors in the Saudi Arabian construction industry could not be improved by a mere framework because the culture of making a profit by any means possible is deeply rooted in them.

Table 8.2: Ability of the framework to improve client satisfaction in the Saudi construction industry

Questions	1 No response	2 Disagree	3 Agree	4 Strongly agree
Could the framework improve client satisfaction in the Saudi construction industry?	0	1	8	7

Apart from showing that the framework is valid in improving client satisfaction, it was important to investigate its validity in terms of the knowledge it contributes to the clients and indeed all the stakeholders in the Saudi construction industry. On this issue, 13 of the respondents strongly agreed that the framework was valid, while 3 of them agreed that the framework was valid in that respect (see Table 8.3). Among the respondents, R3 commented: *"I am impressed with the knowledge provided within the framework, particularly where it pointed out the factors that bring about both satisfaction and dissatisfaction of clients".* Similarly, R8, who is an experienced client, was happy that the contractor's actions to improve client satisfaction were clearly illustrated and defined.

Table 8.3 Contribution of the framework to understanding clients and stakeholders of the construction industry

Questions	1 No response	2 Disagree	3 Agree	4 Strongly agree
Does the framework contribute to clients' and stakeholders' knowledge of the construction industry?	0	0	3	13

Judging from the overall results on the validity of the research findings and the framework, it can be reflected that the findings and framework are all valid. However, some respondents made important observations and recommendations on how to improve the framework . Below are the observations by these respondents:

"There is no sign that indicates the start and finish point of the framework" (R1)

"It is important to introduce different colours in the framework to make it easier to understand" (R5)

"There should be a box that shows a system of measuring clients' satisfaction and this should be located strategically in the framework" (R7)

"I think there should be a relationship between the measures adopted to improve satisfaction and the overall project outcome" (R9)

"Arrow heads are essential in guiding professionals on how the framework works. However, yours are not properly defined " (R10)

"Consider including a sub-heading in the box under factors that lead to satisfaction" (R12)

"The headings showing the different sections of the framework should be given different colours to distinguish them" (R14)

"Please include some brief explanations to go along with the arrows so that people can understand the flow better" (R15)

"There is no need to include an arrow line showing that the framework process is continuous because your arrows illustrate this already. " (R16)

8.2.2 Improving the framework

The observation made by R2 prompted the incorporation of a sign to indicate a start and finish point of the framework. As suggested by R5, different colours were introduced into the framework to make it easier to understand and make it more visually pleasing. A box that shows a system of measuring client satisfaction was included, as suggested by R7. The advice given by R9 was effected accordingly. With regard to R10's observation, the arrow heads were properly situated to guide professionals on how the framework should be implemented. A sub-heading that says 'Mediating factors' was introduced under factors that lead to satisfaction, as suggested by R12. The headings were differentiated with colours for more clarification. Those headings that were related were highlighted with the same colour to show similarities. In accordance with R15's suggestion, brief explanations were introduced into the framework. Lastly, R16's suggestion about removing the arrow boundary line that shows continuous process was effected.

8.2.3 Matters which the proposed framework failed to take into account

Having effected the corrections there were notably some suggestions given by some of the respondents which were not adopted due to lack of data and the fact that they would not affect the validity of the framework. These suggestions were categorised into two types: challenges and drivers to the implementation of the framework.

R7, who has been working as a contractor for 10 years, said that *" The framework is very good and that is why I advise that you include a box for the factors that could affect the adoption of your framework and also the remedy or counter measure of the factors"*. Although this suggestion was relevant, it was not included because it meant updating the questionnaire and recuperating the data all over again. R11 observed that there were no challenges to the adoption of the framework and added, *"It is not easy for contractors who are the major players in satisfying clients to adopt your framework. So you need to indicate how you would take care of a problem related to client satisfaction if that happened"*. On the drivers that would influence the adoption of the framework, R4 said: *"I expect you to include those factors that would influence contractors or other professionals to adopt your framework"*. This suggestion is essential: however, the framework is all about improving client satisfaction, which is a good reason or driver as to why contractors or any other professionals should adopt the framework. Therefore, this suggestion was not included in the framework.

8.2.4 Internal validation of the research process

Internal validity specifically investigates whether an experimental condition or treatment makes a difference to the outcome of a study or not, and whether there is sufficient evidence to authenticate the claim (Yu, 2018). Alternatively, Indiana Education (2018) refers to internal validity as an authenticating procedure to identify how well an experiment is conducted and especially whether it avoids confusion, which occurs where there is more than one possible independent variable or cause acting at the same time. In essence, a research study with high validity allows one to choose one explanation over another with optimum confidence. This is because it avoids many possible instances of confusion (Indiana Education, 2018). Similarly, Plonsky (2015) considered that *"Findings can be said to be internally invalid because they may have been affected by factors other than those thought to have caused them, or because the interpretation of the data by the researcher is not clearly supportable"* (p. X).

The internal validity is very important as it is an approximation of truth about inferences regarding causal relationships or cause-effect. Therefore, it is best suited for studies that try to establish a causal relationship or seek to identify an intervention in social problems (Trochim, 2008). In this regard, this form of validity approach is suitable for this study as it also seeks to provide intervention in relation to the lack of client satisfaction in the Saudi construction industry which is caused by various factors, as illustrated in the previous chapters. According to Manu (2012), internal validity can be achieved through agreement with other research findings, publications and academic validation. This opinion has also been confirmed in various construction management research studies, for example, by Bashir (2013), Hurmekoski, Jonsson and Nord (2015), De Carvalho, Patah and De Souza (2015) and Tam and Lu (2016).

According to Bryman (2016), agreement between research findings illustrates how a new concept is related to the existing ones. It is a way of confirming whether a research is on track by comparing the findings with other published ones, irrespective of the research method employed in some cases (Garson, 2011). Consequently, agreement of the present research findings with other published work was established in Chapter 6 of this research, while the academic validation was conducted through dissemination of the findings in conferences, journal papers, seminars, workshops and other academic avenues which were subjected to peer-review by independent academic reviewers. These academic validation avenues became very useful to this research because of the feedback and observations from independent reviewers who critically questioned the methodologies, the analyses and the research findings as well (Tam and Lu, 2016). These corrections greatly improved the validity of the research findings. Some of the publications and academic records made in relation to this research are presented in Section 8.2.5 below.

8.2.5 Dissemination of the Research

The following dissemination has been accomplished in the course of the PhD study:

Journal papers

Alshihre, F. and Chinyio, E. (2016) Exploring Best Practices for Client Satisfaction in the Saudi Construction Industry. *International Journal of Civil and Structural Engineering, 3*(2), 1-6.

Alshihre, F. (2016) Using Best Practices for Greater Client Satisfaction in the Saudi Construction Industry. *International Journal of Business and Management Study, 3*(1), 1-7.

Conference Papers

Alshihre, F. (2015) *Proceedings of 3rd International Conference on Advances in Management, Economics and Social Science*, MES 2015, 10th-11th December 2015, London.

Alshihre, F. (2016) *4th International Conference in Advances in Bio-informatics, Bio-Technology and Environmental Engineering*, ABBE 2016,17th-18th March 2016, Birmingham.

8.3 Summary of Chapter 8

This chapter has presented the research validation as a means of improving the research findings and framework developed for improving client satisfaction when properly implemented. The chapter discussed the various type of research validation methods while placing special emphasis on the external and internal validation approaches. The validation involved inviting the opinions of the respondents on the validity of the research findings and especially the framework developed. This was achieved by conducting an interview with 16 respondents, comprising both clients and project managers. The overall external validity result indicated that the framework was valid in terms of its relevance, contribution to knowledge and improvement of client satisfaction in the Saudi construction industry. However, some key suggestions were given by the respondents which strengthened the framework after they were implemented.

The internal validation involved the dissemination of the findings through various academic avenues (such as journal papers, conferences, seminars, poster presentation and workshops). This secondary approach validated the research findings and also obtained expert opinions on how to make the framework more useful.

CHAPTER 9: FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

9.1 Introduction to Chapter 9

As presented in Chapter 1 of this thesis (Section 1.4), the Saudi Arabian construction industry is facing issues related to the low levels of client satisfaction in relation to the performance of the construction companies and professionals who are involved in the execution of construction projects. Against this background, this research set out to investigate and identify practices that could be adopted to help improve the level of client satisfaction within the industry and to develop a best practice framework as a contribution to the efforts made by the construction firms. In line with this, and to achieve the aim of this research, data was collected from clients and project managers within the Saudi Arabian construction industry. This chapter concludes the research by providing a summary of the main achievements of the research and making recommendations for practice and further research. As part of this chapter, the extent to which the aim and objectives of this research are achieved is presented.

This chapter is divided into five main sections. The first section presents a summary of the achievements of the objectives of this research, while the second section discusses the conclusions of the research. The third section considers the contribution of this research to best practices and towards improving client satisfaction within the construction industry of Saudi Arabia and beyond. The fourth section of this chapter provides a summary of the practical implications of the results of this research followed by the application and adaptability of the framework developed in the previous chapter. This is followed in the final section by the limitations of the research, and finally, recommendations are made for practice and further studies.

9.2 Achievement of research aim and objectives

As discussed in Chapter 1, Section 1.5, this research set out with the single aim of identifying best practices in construction that could be adopted to ensure client satisfaction within the Saudi Arabian construction industry. To achieve this aim, a set of five key objectives were pursued by the research. The five objectives were: to provide a critical review of previous research in order to identify best practices in relation to client satisfaction within the Saudi construction industry; to identify and examine from the literature the factors influencing practices adopted by contractors and construction

companies in Saudi Arabia to ensure client satisfaction; to collect empirical data in order to identify practices within the Saudi Arabian construction industry aiming towards client satisfaction; to analyse the data and explore practices within the Saudi Arabian construction industry to help identify ideal practices for greater client satisfaction; and to develop a practice guide (framework) for improving client satisfaction in the Saudi Arabian construction industry. A range of activities were undertaken to achieve the objectives stated above. The evidence to indicate that these objectives have been met and the extent to which they have been met are presented in Table 9.1 below.

OBJECTIVE	ACHIEVEMENT OF OBJECTIVE	EVIDENCE IN THESIS
1. To critically review various research studies previously conducted on the construction industry in order to gain an insight into the persisting issues and practices in the construction industry of Saudi Arabia.	This objective was achieved through the review of literature presented in Chapter 2 of this research. It reviewed research from within the Saudi Arabian construction industry and other construction industries.	This can be found in Chapter 2.
2. To use the literature to identify and examine factors that influence the practices and processes adopted by contractors and construction companies operating in the Saudi Arabian construction industry.	From the literature review, factors that influence the practices of construction firms were identified. This also helped to identify the issues related to client satisfaction including drivers and barriers. This helped to form the basis for developing the conceptual framework developed in Chapter 3.	See Chapter 2.
3. To uncover various factors by means of primary data collection via interviews, such as socio-cultural, economic, and technical factors that lead to optimum satisfaction among clients.	Data collection for this research was done through the use of interviews with clients and project managers within the Saudi Arabian construction industry. This helped to obtain empirical evidence to understand the current state of client satisfaction and the factors that influence the achievement of client satisfaction.	Evidence for this is presented in Chapter 5.
4. To analyse the data collected to compare and contrast the prevailing practices in the Saudi construction industry with the strategies adopted by other nations in order to identify the ideal practices that should be adopted for greater client satisfaction in the construction industry of Saudi Arabia.	Data analyses and discussion helped to identify factors unique to the Saudi Arabian construction industry as well as practices adopted to improve client satisfaction.	See Chapter 6.
5. To develop a practice guide	As an output from this research, a best	Evidence for this

(framework) for improving the satisfaction of construction clients in Saudi Arabia.	practice framework for improving client satisfaction in the Saudi Arabian construction industry (which is applicable to other construction industries) was developed. It was based on insights from the data collection and analyses as well as the literature review. The framework covers the key areas on which Saudi Arabian construction firms should concentrate in order to satisfy clients' requirements.	achievement is presented in Chapter 7 of this thesis. See Section 7.3).

Table 9.1 Achievement of research objectives

Table 9.1 above outlines the five objectives of this research and provides an indication of the sections of this thesis where the achievement of the objectives can be found. Overall, this research has achieved the key objectives leading to the achievement of the aim of this study. From the achievement of the objectives, it was identified that client satisfaction within the Saudi construction industry can be improved when contractors understand the factors that lead to dissatisfaction and channel their efforts towards dealing with these factors.

9.3 Conclusions of the research

This section of the thesis summarises the main conclusions of this research and how these conclusions relate to the research aim and objectives. Overall, this research draws seven main conclusions.

1. As shown in the discussion chapter of this thesis (Chapter 6), the issue of client satisfaction remains highly topical in the Saudi Arabian construction industry. This is due to the fact that many clients are either not entirely satisfied or partly dissatisfied with the projects and services they receive from the construction industry. This research concludes that the level of satisfaction of clients within the Saudi Arabian construction industry is low and that this can be due in part to the lack of understanding of what satisfies a client on the part of the contractors. In terms of the level of satisfaction, this research concludes that clients are mostly not satisfied with the process of completing their projects nor with the outcome of the processes.

2. In terms of the satisfaction of clients in relation to the three main measures of project performances (iron triangle), this research concludes that clients are mainly not satisfied with the quality of projects completed nor with the cost of completing those projects. In

terms of timely delivery of projects, it was identified that clients found their projects normally delayed by a month or more in some cases.

3. In terms of measures to understand and investigative the level of client satisfaction in the construction industry, this research concludes that majority of the construction companies in the Saudi Arabian construction industry do not have a formal process for measuring the level of client satisfaction. Currently satisfaction is mainly gauged by the reuse of the service of the contractor by the client or referral of the contractor by the client. Only a few companies have a formal process for taking views from clients in terms of satisfaction.

4. The main factors that contribute to client satisfaction within the Saudi Arabian construction industry are: effective financial management of the project; maintaining good communication between the clients and project team; use of good quality building materials; honesty of contractors; use of a skilled workforce; paying attention to detail; commitment to striving for perfection, health and safety, and proper planning and organisation. Outcomes from this research show that where clients see these factors present in their process of executing their projects, they feel satisfied with the process as they are sure the presence of such factors can lead to a smooth process and a better outcome. Out of these factors, the most important ones for the client are honesty and good communication between the project team and the client. This is because clients believe that with honesty and open communication, they are able to have a good understanding of the process.

5. The research also concludes that key factors leading to dissatisfaction of clients during the execution of construction projects were: late completion; cost overruns; lack of proper communication between project team and client; lack of commitment to agreed designs; use of an inexperienced workforce, leading to poor implementation practices; negligence in planning; and lack of commitment to health and safety issues. With commercial clients in particular, late completion was identified as having a huge impact on the benefits derived from the project and there was a high level of dissatisfaction where projects were not completed on time.

6. The research concludes that even though many factors were considered by clients as an influence on their satisfaction, this was not the case with contractors. For some contractors, the most important requirements for clients were to finish the project on time, within cost and to the standard of quality required. Quality was identified to be the most important factor for contractors, in terms of satisfying their clients. However, this meant

that contractors in some cases neglected other important factors which could help to improve the satisfaction of their clients. Factors that were found to be common between clients and contractors were effective communication, use of a skilled workforce and use of advanced technologies.

7. To ensure clients are satisfied, contractors in the Saudi Arabian construction industry should adopt a number of practices. These practices include building trust with the clients, client relationship management through honesty and commitment, health and safety practices, improving the use of technology, maintaining consistency in cost, training of employees, and quick response to client requests.

9.4 Contributions of the research

This research has collected and analysed empirical data from the construction industry in Saudi Arabia on the levels of client satisfaction. These contributions can be divided into two main areas: contribution to practice and contribution to knowledge.

9.4.1 Contribution to practice

In the quest by construction companies to improve the satisfaction of their clients with the projects they undertake, this research contributes a best practice framework which seeks to ensure that contractors understand the key factors to client satisfaction and put in place measures to ensure the effective use of these factors. A practical application of the framework produced by this research is provided through step-by-step guidelines for implementing the elements of the framework, which is intended to serve as a guide for construction companies in Saudi Arabia to ensure they fully meet and understand the needs of their clients and adopt the correct practices to achieve this. Suggestions and recommendations are provided for ensuring the construction companies are able to fully utilise the potential of this framework.

9.4.2 Contribution to knowledge

The approach taken by this research is intended to contribute to the current knowledge of client satisfaction within the Saudi Arabian construction industry, as well as construction industries elsewhere. Based on this research, factors that were not previously identified in the literature have been identified as new areas for further research: for example, honesty being the most important factor contributing to client satisfaction in the Saudi construction industry, as found through the use of qualitative means, and this helps in contributing to the knowledge in the area.

The best practice framework developed by this research has also produced new knowledge that can be further explored by researching better ways of ensuring contractors improve client satisfaction.

9.5 Practical implications of the research findings and framework developed

The results of this research have practical implications for client satisfaction within the construction industry. The first implication of the research findings is that contractors and clients do not always have the same perspective on client satisfaction. There is a need therefore for contractors to ensure they purposely make efforts to understand the needs of their clients and the level of satisfaction they seek.

As shown from the research, clients are generally interested in effective communication and honesty in terms of the relationship between them and the contractors. The practical implication of these findings is that no matter what practices or measures are adopted by the contractor, until this aligns with the expectations of the client (which can only be determined through open communication), there is a high likelihood that the clients will not be satisfied. This implies a requirement to have in place a process at the beginning of the project to obtain the key requirements they seek to achieve throughout the process and on completion of the project from the client.

Therefore, this makes the best practice framework proposed by this research an important one. Where contractors are able to identify the client's expectations of the project as well as the process at the initial stages of the project, this allows the contractors to align their efforts towards meeting these requirements.

Beyond the contractual obligation of ensuring that projects are completed in accordance with the required time, cost and quality, this research identified evidence that suggests that clients are satisfied when contractors offer them advice on the projects. This subsequently presents practical implications for measures to be adopted by the contractors.

9.6 Application and adaptability of the best practice framework

The best practice framework developed in this research (see Figure 7.1) serves to provide a contribution towards resolving the issues of low levels of satisfaction within the Saudi construction industry. However, even though the framework was developed based on data from the Saudi Arabian construction industry, this framework could also be applied to other construction industries within the Gulf region, as well as to those in Europe, America and Africa.

This is due to the fact that the framework has been designed to be adaptable to other construction industries. The key areas of the framework require actions that can be contextualised based on information from construction industries in other regions. It begins by identifying issues that prevent the achievement of client satisfaction, thus forming the basis for other actions required by the framework. This therefore presents the opportunity for contractors in other construction industries to adopt and adapt the framework to suit their local conditions and requirements.

9.7 Limitations of this research

Every effort was made to ensure this research produced relevant information and a worthwhile contribution to the area of client satisfaction in the construction industry. These efforts notwithstanding, there are a number of limitations for this research.

The biggest limitation of this research was the use of the qualitative approach, in which 30 clients as well as 30 project managers were involved in the collection of data. Although the use of the qualitative approach provided rich and deep insights into the problem, this approach is usually criticised for its inability to cover a more representative sample for the population being studied.

Another limitation of this research is the lack of testing of the framework which would have been achieved by allowing construction companies to use the framework on their projects. This would have helped to identify how best this framework contributes to client satisfaction and which areas within the framework may need modification in the long term.

9.8 Recommendations for future research

From the outcome of this research as well as its limitations, further research into the area of client satisfaction – using the results of this research as the basis – will add more knowledge to the subject area. Two key recommendations are made for future studies:

1 Considering the limitations of the present research, further studies can be undertaken using the framework produced from this. The framework could be used by firms of various sizes in the construction industry (small, medium or large) to discover the actual performance of the framework when applied to projects of varying calibre. This could lead to the development of a refined framework on the basis of firm size.

2 The use of a quantitative approach could have ensured that many more people took part in the research and that the results represented fully and properly the construction industry in Saudi Arabia. Further research on the subject using a quantitative approach, with the results of this research used as the starting point, is also recommended. This study could target representation from different regions within the whole of the Saudi Arabian construction industry.

9.9 Summary of Chapter 9

This chapter presented a detailed conclusion of the study in a manner that enabled the research question to be addressed. In this respect, it has been concluded that client satisfaction is a key issue in the Saudi Arabian construction industry because of inadequate outcomes, cost overruns and late delivery of the projects. Most construction companies do not follow a formal process for measuring the level of client satisfaction and so this cannot be monitored appropriately. Effective financial management of the project, maintaining good communication between the clients and project team, use of good quality building materials, honesty of contractors, use of a skilled workforce, paying attention to detail, commitment to services and duties, striving for perfection, health and safety, and proper planning and organisation, have been examined as the main factors that contribute to client satisfaction within the Saudi Arabian construction industry. It is thus concluded that for improved satisfaction of the clients, it is essential that contractors in the Saudi Arabian construction industry adopt some strategic practices that include building trust with the clients, client relationship management through honesty and commitment, health and safety practices, improving the use of technology, maintaining consistency in cost, training of employees and quick response to client requests.

The chapter also discussed the contribution of this study towards the research in this field, as well as practice and knowledge, and highlighted the practical implication of the research findings and the adaptability of the best practice framework developed in the study. Some recommendations have been provided in respect of the findings of the research which state that the framework can be used by construction companies from different levels of industry and further research targeting the entire Saudi construction industry is also recommended.

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APPENDICES

APPENDIX 1- Ethical Approval

Approved by Dr Subashini Suresh 19/10/2016

Single response: Ethical Approval Form (Faculty of Science and Engineering)

Survey input field	Respondent's answer

Name: Alshihre Fawaz

1. Please enter your surname and first name below. (SURNAME, FIRST NAME)

2. Please enter your University email address (e.g. M.Name@wlv.ac.uk)

[redacted]

3. Please enter the name of your Director of Studies, Principal Investigator or, for Principal Investigators, your line manager.

Chinyio, Ezekiel

4. Please enter date by which a decision is required below. (Note that decisions can take up to 4 working weeks from date of submission)

08/08/2016

5. Which subject area is your research / project located?

1. **Architecture and Built Environment**
2. Biology, Chemistry and Forensic Science
3. Engineering
4. Life Sciences
5. Mathematics and Computer Science
6. other

6. Please select your School

1. **School of Architecture and Built Environment**
2. School of Biomedical Science and Physiology
3. School of Biology, Chemistry and Forensic Science
4. School of Engineering
5. School of Mathematics and Computer Science
6. School of Pharmacy
7. Other (please specify below)

7. Does your research fit into any of the following security-sensitive categories? (For definition of security sensitive categories see RPU webpages (www.wlv.ac.uk/rpu) follow links to Ethical Guidance).

1. Commissioned by the military
2. Commissioned under an EU security call
3. Involve the acquisition of security clearances
4. Concerns terrorist or extreme groups
5. **Not applicable**

8. **Does your research involve the storage on a computer of any records, statements or other documents that can be interpreted as promoting or endorsing terrorist acts?**

1. YES
2. **NO**

9. **Might your research involve the electronic transmission (eg as an email attachment) of any records or statements that can be interpreted as promoting or endorsing terrorist acts?**

1. YES
2. **NO**

Approved by Dr Subashini Suresh 19/10/2016

10. Do you agree to store electronically on a secure University file store any records or statements that can be interpreted as promoting or endorsing terrorist acts. Do you also agree to scan and upload any paper documents with the same sort of content. Access to this file store will be protected by a password unique to you. Please confirm you understand and agree to these conditions?

1. **YES I understand and agree to the conditions**
2. NO (please explain below)
3. I do not understand the conditions

11. **You agree NOT to transmit electronically to any third party documents in the University secure document store?**

1. **YES I agree**
2. NO I don't agree

12. **Will your research involve visits to websites that might be associated with extreme, or terrorist, organisations? (for definition of extreme or terrorist organisations see RPU webpages (www.wlv.ac.uk/rpu) and follow links to Ethical Guidance.**

1. YES (Please outline which websites and why you consider this necessary)
2. **NO**

13. You are advised that visits to websites that might be associated with extreme or terrorist organisations may be subject to surveillance by the police. Accessing those sites from university IP addresses might lead to police enquiries. Do you understand this risk?

1. **YES I understand**
2. NO I don't understand

14. What is the title of your project?

Best Practices for Client Satisfaction in the Saudi Construction Industry

15. **Briefly outline your project, stating the rationale, aims, research question / hypothesis, and expected outcomes. Max 300 words.**

This research involves using analytical methods to identify the best practices for client satisfaction within the Saudi construction industry. Identifying satisfaction as an important determinant of project success due to its association with competitive advantage, profitability and sustainability, this research is set to identify construction practices that aid client satisfaction. Satisfaction theories and models as well as a comparative analysis of construction practices in diverse geographical locations have been explored to identify best practices that enhance client satisfaction in construction. In the Kingdom of Saudi Arabia, the construction industry contributes greatly to economic growth and development and the research context is on residential and commercial buildings as well as infrastructure development projects which provide an adequate sample of schemes where clients have expressed dissatisfaction with the outcomes of projects.

Research Aim and objectives
The main aim of the research is to explore various practices that can be adopted by the contractors in the Saudi Arabian construction industry in order to ensure cost effectiveness and timely completion of projects and that way maximise the frequency and level of client satisfaction.
Research objectives
• To critically review various researches previously conducted on the construction industry in order to establish the persisting issues and contractors' practices in the construction industry of Saudi Arabia.
• To use the literature review to identify the factors that client satisfaction in the Saudi Arabian construction industry.
• To obtain and analyse primary data, in order to identify the socio-cultural, economic, and technical factors that lead to greater satisfaction among construction clients in Saudi Arabia.
• To obtain and analyse primary data regarding the adoption and implementation in Saudi Arabia of client-satisfaction models from other countries
• To use the Results of the data analysis to develop and test a framework for greater client satisfaction in Saudi Arabian construction.
• Draw conclusions from the foregoing and write thesis to wrap-up the research.

Approved by Dr Subashini Suresh 19/10/2016

16. How will your research be conducted?
Describe the methods so that it can be easily understood by the ethics committee. Please ensure you clearly explain any acronyms and subject specific terminology. Max 300 words

This research adopts a qualitative research methodology as the key method of inquiry. Taking an interpretivist philosophical stand, the research is aimed at understanding human phenomenon based on interpreting opinions on particular issues. The interpretivist approach obtains information through dialogue between researchers and the research participants and constructs meaningful reality through an analysis of the multiple views of the dialogue (Yin, 2014). Hence a survey using interviews would be employed to obtain primary data. Consequently, 60 project managers and 60 clients involved with three categories of construction projects are scheduled to participate in this research. The categories involve small scale, medium scale and large scale construction projects. These categories are characterised by their organisational strength, number of construction projects handled, as well as the cost of the construction project. 20 Participants from each of the three categories mentioned above would be employed in this research. The participants would be obtained from a list of construction companies operating in Saudi Arabia, and an introductory letter would be handed over to the participants. This would state the purpose of the research, the guidelines on participation, the respondent's right to participation, and further seek their consent.

The interviews would be recorded and transcribed to obtain a textual description of the respondent's opinion on best practises that enhance client satisfaction in the Saudi construction industry. These texts would then be subjected to thematic analysis, identifying similarities and differences in opinions and creating themes based on the transcribed texts. The findings are aimed at making recommendations on best practices that are beneficial to client satisfaction within the Saudi construction industry. Validation of the findings would be provided by a questionnaire survey on clients within the industry to ascertain if the recommendations from the interviews support client satisfaction or if there are any additions.

17. **Is ethical approval required by an external agency? (e.g. NHS, company, other university, etc)**

1. **NO**
2. YES - but ethical approval has not yet been obtained
3. YES - see contact details below of person who can verify that ethical approval has been obtained)

18. What in your view are the ethical considerations involved in this project? (e.g. confidentiality, consent, risk, physical or psychological harm, etc.) Please explain in full sentences. Do not simply list the issues. (Maximum 100) words)

The key ethical considerations involved in this project are confidentiality, consent and data protection. The research however poses no physical risk or psychological harm to the participants. Confidentiality entails ensuring that the data provided by the participants are strictly for research purposes, not for any other investigation. Consent entails informing the participants on their rights to participate in the research, stating that it is voluntary and can be discontinued at any time. However, acceptance to participate would be obtained through a signature in the consent section of the survey tool. Data protection involves ensuring that the personal information of the participants such as name and contact details would be not be disclosed to anyone.

19. **Have participants been/will participants be, fully informed of the risks and benefits of participating and of their right to refuse participation or withdraw from the research at any time?**

1. **YES (Outline your procedures for informing participants in the space below.**
2. NO (Use the space below to explain why)
3. Not applicable - There are no participants in this study

-A letter of introduction stating the relevance of the research would be provided.
The research itself poses no risk to participants as only their opinions are being sought. As participants would answer questions about how to increase client satisfaction, their opinions would not pose any risk to any stakeholders. This very low risk will be highlighted to the participants
-A section informing participants on the voluntary nature of their participation and a consent signature to acknowledge participation by participant.
-A section asking if participants would need the final report sent to them.

20. Are participants in your study going to be recruited from a potentially vulnera

Approved by Dr Subashini Suresh 19/10/2016

group? (See RPU website (www.wlv.ac.uk/rpu) and follow link to Ethical Guidance pages for definition of vulnerable groups)
1. YES (Describe below which groups and what measures you will take to respect their rights and safeguard them) 2. **NO**

21. How will you ensure that the identity of your participants is protected (See RPU website (www.wlv.ac.uk/rpu) and follow link to Ethical Guidance pages for guidance on anonymity)
It is important to maintain the confidentiality of the data collected from various primary and secondary sources. -Codes will be used when recording interviews and inputting data on the computer. For example, CS1, CS2, CS3, to represent respondent 1, 2 and 3 respectively. These codes would only be known to I and my supervisors. -The survey tool has been designed to extract information on the characteristics of the participant, rather than personal details. -Un-marked postal envelopes would be used for postal communication. -Only myself and my supervisors will have access to personal details of the respondents.
22. How will you ensure that data remains confidential ((See RPU website (www.wlv.ac.uk/rpu) and follow link to Ethical Guidance pages for definition of confidentiality)
Raw data would be destroyed at the end of the research. The final report will only contain inference codes from the collected data, no personal information will be used. The analysis will use coded data and thus hide the identities of respondents.

23. **How will you store your data during and after the project? (See RPU website (www.wlv.ac.uk/rpu) and follow link to Ethical Guidance pages for definition of and guidance on data protection and storage).**
Confidential files would be used to store the personal information and data collected, which would be protected with strong passwords. These passwords will not be revealed to anyone. Information would be coded and made available to I and my supervisors only and would be destroyed once the research is completed. A backup of files will also help to ensure that there are fewer chances of losing the data in the course of the research and that would also be securely destroyed on completion of the research.

Fawaz Alshihre Date: 2016/09/20 

APPENDIX 2A – COVER LETTER TO PARTICIPATE IN ACTION RESEARCH

Faculty of Science and Engineering
University of Wolverhampton
MI Building
City Campus Norh
Wulfruna Street
Wolverhampton WV1 1ly
United Kingdome

10th September 2017.

Dear Sir,

INVITATION TO PARTICIPATE IN THE INTERVIEW

I am a research student at the University of Wolverhampton undertaking a Ph.D. research on the development of a framework for enhancing Clients' satisfaction in the Saudi Arabian construction industry. The doctoral research is sponsored by the Saudi Culture office, Ministry of Education, Saudi Arabia. I would like to invite you to participate in an interview, as part of the research, which aims to identify the best practices that could be used to enhance clients' satisfaction in Saudi construction industry.

A copy of the interview is attached. The purpose of the interview is to obtain your opinion on the best practices that can be adopted to satisfy construction clients. The interview is estimated to last for about 50 minutes. Data obtained from the interview will be treated with strict confidence and used for academic purposes only. No records will bear your company's name. The interview will be held preferably between November and January 2017.
If you have any questions or queries, please do not hesitate to contact me. Thank you very much in advance for your time and valuable assistance in this research.
Yours sincerely,
Fawaz Alshihre

Doctoral Research Student
Faculty of Science and Engineering
University of Wolverhampton
Wolverhampton
Mob: [redacted]
Email: [redacted]

APPENDIX 2B – Interview Questions for Project Managers

Adopting Best Practices for Greater Client Satisfaction in the Saudi Construction Industry

Interview Questions for Project Managers

Introduction

The primary objective of this interview is to gain an insight into client satisfaction in the Saudi Construction Industry. For this reason, the project managers of leading Saudi construction companies will be interviewed to shine a light on practices and strategies within their respective companies that enable them to satisfy their clients completely.

Background Questions

Q1. What is your name?

Q2. What is the name of the company you work with?

Q3. How long have you been working with this company?

Q4. What is the size of your company in terms of the number of clients and number of people employed?

Q5. What is the annual turnover of your construction company?

Q6. Can you describe briefly the different types of projects your construction company is presently engaged in?

Q7. What is the size of the projects you construct?

Q8. What is the highest price of project you have carried out?

Possible factors influencing client satisfaction

Effective financial management

Q9. How do you think effective financial management help in establishing financial stability for construction clients in the Saudi Construction Industry?

Q10. What practices do you follow as a construction manager to ensure effective financial management within the company?

Q11. In your opinion, what are the positive impacts of efficient financial management practices on the satisfaction of construction clients?

Using advanced technology

Q12. What is the significance of using advanced construction technology in Saudi Arabia by contractors?

Q13. Does the use of advanced technology influence client satisfaction?

Skilled workforce

Q14. Do you think the skilled labour in the Saudi Construction Industry contributes to the overall performance in your projects?

Q15. To what extent does the presence of a skilled workforce within the construction industry affect the satisfaction of your clients?

Q16. As a construction manager, how often do you initiate programs to enable the enhancement of skills of the workforce employed by your company?

Project waste management

Q17. Do you think that companies which follow good waste management techniques perform well in terms of efficient project delivery?

Q18. What waste management practices do you apply in your projects?

Q19. How much does the implementation of waste management techniques influence the satisfaction of construction clients in Saudi Arabia?

Weather and location

Q20. Do you think that weather impacts on your performance on construction projects?

Q21. How much are your clients concerned about the impact of weather on construction?

Q22. Is project location a big factor to you in terms of achieving the requirements of clients?

Time

Q23. Do you think that time constraints present a significant challenge to construction contractors in Saudi Arabia?

Q24. Are construction clients satisfied with the time in which their projects are completed?

Communication

Q25. In your opinion, how effective is the flow of communication between Head office and project managers?

Q26. How essential is effective communication in enabling the project team to render projects to the desired level of client satisfaction?

Client relation management

Q27. What aspects should be considered in client relationship management by construction managers in order to improve the level of client satisfaction?

Q28. How important is relationship management to your clients?

Health and safety

Q29. On a scale of 1-10, how would you rate the commitment of your organization to health and safety? (1 is not committed and 10 is fully committed)

Q30. How do you think that the level of your commitment to health and safety contributes towards affecting the level of satisfaction of your clients?

Strategic legal issues

Q31. Do you think that that the construction regulations in Saudi Arabia are important for contractors to satisfy their clients?

Q32. Why must legal issues of a construction business necessarily be addressed in order to improve client satisfaction?

Relevant practices

Q33. Which of these relevant practices does your company adopt for the purpose of ensuring desired project outcomes?

	Relevant practices	Not used	Used sometimes	Used always
1.	ISO 9002			
2.	Total Quality Management			
3.	Business Project Reengineering			
4.	Business to Business			
5.	Benchmarking			
6.	Other good Practice? Please state …… ……			
7.	Saudi Building Code			

Q34. Please answer questions I to X below in respect of the good practices in Q.29 above:

I. How does effective financial management impact on good practices?

II. How does using advanced technology impact on good practices?

III. How does using a skilled workforce impact on good practices?

IV. How do time constraints in projects impact on good practices?

V. How does the level of communication between the project team impact on good practices?

VI. How does client relationship management impact on good practices?

VII. How does the level of commitment to health and safety regulations impact on good practices?

VIII. How does the consideration of the strategic legal issues impact on good practices?

IX. How does effective waste management in your projects impact on good practices?

X. What is the impact of weather and location on good practices?

Q35. In your own opinion, what factors influence client satisfaction?

Q36. What criteria do you consider for measuring the degree of client satisfaction?

Q37. How many clients are satisfied with your services?

Q38. What do you think construction companies should do to improve the satisfaction of construction clients?

End of interview. Thank you for your time.

APPENDIX 3 – Interview Questions for Private Sector Clients

Adopting Best Practices for Greater Client Satisfaction in the Saudi Construction Industry

Interview Questions for Private Sector Clients

Introduction

The following questions focus on collecting data from clients of the construction industry in Saudi Arabia. The questions mainly highlight the relationship between the functioning criteria of the construction business and client satisfaction. The interviewees are free to skip any question they want. The researcher will ensure that all the data collected will be kept confidential by following the University of Wolverhampton's procedures. The interviews will be audio-recorded and later transcribed to enable analysis. The questions are in two parts: background questions and client-specific questions. These questions are as follows:

Background Questions

Q1. What is your name?

Q2. Do you consider yourself a private client or an organization?

Q3. How many projects have you procured?

Q4. What types of construction buildings or facilities were procured?

Q5. For how long have you been procuring construction projects?

Q6. What size of projects does/ did you procure?

Q7. What is the highest price of project you have procured?

Q8: Do you have any experience of working in an organization involved with construction industry?

Q9: Did the construction company complete the project before or after the deadline?

Q10: Are you the end user of the building/facility that was constructed or is someone else using it?

Q11: What is your overall level of satisfaction with the construction company that carried out the project?

Please rate your answer on a scale of 1 to 10: where 1 = dissatisfaction and 10 = complete satisfaction. satisfied.

Quality

Q12: Please explain the significance of quality management practices undertaken by construction companies, in relation to the satisfaction of construction clients?

Q13: What are the basic elements of quality in your projects?

Q14: How satisfied are you with the quality of the construction project produced for you?

Rate your answer on a scale of 1 to 10: where 1=dissatisfaction and 10 = complete satisfaction.

Q15: Please state and explain some common issues which can be faced by you as a client due not achieving quality in your projects.

Client relationship management

Q16: Is client relationship management effective in enhancing your level of satisfaction?

Q17: What aspects should be considered in client relationship management by construction managers to improve your level of satisfaction?

Q18: What is your assessment of the level of quality of relations with the contractor before the project started?

Please rate your answer on a scale of 1 to 10: where 1 = dissatisfaction and 10 = complete satisfaction.

Q19: What is your assessment of the level of quality of relationship with the contractor during the project?

Time

Q20: Please explain the significance of time to you, in terms of client satisfaction.

Q21: Depending on your experience, what are the factors that help to deliver your projects on time?

Q22: What are the factors that have delayed the delivery of your project/s if applicable?

Q23: How satisfied are you with the time performance of your construction projects?

Please rate your answer between 1 to 10: where 1 = dissatisfaction and 10= complete satisfaction.

Cost

Q24: Why do you think that maintaining consistency in cost is necessary for gaining client satisfaction?

Q25: How do you evaluate the pricing of the project compared with the service provided?

Q26: What are the factors that control the pricing of the project according to your knowledge?

Q27: How satisfied are you with the contractor's performance on your project's regarding price?

Please rate your answer between 1 to 10: where 1 = dissatisfaction and 10 = complete satisfaction.

Client satisfaction

Q28: What practices do you think construction companies can adopt to improve the satisfaction levels of clients?

Q29: In your opinion what are the other factors apart from time, cost and quality that can play a vital role in increasing the level of client satisfaction?

Q30: What other factors do you think influence client satisfaction?

End of interview. Thank you for your time.

APPENDIX 4 – NVIVO Samples

05/04/2018 11:37

Source Summary
CLIENT SATISFACTION IN RSA CONSTRUCTION INDUSTRY
05/04/2018 11:37

Total Words in Source	Total Paragraphs in Source	Number of Nodes Coding Source	Coded Percentage of Source	Number of Text References	Number of Audio Video References	Number of Image References
Document						
Internals\\CLIENTS\\1						
1092	186	85	0.8896	148	0	0
Internals\\CLIENTS\\10 (2)						
988	173	62	0.8790	120	0	0
Internals\\CLIENTS\\11 (2)						
970	193	62	0.8761	120	0	0
Internals\\CLIENTS\\12 (2)						
1047	194	60	0.8840	116	0	0
Internals\\CLIENTS\\13 (2)						
1081	193	62	0.8842	124	0	0
Internals\\CLIENTS\\14 (2)						
1217	186	62	0.8931	120	0	0
Internals\\CLIENTS\\15 (2)						
1038	182	60	0.8808	116	0	0
Internals\\CLIENTS\\16 (2)						
1165	184	58	0.8916	112	0	0
Internals\\CLIENTS\\17 (2)						
1131	191	58	0.8895	112	0	0

Reports\\Source Summary Report

Total Words in Source	Total Paragraphs in Source	Number of Nodes Coding Source	Coded Percentage of Source	Number of Text References	Number of Audio Video References	Number of Image References
Internals\\CLIENTS\\18 (2)						
1145	192	58	0.8866	112	0	0
Internals\\CLIENTS\\19 (2)						
1057	178	58	0.8817	112	0	0
Internals\\CLIENTS\\20 (2)						
1139	185	56	0.8890	108	0	0
Internals\\CLIENTS\\21						
1188	206	29	0.8945	56	0	0
Internals\\CLIENTS\\22						
1124	193	29	0.8912	56	0	0
Internals\\CLIENTS\\23						
1111	207	29	0.8895	56	0	0
Internals\\CLIENTS\\25						
1150	185	29	0.8920	56	0	0
Internals\\CLIENTS\\26						
1168	179	28	0.8886	54	0	0
Internals\\CLIENTS\\27						
1215	199	29	0.8920	56	0	0
Internals\\CLIENTS\\28						
1040	195	29	0.8855	56	0	0
Internals\\CLIENTS\\29						
1126	198	29	0.8905	56	0	0