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Faculty of Engineering and the Built Environment

School of Construction Economics and Management

DETERMINING ORGANISATIONAL STRUCTURES THAT ENCOURAGE EMPLOYEE INVOLVEMENT: CASE OF LARGE CONSTRUCTION COMPANIES IN SOUTH AFRICA

By

Xolisa Mnyani

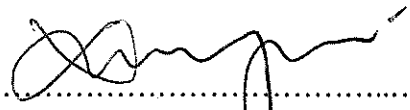
A research report submitted in partial fulfilment of the requirements for the degree of Master of Science (Building) in Project Management

Supervised by Dr. Senthilkumar Venkatachalam

20 August 2015

DECLARATION

I declare that this research report is my own unaided work. It is being submitted to the School of Construction Economics and Management, in partial fulfilment of the requirements for the degree of Master of Science (Building) in Project Management. It has not been submitted for any degree or examination in this or any other university.



Xolisa Mnyani

20 AUGUST 2015

Date

DEDICATION

To my late Dad, Mr Makhwenkwe Willard Kratshi, although you were not always around, I still cherish the moments we shared together.

To my rock – my Mother, Ms Kholiswa Felicia Mnyani, for raising a boy to manhood and giving me the necessary resources to succeed in life.

To my Wife of nine years, Hlamalani Sinovuyo Mnyani, for her tireless support and encouragement to complete this project.

To my beautiful three year old Daughter, Langelihle Kwetsima Mnyani, I hope you will grow to appreciate and value contributing knowledge to society.

To my Father, God, who looked after me while I was in the wilderness, and who is able to pull me out of the deepest of pits. To Him be all the Glory for now and forever.

"There is at the end of the day only one thing that distinguishes one corporation from another – its employees" (Khattak, Iqbal and Khattak, 2013).

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ABSTRACT

This research study sought to explore typical organisational structures that are prevalent in South African large construction companies, and investigate their behaviour towards employee involvement. The study proceeded by providing an understanding of the relationship between organisational structures and employee involvement, and draws general deductions of the influence of employee involvement on organisational performance.

The aim of this research was to investigate the level of employee involvement on various organisational structures as employee involvement was felt as one of the contributing factors towards the success of any construction company. It was acknowledged that inappropriate organisational design leads to poor involvement of employees.

The scope of this research is limited to the selected five large construction companies in South Africa. The research approach to the study was quantitative in nature, collected data was statistically analysed and presented through appropriate means. Research techniques employed for data collection were surveys and interviews. Surveys were completed by employees, while interviews were conducted with management level staff using a self-administered questionnaire. A sample population of 71 respondents was obtained from a study response rate of 33%.

The research findings confirmed the existence of a relationship between organisational structures and employee involvement. It was also revealed that from the large construction companies investigated, 60%, use hybrid (a combination of divisional and geographical) structures as their organisational structure. Two of the three (67%) hybrid structured companies achieved the best organisational performance measured over a period between 2008 and 2012.

In conclusion, hybrid structures have proven to be the most appropriate organisational structures that are encouraging to employee involvement. From the findings, companies structured in this manner achieved the best financial results by becoming the first and

second achievers in the overall financial assessment. Companies can be similarly structured, but may differ substantially in their effectiveness because organisational success lies in employee involvement and the quality of the human resources at its disposal.

When implemented properly, employee involvement impacts the customer experience and subsequently, the overall organisational performance by means of high productivity and profitability. This study makes a modest contribution to the understanding of the relationship between employee involvement and organisational performance in the South African construction industry. Similarly to the previous studies in other sectors and countries, the findings of this study provided empirical evidence that employee involvement has an influence on organisational performance.

The implications of this study to the South African construction industry are as follows: construction companies must constantly seek for opportunities to participate on projects outside the country. There are substantial work opportunities that are available in other developing economies such as: Nigeria, Ghana, Kenya, Congo, etc. At this point in time, the South African construction industry is not able to sustain all its role players.

The South African government has to finally unlock the infrastructure expenditure plans that have been on the pipeline for a long time. This country as a developing economy still reflects huge infrastructural backlogs, and this expenditure could ignite the much needed growth and development for the entire economy.

South Africa's large construction companies are to expand and show real growth in as far as competing at global stage with some of the biggest construction firms in the world. This would lead to growth and expansion of all construction companies and effectively the development of the entire construction industry. The attempt to attain best practise international standards will also lead to improvements in poor performances that have constantly plagued the industry in the recent past.

Keywords: Organisational Structures, Employee Involvement, Organisational Performance, Construction Industry, South Africa

LIST OF FIGURES

Figure 2.1 Example of a Functional Structure.....21

Figure 2.2 Example of a Divisional Structure.....23

Figure 2.3 Example of a Geographical Structure.....24

Figure 2.4 Example of a Matrix Structure.....26

Figure 2.5 Net Profit Margins over a Five Year Period.....50

Figure 2.6 Conceptual Framework of Literature Reviewed.....52

Figure 3.1 Research Onion Illustration.....55

Figure 4.1 Years of Service.....64

Figure 4.2 Formal Qualifications.....65

Figure 4.3 Status in the Company.....66

Figure 4.4 Functional Divisions.....67

Figure 4.5 Age Distribution.....68

Figure 4.6 Number of Management Layers.....70

Figure 4.7 Management Levels Distribution.....71

LIST OF TABLES

Table 2.1 Characteristics of Organisations.....29

Table 2.2 Shariat *et al* (2013) Research Study Summary.....34

Table 2.3 Vazifedoust, Nasiri and Norouzi (2012) Research Study Summary.....35

Table 2.4 Sofijanova and Zabijakim-Chatleska (2013) Research Study Summary...45

Table 2.5 Khattak, Iqbal and Khattak (2013) Research Study Summary.....46

Table 2.6 Kuye and Sulaimon (2011) Research Study Summary.....48

Table 3.1 Cronbach's Alpha Internal Consistency Guideline.....60

Table 4.1 Gender Breakdown.....68

Table 4.2 Management Breakdown.....69

Table 4.3 Number of Employees Breakdown.....70

Table 4.4 Agreeability Ratios Guideline.....72

Table 4.5 Organisational Structure (Manager's Responses Only).....72

Table 4.6 Organisational Performance (Manager's Responses Only).....73

Table 4.7 Employee Involvement.....74

Table 4.8 Organisational Structure.....75

Table 4.9 Employee Involvement.....76

Table 4.10 Organisational Performance.....77

Table 4.11 Structural Essential Elements.....78

Table 4.12 Employee Essential Elements.....79

Table 4.13 Organisational Essential Elements.....79

Table 4.14 Financial Results over a Five Year Period.....81

Table 4.15 Revenue Growth Scoring.....82

Table 4.16 Net Profit Margin Ratio Scoring.....82

Table 4.17 Liquidity Ratio Scoring.....83

Table 4.18 Net Worth (Equity) Scoring.....84

Table 4.19 Overall Scoring Results.....84

Table 4.20 Financial Ranking of Companies.....85

Table 4.21 Characteristics of Employee Involvement.....86

Table 4.22 Comparison between Research Findings and Literature Reviewed.....89

Table 5.1 Summary of Key Arguments and Implications..... 96

DETERMINING ORGANISATIONAL STRUCTURES THAT ENCOURAGE EMPLOYEE INVOLVEMENT: CASE OF LARGE CONSTRUCTION COMPANIES IN SOUTH AFRICA

Xolisa Mnyani

TABLE OF CONTENTS

DECLARATION.....ii
DEDICATION.....iii
ACKNOWLEDGEMENTS.....iv
ABSTRACT.....v
LIST OF FIGURES.....vii
LIST OF TABLES.....viii
TITLE PAGE.....ix

CHAPTER 1: INTRODUCTION

1.1 Introduction
1.2 Background of the South African Construction Industry.....1
1.3 Formation of Organisational Structures.....1
1.4 Human Capital Challenges.....4
1.5 Problem Statement.....8
1.6 Research Aim and Objectives.....9
1.7 Research Questions.....10
1.8 Scope and Context of Study.....11
1.9 Research Rationale.....11
1.10 Overview of Research Approach.....13
1.11 Ethical Considerations.....14
1.12 Research Report Outline.....14
1.13 Conclusion.....15

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction.....17
2.2 Background of Literature.....17
2.3 South African Construction Industry Performance.....18
2.4 An Overview of Selected Organisational Structures.....19
2.4.1 Functional Structure.....20

2.4.2 Divisional Structure.....22
2.4.3 Geographical Structure.....23
2.4.4 Matrix Structure.....25
2.4.5 Summary of Organisational Structure Designs..... 26
2.5 The Future of Organisational Structure Designs..... 27
2.6 Characteristics of Organisations..... 28
2.7 The Concept of Employee Involvement.....30
2.7.1 Benefits of Employee Involvement.....31
2.7.2 Organisational Structure and Employee Involvement Relationship.....33
2.8 Organisational Performance.....38
2.8.1 Financial Performance as a Measure of Organisational Performance.....39
2.8.2 Description of Financial Analytical Techniques.....40
2.9 Employee Involvement and Organisational Performance Relationship.....44
2.9.1 Organisational Performance in South Africa.....49
2.9.2 Summary of Organisational Performance.....51
2.10 Literature Review Framework.....52
2.11 Conclusion.....52

CHAPTER 3: METHODOLOGY

3.1 Introduction.....54
3.2 Research Design.....54
3.3 Research Strategy and Techniques.....57
3.4 Sample Selection.....59
3.5 Validity and Reliability.....59
3.6 Data Collection.....60
3.7 Data Analysis.....61
3.8 Research Limitations..... 61
3.9 Conclusion..... 62

CHAPTER 4: DISCUSSION OF RESULTS

4.1 Introduction.....63

4.2 Reliability of Data Analysed.....63

4.3 Demographic Profile of Respondents.....63

4.4 Discussion of Quantitative Results.....71

4.5 Confirming the existing relationship between Organisational Structures and Employee Involvement..... 77

4.6 Discussion of Financial Results.....80

4.7 Answers to Research Questions.....85

4.8 Comparison between Research Findings and Literature Reviewed.....89

4.9 Conclusion..... 92

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction.....93

5.2 Key Findings.....93

5.3 Summary of Conclusions..... 94

5.4 Recommendations.....94

5.5 Implications of the Study.....96

5.6 Conclusion..... 97

5.7 Further Research Areas.....97

LIST OF REFERENCES..... 98

Appendix A: Cover Letter and Questionnaire.....104

Appendix B: Cronbach's Alpha Reliability Results.....111

Appendix C: Agreeability Ratio Analysis.....112

CHAPTER 1
INTRODUCTION

1.1 Introduction

The purpose of this research report is to investigate the level of employee involvement on various organisational structures utilised by large construction companies in South Africa. This chapter discusses the background of the South African construction industry, the formation of organisational structures and human capital challenges prevalent to large organisations.

The research focus is presented in the form of the problem statement, research aim and objectives, and research questions. The scope and context of the study is detailed and the motivation for undertaking the research. An overview of the research approach is offered and applicable ethical considerations drawn out for the research. This chapter concludes by outlining the research report structure to be followed and a summary of the subsequent chapters to be discussed.

1.2 Background of the South African Construction Industry

The construction industry plays an important role in the economy of South Africa. Although the industry's contribution (3.8 percent was the lowest contributor in 2011) to the gross domestic product (GDP) has shrunk in the past few years, it still remains an active and important economic participant (Construction Industry, Report No.P5002, 2012). The Construction Industry Report highlights that in 2011, the industry reflected a total income of R268 100 million and expenditure of R257 157 million. Large enterprises (those with annual turnover exceeding R52 million) contributed about 64 percent (R171 584 million) to the total income.

Despite being the lowest contributor to the GDP, the formal construction industry employs a total of 479 700 people, with about 42 percent (201 474) of those workers employed by large enterprises. The proportion of males is 427 856, which is about 89 percent of the total population while females account for 51 844 at about 11 percent (Construction Industry, Report No.P5002, 2012).

This industry is underpinned by strong public infrastructural expenditure, and the government has proposed the following infrastructure budgets: a current budget of R844 million (to be spent over the next 3 years), while R642 million was spent in the last 3 years (Budget Review, 2012).

The Budget Review (2012) indicates that a whopping R3.6 trillion has been budgeted for infrastructure spending over the next 15 years. Government and state owned entities' spending amounts to about 42 percent of the entire domestic construction income. It is generally expected that this infrastructure expenditure will ensure growth and development in the construction industry and the country as a whole.

With this infrastructure spending in mind, it is also noted that the industry is swarmed with 'micro to medium' enterprises (those with annual turnover below R6 million and up to R52 million) which contributed about 36 percent (R96 516 million) of the total income in 2011 (Construction Industry, Report No.P5002, 2012).

Most construction companies are in the 'micro to medium' category, which cushions them from challenges associated with execution of unique, large and complex projects. In fact, construction companies that are able to claim the 'large' category stature are a handful in South Africa. There are five such companies in existence (commonly known as the 'big five'), and are listed companies on the Johannesburg Securities Exchange (JSE).

All these companies despite being active in the local market have expanded onto the international market and are very competitive at a global stage. Clayton and Fisher (2006) argue that globalisation has contributed to increase in competition, and technological changes have created a greater need for innovation, coordination and integration across organisations in order to improve efficiency. Thus, as suggested by the above authors, this progression does require these construction companies to review the way they are structured.

It goes without saying that the companies in question have had to adjust their business approach in order to service their global market effectively. Shariat *et al.* (2013) suggests that employees and organisations should be constantly looking for the best

practises and procedures in order to adapt to their changing environment. Therefore, South African companies need to govern and gauge themselves against international standard of practise if they are to enjoy success at global level. One element of keen interest to this research comes from the fact that these construction companies are not only large in scale (as suggested by the title of this research) but are also global players. This becomes significant because it emphasises the need to adopt a strategy that works both locally and internationally for these companies to be successful.

This research specifically focuses on the aspect of organisational structure, management studies have proposed a number of organisational structures available for companies to use as suited to their business strategy, process flow and functional requirements. Most companies attempt to utilise an organisational structure that seeks to involve their employees and achieve performance as defined by their own policies (Lawler, 2001). However, not all construction companies in South Africa can be said to have engaged employees, it is therefore imperative that the level of employee involvement is measured and related to the organisational structure utilised by the organisation.

Meijaard, Brand and Mosselman (2002) argue that large organisations usually adopt a structure that strives to address imminent operating needs and offer a better response to challenges foreseen. Unfortunately, this approach does not always ensure that the organisation employs the most suited organisational structure. In his research, Robbins (2002) concluded that an organisational structure has a bearing on employee's attitude and behaviour, and similarly the output of the organisation. Robbins' conclusion suggests that the employee aspect has a critical role to play in organisational welfare. Oyewobi (2014) asserts that for construction companies determined to be leaders in the industry, it is sensible for them to adopt a structure that empowers employees to contribute effectively so as to realise the maximum output for the company through business operations.

Having set the scene by highlighting the background of the South African construction industry, the next section will describe the formation of organisational structures that can be used by construction companies.

1.3 Formation of Organisational Structures

An organisational structure, is necessary if two or more people are involved in the business (Stokes, 2005). DuBrin, Ireland and Williams (1989) describe an organisational structure as formal, stated set of relationships between various departments and business units in a company. Traditionally, an organisational structure was a 'pyramid' shape with layers from top down. The recent trend is to have a less hierarchical structure, and that has consequently reduced the number of 'wasteful' layers.

The structure of every organisation is unique in some respect, but all organisational structures develop or are consciously designed to enable the company to accomplish its work. However, it is common that organisational structures will evolve as the company grows and changes over a period of time (Robbins, 2002). Oyewobi *et al.* (2013) stressed that the implementation of relevant organisational structure is a prerequisite for achieving business strategic goals, and identifying fresh opportunities and translating business ideas into realities. In short, whether by design or by default, an organisational structure needs to serve the business in the most effective manner.

One of the ways to explain the structure of a company is through an organisational chart. The organisational chart usually shows connecting lines indicating who is accountable to whom, and who has the responsibility for which division. It does not tell everything about the company such as the communication channels and liaising between departments but it is a useful conceptual tool that can be used to depict the overall picture of the company, and how all its parts fit together (DuBrin, Ireland and Williams, 1989). The chart is only a visual tool that gives a snapshot into the organisation, but employees can attest that the reporting responsibilities are not always followed as depicted by it, because some organisations have accommodated flexibility in their business approach.

Taking the organisational chart into context, large construction companies typically employ many people when compared to their counterparts in other sectors due to the labour intensive operational methods. Their sizes command that they utilise lots of human capital to achieve their goals. Lawler (2001) argue that human capital is critical to the core competencies and organisational capabilities. Organisations require the right

kind of human capital in order to be sustainable. In addition to needing human capital that has the knowledge, skills and ability to perform, they also require individuals who are committed to the ultimate success of the organisation.

The next section will highlight some of the human capital challenges that develop after the formation of the organisational structure.

1.4 Human Capital Challenges

It is hardly surprising that there is an increasing emphasis on human capital and a dramatic increase in the degree which organisations compete for talented human capital Stiles and Kulvisaechana (2005). Stiles and Kulvisaechana (2005) further pointed out that the emphasis on human capital in organisations reflects the view that market value depends less on tangible resources, but rather on intangible ones, particularly, human resources.

Recruiting and retaining the best employees, however, is only part of the equation. The organisation also has to leverage the skills and capabilities of its employees by encouraging individual and organisational learning, and create a supportive environment where knowledge can be created, shared and applied (Stiles and Kulvisaechana, 2005). It is said that the main source of competitive advantage today, does not lie in the mere use of technology but is rooted in dedication, innovation, positive thinking, and commitment to quality and workforce capabilities (Shariat *et al.*, 2013). These employee issues have started to come to the forefront and are pressurising organisations to take a stance on how they want to treat their employees.

The above arguments can be summed up into two key elements that affect organisations, 1) Organisation-employee fit, and, 2) Employee contribution. It must be said that organisation-employee fit and employee contribution are significant to the understanding of the concept of employee involvement that is addressed by this study. Apostolou (2000) defined employee involvement as a process of empowering employees to participate in decision making and improvement activities appropriate to their levels in the organisation. This research will also use the term 'employee involvement' to focus on the ability that employees possess in decision making relating to their jobs and daily tasks. Therefore, it should be noted that in the context of this

research the use of the word 'employee involvement' is in line with the above definition.

The presence of these two human capital challenges is evident in most large organisations, therefore, the construction companies being investigated are not exempted from these issues.

Organisation-Employee Fit

Employees are a critical component of any organisation; they provide the platform for the organisation to succeed in tough and highly competitive markets. Johnson (2006) indicates that the purpose of an organisational structure is to provide the best fit for employees in order to achieve its business goals. However, it should also be noted that organisational structures are designed to service the work and not to serve employees.

The notion of organisation-employee fit implies that organisations endeavour to employ individuals who possess the same values, culture and vision as the organisation. The benefit that an 'appropriate fit' brings is that of enhanced performance, good working environment, satisfied employees and organisation (Markos and Sridevi, 2010). When an 'appropriate fit' is established between the organisation and employee, the workplace becomes a place where employees have a say on decisions and actions that affect their jobs. This enables them to contribute to continuous improvement and on-going success of the organisation.

However, for an organisation to find and retain employees who exhibit characteristics of an 'appropriate fit' is an enormous task. Successful organisations have distinguished themselves by constantly addressing this challenge before it becomes a crisis. It is renowned that when employees feel that they do not fit within the organisation, they tend to be unproductive, demotivated and frequently absent from work (Stiles and Kulvisaechana, 2005). To sum it up, Lawler (2001) explained the organisation-employee fit as follows, "people need to change their skills and behaviour in order for an organisation to change". These perceptions stress the fact that organisation-employee fit is a two-way process that requires both parties to critically analyse before embarking on the challenge.

In the South African context, the above issues are very apparent and need to be addressed. In their research, Matlhape and Lessing (2002) concluded that employees fall within the most important category of resources. Matlhape and Lessing (2002) further contend that it is ideal for individuals to set goals that coincide with the goals of the organisation in order to stay motivated in their jobs. Therefore, for the fit to work efficiently, employees are to ensure that they are aligned to the organisational goals of the company they wish to work for.

Employee Contribution

Robbins (2002) established that the purpose of organisational design is to ensure that employees are employed within a structure that both enables and encourages them to make use of their full range of expertise to implement company strategies. The manager's opinion that the company is constantly operating at the highest efficiency while disregarding employee's input is considered to be a major pitfall to organisational performance.

Sofijanova and Zabijakim-Chatleska (2013) defined employee contribution as a process of participation and empowerment of employees to use their input towards achieving higher individual and organisational performance. It is also said to enable the organisation to have a better insight about the way of functioning and where it can potentially make improvements that would be beneficial for both, the organisation and employees. Employee contribution is fast becoming an issue that organisations cannot afford to ignore anymore. Companies are to look at it strategically and devise ways of incorporating it onto their business approach.

Apostolou (2000) argue that each employee is involved in helping the organisation meet its goals. Employees take more pride and interest if they are allowed to make meaningful contributions to their work and influence decisions made about it (Silverman *et al.*, 2013). Employees have traditionally been viewed as a cost to be minimised. At best, human resources are viewed as contributing to the efficiency of the organisation, but not explicitly as a source of value creation (Stiles and Kulvisaechana, 2005). Research has raised convincing arguments that there is a competitive advantage that lies with human capital, therefore, organisations are to tap into strategic ways of using that to benefit their business.

If employees do not contribute sufficiently towards the achievement of organisational goals, the company stands to suffer. However, if the company does not create a conducive environment that enables employees to contribute, employees will be discouraged and will most probably disengage from the organisation and its business activities. Therefore, a perfect balance is to be established between these two competing requirements taking cognisance that this has to be a win-win situation.

Andre A. de Waal (2008b) summed up the value of employees as follows, "A team of good people can achieve anything it wants, while an organisation with a clear and well-defined strategy but without the right people to execute it is bound to go nowhere".

There is no doubt that for the South African economy to be counted amongst the most enterprising economies, it needs to revisit its primary asset, people, to elevate it to a higher level (Cawe, 2006). The conclusion from Cawe (2006) is echoed by many developing economies that find themselves in the same state as South Africa, nevertheless, it is reassuring to know that there is recognition that human capital could be the answer to some of the economic challenges faced by South Africa and the rest of the world.

Having briefly reviewed segments of the research problem to be investigated, the next section will detail the problem statement in light of the above discussions.

1.5 Problem Statement

The South African construction industry is also besieged by poor performance like any other developing country. However, organisational structures can be used by organisations to address some of the organisational performance related issues that are experienced by construction companies and consequently by the construction industry. McMillan (2002) argue that the nature and importance of the organisational structure and the underpinning design principles are not well understood and yet they play a key role in organisation performance.

Meijaard, Brand and Mosselman (2002) also stressed that the relationship between organisational structures and performance has received little attention over the past few

decades. Although recent empirical research demonstrates that the organisational design process is unmistakably an important determinant of the performance of firms. Thus, the way in which organisations are structured has an influence on its performance. Markos and Sridevi (2010) discovered that employee involvement is also a stronger predictor of positive organisational performance.

In this research, employee involvement is also been felt as one of the contributing factors towards the success of any construction company. Vazifedoust, Nasiri and Norouzi (2012) reason that organisations must be designed in a structure that allows all employees' involvement in organisational affairs, only by this procedure is the sustainability and survival of organisation assured in today's turbulent world. In as much as the design of the organisational structure is key to organisational performance, the level of employee involvement is also influenced by how well the organisational structure is accommodating to it.

The basis of the research problem stems from the above arguments that suggest a positive relationship between two constructs: organisation structure and employee involvement with organisational performance. The problem can be summarised as follows: the use of inappropriate organisational structure may lead to poor employee involvement and the organisation will not perform at its optimum level. While the use of an appropriate organisational structure that encourages adequate levels of employee involvement could result in improved organisational performance of South Africa's large construction companies.

1.6 Research Aim and Objectives

With reference to the problem statement, the aim of this research is to investigate the level of employee involvement on various organisational structures utilised by large construction companies in South Africa. The research is guided by the following objectives:

- To identify different organisational structures which exist in large construction companies in South Africa.
- To determine characteristics of employee involvement by which the organisation's performance is affected.

- To establish the relationship between the identified organisational structures and the level of employee involvement.
- To recommend the most appropriate organisational structure that encourages employee involvement and thereby improves organisational performance.

1.7 Research Questions

The following research questions were formulated from literature reviewed and the research aim and objectives. Three sub-questions posed by the research are supported by relevant literature cited and discussed in the next chapter. However, it should be noted that the main question is answered and clarified through a combination of the sub-questions.

Main Question

What is the most appropriate organisational structure that encourages employee involvement in decision making and thereby, has the likelihood of contributing towards improvement of organisational performance?

Sub-Questions

Sub-Question 1

Which organisational structures are used by the five selected large construction companies in South Africa?

This question is derived from Stokes (2005)'s perception that there are three forms of organisational structures that are of pure type in management science. This discussion is contained in section 2.4.5.

Sub-Question 2

What are the characteristics of employee involvement by which the organisation's performance is affected?

Sofijanova and Zabijakin-Chatleska (2013), Khattak, Iqbal and Khattak (2013) and Kuye and Sulaimon (2011), all revealed the relationship between employee involvement and organisational performance in section 2.9. The findings from the

abovementioned research studies did not detail the characteristics which the organisation's performance is affected by. Therefore, the current research would go further to identify and discuss these characteristics of employee involvement.

Sub-Question 3

What is the nature of the relationship between the identified organisational structures and the level of employee involvement?

Shariat *et al.* (2013) and Vazifedoust, Narisi and Norouzi (2012) both established the existence of the relationship between organisational structures and employee involvement as discussed in section 2.7.2. This study will attempt to analyse the form of this relationship based on the organisational structure types identified in sub-question 1 and the level of employee involvement deduced from the research findings.

1.8 Scope and Context of Study

Stokes (2005) maintains that there are many organisational structures applicable in management science. However, for the purpose of this research, only four major structures will be discussed:

- Functional: arranging the business according to what each department does;
- Divisional: organised according to different divisions;
- Geographical: arrangement by area or region;
- Matrix: coordination by individual projects.

Furthermore, it should be noted that this research does not examine the process of organisational structural design, it is assumed that this issue is already addressed at strategic level in the organisation. The scope of research limits participants to the selected five large construction companies, namely: Company A, B, C, D and E.

1.9 Research Rationale

From the literature reviewed, it became evident that there is very little literature available on this subject in South Africa. The subject is generally under-studied in developing economies. Nevertheless, that did not deter the researcher from conducting a study that could ignite research interest in this area. The fact that this research subject

is under-researched led to rising curiosity from the researcher and served as motivation to undertake that which could form precedence to future research. Despite the above, South African researchers, Kok, Lebusa and Joubert (2014) argue that there is renewed interest in research focused on employee involvement as a result of increasing competitive pressures arising from both local and global markets.

Naturally, the subject of organisational performance is a critical aspect for any business, thus, it is no different in the construction environment. A study of this nature will not only enable South African construction firms to identify deficiencies in their practises but will also contribute positively in the performance of the industry and upliftment of the society as a whole (Sidumedi, 2009). A comprehensive understanding of organisational performance and elements affecting it are an essential and interesting research for all businesses at large. This study has chosen to particularly focus on large organisations because small and medium-sized enterprises are usually unstructured and informal in their organisational approach.

In the context of the South African economy, improved performance by the construction sector could only happen when construction companies participating in this environment are showing signs of increasing performance. Thus, the potential and importance of the construction sector to the economy is critical to the economic development of South Africa. As a developing economy, the role played by the construction sector in provision and eradication of infrastructure backlog remains a significant one. Therefore, the growth of South Africa construction companies is to be taken seriously and can only occur in a flourishing economy.

The effects of globalisation have driven South Africa's large construction companies to benchmark themselves against international standards, hence, this research becomes even more significant to their business approach as they undertake work at a global stage. It is envisaged that this research would complement other relevant studies conducted in different countries and reinforce the importance of employee involvement as a performance catalyst.

Recommendations put forward by this research would contribute to the body of knowledge in management science. The ultimate goal of this report is to provide

supporting evidence about employee involvement's influence and how it impacts organisational performance.

1.10 Overview of Research Approach

This study took an exploratory approach due to limited literature on this subject in South Africa. Hair *et al.* (2003) states that in exploratory studies, researchers may even find it impossible to formulate a basic statement of the research problem. However, exploratory research is useful in developing better understanding of the subject and serves to prove a general proposition. Thus, this research aspires to develop knowledge and offer evidence that can be tested or further researched in the South African construction industry.

According to Saunders, Lewis and Thornhill (2003), there are three ways of conducting an exploratory research, search of literature, talking to experts on the subject and conducting focused interviews. The advantage of exploratory research is its flexibility and adaptability to change as a result of new data that appears and new insights realised.

The research choice of the study was quantitative in its approach, collected data was numerically analysed and presented in a statistical format. The sample population was randomly selected from all divisions within the five construction companies investigated. Research techniques employed for data collection were surveys and interviews the same questionnaire.

Surveys were self-administered and completed by employees from all divisions in a random manner. While interviews were conducted with management staff. These interviews took a structured format in order to focus participants to issues at hand, and avoid contamination of information. Remenyi *et al.* (1998) recommends structured interviews because they ensure consistency across all participants and hence facilitate a better comparison of data gathered.

The questionnaire (contained in Appendix A) took a holistic approach as it gathered demographic information and specific data relating to organisational structures, employee involvement and organisational performance. An opportunity to provide

additional information was presented at the end of the questionnaire for participants to include issues that might be of importance to the research.

1.11 Ethical Considerations

Prior to conducting surveys and setting up interviews, consent was obtained from the participating companies. All participants' confidentiality was guaranteed and their input was used solely for the purpose of this research.

Participants were made aware that information provided directly by them is attributed to them alone; and does not form part of the overall views of the company. Participating companies were assured that no company information would be made public without their prior consent, and that they will be afforded a chance to review the findings of the research. A summary of the findings was made available to all construction companies that participated and indicated an interest to receive the findings. However, it should be further stressed that information provided by participants should be regarded only for academic interpretation.

1.12 Research Report Outline

This research report follows the outline detailed below:

Chapter 1: Introduction

This chapter briefly discussed the background of the South African construction industry and literature relating to the formation of organisation structures as well as the effects of relevant human capital challenges on large organisations. It further outlined the research focus presenting the problem statement, research aim and objectives, and research questions. This chapter further defined the scope and context of the study as well the motivation for undertaking the research. The research approach was defined and ethical considerations drawn out for the research.

Chapter 2: Literature Review

This chapter begins by detailing the performance of the South African construction industry. It also gives an overview of the selected organisational structures that are applicable to this study and further discusses them in the context of the South African

construction environment. The concept of employee involvement is presented with its benefits and relevance in the South African context.

The relationship between organisational structures and employee involvement is explored. Organisational performance is discussed with particular focus to financial performance as the measure chosen for this study. The relationship between employee involvement and organisation performance is reviewed as validation to the literature findings of the study. The chapter concludes by highlighting the influence of employee involvement to organisational performance and its implications to the South African construction industry.

Chapter 3: Research Methodology

This chapter presents the research methodology framework including the research design, research strategy and techniques, sample selection, data validity and reliability, data collection and analysis, and research limitations.

Chapter 4: Discussion of Results

This chapter discusses the validity and reliability of the data collected, it further analyses the data and presents the interpretation of the results. Research questions are answered, and a comparison of the research findings and literature reviewed is conducted. The chapter concludes by deliberating on the research objectives to ensure that the study has achieved its research aim.

Chapter 5: Conclusions and Recommendations

This chapter summaries the key research findings, draws conclusions from the research findings, and makes compelling recommendations based on these conclusions. The implications of the study to the South African construction industry are presented and the scope for further research is proposed.

1.13 Conclusion

This research emphasis is to investigate the level of employee involvement on various organisational structures utilised by large construction companies in South Africa. This chapter presented a brief background of the South African construction industry. The

definition and formation of organisational structures were discussed; including human capital challenges that are prevalent in large organisations.

The research focus was detailed, including the scope and context of the study and motivation for undertaking the research. An overview of the research approach and ethical considerations were presented. The chapter further detailed the research report structure and provided a summary of the succeeding chapters.

The next chapter will discuss key literature concepts and related theories relevant to organisational structures, employee involvement and organisational performance.

CHAPTER 2
LITERATURE REVIEW

2.1 Introduction

The purpose of this chapter is to identify gaps in extant literature which led to the undertaking of this research. The chapter commences by providing background to literature relevant to this research. This chapter intends to incorporate the foundational knowledge from prior research studies conducted by other authors in the same field of study. It further focuses the relevant literature in order to fit within the parameters of the research problem identified. The literature to be discussed delivers the basis of the research questions and supports the development of the questionnaire used for surveys and interviews.

2.2 Background of Literature

The construction industry has a critical role to play in fostering economic development in the formal and informal sector of the economy. Today's companies operate in challenging environment: competition is intensifying with globalisation and the pace of technological change is fast and customers are increasingly demanding. In this age, companies are said to be successful because they achieve the best financial results.

However, these results are driven by other factors that companies may or may not be aware of. Some of these factors are subtle while others are blatant to the observer and to the company (De Waal, 2008b). It is felt that an organisational structure that is accommodating to employee involvement has a decent chance of influencing organisational performance.

The next sections will present detailed literature on organisational structures and their characteristics and features, with special references made to their applicability in the South African construction industry. Relevant past research studies will be presented as supporting evidence of the relationships between the constructs: organisational structure and employee involvement with organisation performance. The organisational performance measure used by the study is financial performance, the industry results and those of the construction companies investigated will be discussed.

2.3 South African Construction Industry Performance

Lawler (2001) and De Waal (2008a) argue that boundary less economies and globalisation have brought new competitors to many businesses, competition can literally come from every corner of the world. In practically every industry and business sector, competition continues to intensify (Wyman, 2007). Living in a world of organisational changes, companies are facing severe competitive pressures and rapidly changing markets (Vera, 2001). An organisation's survival often depends on its ability to adapt to environmental changes. One of the manifestations of organisational change is the movement from bureaucracy towards a more flexible form, which must meet the challenges of changing demands (Grobler, 2005). Therefore, companies are under pressure to seek new strategies and to make quick decisions to overcome the changes in environment (Sofijanova and Zabijakim-Chatleska, 2013).

Over the past few years, constraints confronting the South African construction industry have been emphasised by both practitioners and researchers. The industry is identified as fragmented and complex, faced with incessant challenges and huge demands due to unstable government policies and the uncertain nature of the construction business environment where organisations operate (Oyewobi *et al.*, 2013). Poor capacity, poor quality, low productivity and low profit margins continue to characterise the majority of South African construction firms; and evidence of the South African construction industry's poor performance is well documented (Sidumedi, 2009).

In the midst of the poor performance identified, South African construction companies also need to deal with the effects of globalisation. It has become necessary for local firms to utilise the international best practises in order to enhance the overall performance of the industry (Talukhaba, Sidumedi and Miruka (2010). Certainly, the construction industry is critical to the growth and success of the South African economy but the structural problems identified continue to have a negative impact on the performance of the industry, thus, preventing it from taking its rightful position in the economy (Sidumedi, 2009). In order to alleviate these challenges, the industry and its stakeholders are to propose ways of dealing with these issues so as to improve the performance of the South African construction industry.

Due to the economic challenges, many companies seeking a competitive edge in business environment consider the engagement of their people to be a strategic advantage (Nazrul-Islam, 2010). Stiles and Kulvisaechana (2005) argue that competitive advantage is dependent not, as traditionally assumed, on such bases as natural resources, technology, or economies of scale, since these are increasingly easy to imitate. Rather, competitive advantage is, dependent on the valuable, rare and hard to imitate resources that reside within an organisation: human resources.

Therefore, to counter the effects of global competition, South African construction companies are to develop business strategies that will enable them to functional at an international stage, and expand in influence in order to compete at the highest level. The strong suggestions that employees are the greatest competitive tool still remain a viable option to be explored further in the South African context.

The next section will detail the selected organisational structures applicable to this research.

2.4 An Overview of Selected Organisational Structures

The concept of organisational structure has its foundation in organisational theory dating back to the 1940s. This era was characterised by the traditional organisational structure which was considered to be tall, bureaucratic, pyramidal and centralised in nature with many levels of management and different lines of authority, rigid chains of command and narrow span of control (Oyewobi, 2014).

This section will outline the basic types of organisational structures applicable in the construction industry in South Africa. The discussion of these structures is centred on the process flow and functionality of organisational structures, and does not necessarily focus on authoritative flow within the structure. Erven (2002) defines an organisational structure as a formal pattern of how people and jobs are grouped. Organisational structures outline roles and activities required of people in order to meet the objectives of the business.

Erven (2002) clarified that the organisational structure helps people to accomplish their own career and personal goals. The aim of an organisational structure is to control,

eliminate or at least reduce uncertainty in the behaviour of individual employees or simplify the actions expected from employees. Employees in a company must be able to answer the following questions:

- What their activity is and where it fits into the organisation as a whole?
- What their roles are?
- What responsibilities they have and to whom they are answerable?

Lawler (2001) provided a number reasons as to why companies need to have organisational structures:

- They facilitate the coordination of activities;
- Help to control actions of members within the organisation;
- Clarify responsibilities among employees.

As mentioned in the previous chapter, this study focuses on four major organisational structures:

- Functional: arranging the business according to what each department does;
- Divisional: organised according to different divisions;
- Geographical: arrangement by area or region;
- Matrix: coordination by individual projects.

The following sections will provide a description of the above organisational structures and discuss their application in the context of the South African construction industry.

2.4.1 Functional Structure

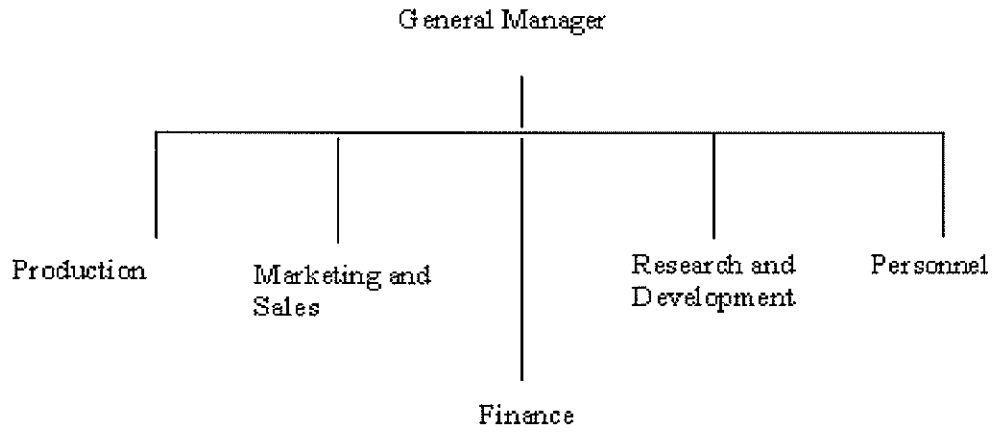
Stokes (2005) stated that functional structures divide the organisation based on a logical grouping of members that share common tasks or goals. The idea behind a functional structure is to increase profits by specialising tasks and grouping them together for maximum productivity. Members of a functional structure can easily see the relationships between all individuals in one department.

In a manufacturing environment, key functions such as production, procurement, marketing, accounting, and human resources are grouped together. While is a hospital setting, grouping of tasks usually includes: surgery, psychiatry, nursing, maintenance

and invoicing. Using such functions as the basis for structuring a company may, in some instances, have the advantage of efficiency (Smit and De Cronje, 1992).

Stokes (2005) further declares that the strength of a functional structure lies in its simplicity and clear delineating of task responsibility. It is flexible and can be varied in a number of ways, and it is generally the most used organisational structure across all business sectors. Functional structures are well manageable and simplistic structures to follow because of the departmentation of functions.

In most instances, 'micro to medium' construction companies tend to implement this organisational structure, however, it does become daunting for large organisations as it centralises the process flow towards one point of reference. Figure 2.1 below illustrates the process flow of departments centralised towards a "General Manager". For a 'micro to medium' business, this organisational structure is said to offer the most efficient way of structuring a company.



(Adapted from Bartol and Martin, 1994)

Figure 2.1: Example of a Functional Structure

A functional structure is especially appropriate when the most important needs of an organisation are in collaboration and expertise within a defined set of operations. It is also beneficial when the environment is stable and only one or a few products / services are offered. Functional structures are designed according to personnel and activities, including the resources that are essential to the operational process (Robbins, 2002).

In summary, it should be noted that all company resources in this type of structure are shared within the business. In other words, there is no duplication of resources that perform similar functions housed under different departments.

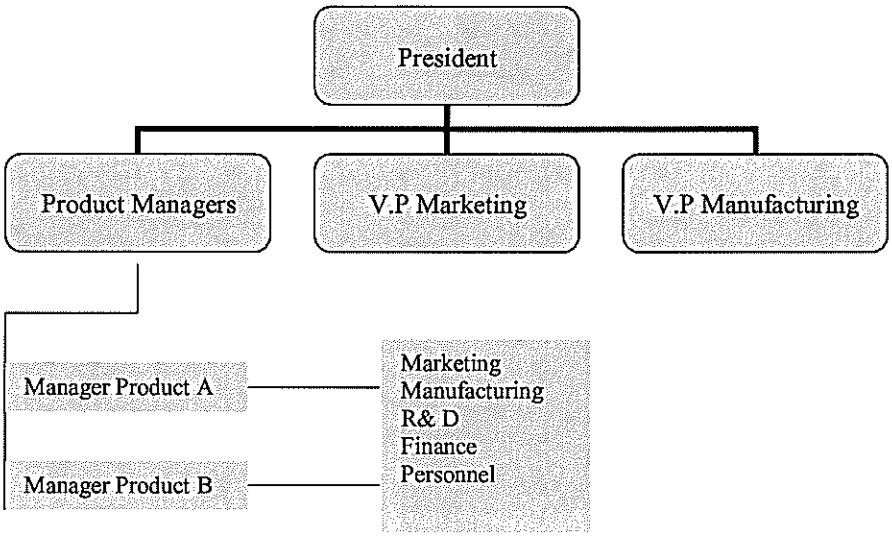
2.4.2 Divisional Structure

Stokes (2005) argue that when a functional structure becomes too large and diverse, the organisation typically takes on a divisional structure. In a divisional structure, the organisation is simply divided into functional structures that report to a head office.

All activities necessary to produce and market a division are grouped together. In such an arrangement, the top manager of the division typically has considerable autonomy over the operation. Calvert, Bailey and Coles (1995) pointed out that each division is separated from the rest of the parent system. It is a self-contained unit with its own technical staff, administration, etc., tied to the parent firm by tenuous strands of periodic progress reports and oversight.

According to Stokes (2005), the primary goal of this type of organisational structure is to coordinate activities within each division in order to give attention to customer desires. Divisional structured organisations run the risk of not being as profitable as functional structured organisations due to duplication of similar tasks in each division of the organisational structure. However, an advantage of this structure lies with its size and the fact that a larger company will be able to possess greater influence and gain a larger competitive advantage in its environment.

Construction projects are slightly different in nature, and construction companies may find it necessary to employ a divisional structure when categorising their projects. This structure is advantageous to large construction organisations with similar types of projects that can be grouped together. A construction company may have divisions such as Building, Civil, Roads and Earthworks, Mining, etc. These divisions typically refer to specific projects grouped together which are similar in nature. In a construction company, it becomes further advantageous to have expertise and similar skills housed in one division to discharge the much needed and timeous input on projects. Figure 2.2 below depicts a typical divisional structured organisation.



(Adapted from Bartol and Martin, 1994)

Figure 2.2: Example of a Divisional Structure

In conclusion, divisional structures have all functions duplicated under each division of the organisational structure. Each division is assembled, contributes and behaves as an independent business unit with its own resources and goals.

2.4.3 Geographical Structure

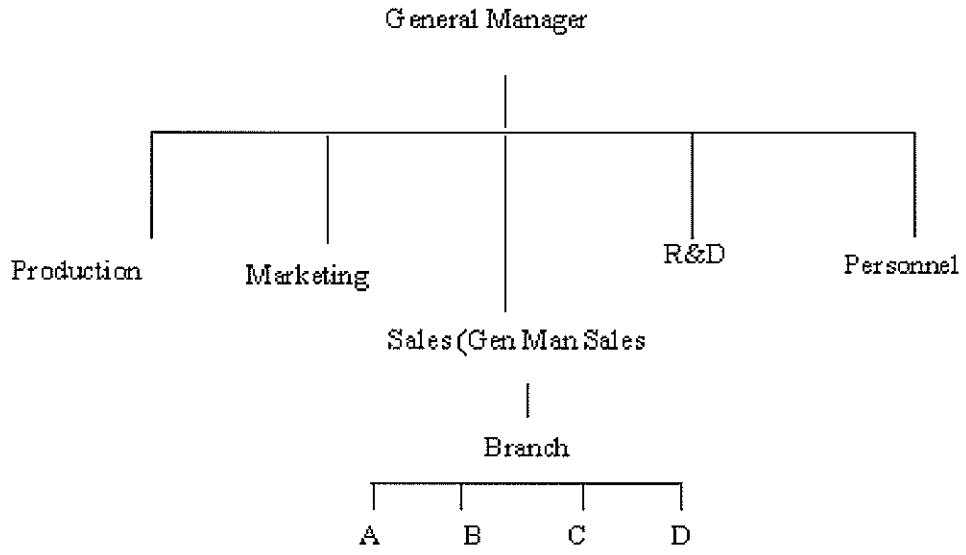
Companies that are spread over a wide area may find advantages in organising along geographic lines so that all activities performed in a region are managed together. In large organisations, simple physical separation makes centralised coordination more difficult. As the company grows, it sometimes needs to set up branches in other locations and may wish to allow these branches to work as autonomous units, This means that these branches are like little companies of their own, making local decisions but guided by the policy decisions made at the head office (Calvert, 1981).

Some large 'fast food' chains often work in this manner, satellite branches are ran by "Managers". Head office provides support but is not closely involved in the day to day running of the branch. The branch manager does have scope to make decisions, but this is limited when compared to a completely separate business. Similarly to the divisional structure, geographical separated business units are independent in operation but they still form part of the main organisation. The divisional and geographical structural

approaches are complementary in application. The similarities sometimes lead to a common occurrence called "hybrid structuring".

Hybrid structuring refers to a process of combining two or more types of organisational structures to form a singular and unique structure. Certain large construction companies investigated are structured in this manner, combining a 'divisional' and 'geographical' structure to form one organisational structure.

Geographical structures are more appropriate for large companies, and construction companies that have projects in different regions. For example, in the case of South African businesses, a company may structure their organisation by province: Gauteng, Limpopo, Mpumalanga, etc. Figure 2.3 below shows a typical example of a geographical structure.



(Adapted from Bartol and Martin, 1994)

Figure 2.3: Example of a Geographical Structure

To have work structured in geographical spheres makes it practicable for companies to execute and manage their business at regional level. Each region fulfils its own responsibilities as an independent entity acting under the umbrella of the main organisation. Customers stand to benefit more because of the personal interaction with company representatives who are close to them and who understand their needs better.

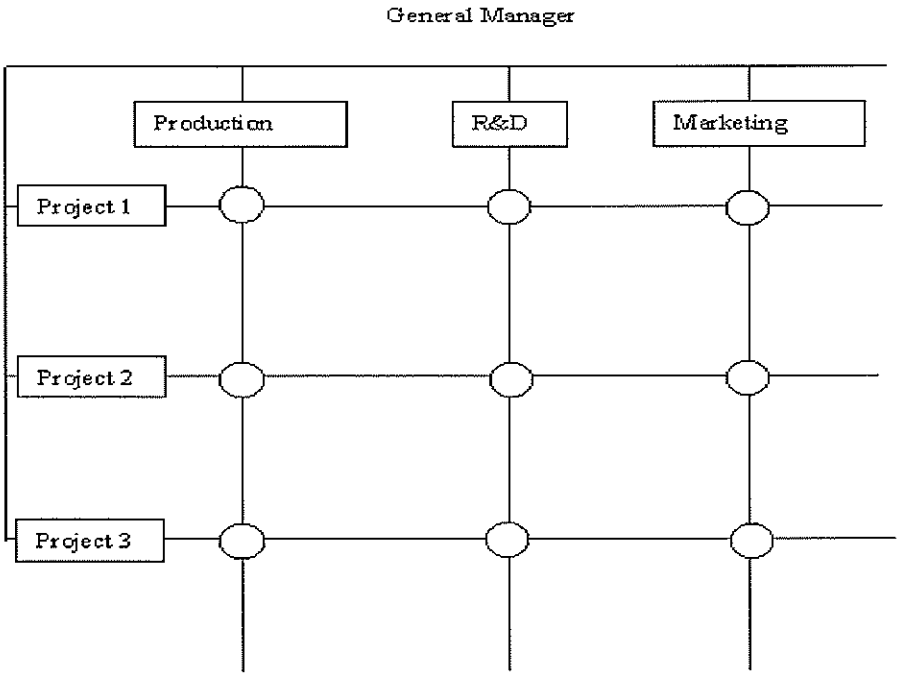
2.4.4 Matrix Structure

Some companies find that none of the aforementioned structures meet their needs. One approach that attempts to overcome all the above inadequacies is a matrix structure. A matrix structure is a combination of divisional and functional structures. In a matrix structure, dual levels of reporting are common. The roles may also become more complex and unvaried, and therefore may require higher levels of competence and ability from employees (Grobler, 2005). Also known as a 'specific' hybrid structure. A matrix structure employs both functional managers and product managers (Stokes, 2005).

Members involved in a matrix structure are assigned to project teams based on agreements between the functional and product manager. Teams have to include both members that possess functional-specialised abilities and members with technical skills to complete the task at hand. Team members report to both the functional manager and the product manager; therefore, a major disadvantage of a matrix structure lies with the conflict that is often created by dual lines of authority (Stokes, 2005).

For example, when a company wants to develop a new product; for this purpose, it obtains personnel from functional departments such as research and development, engineering, production and marketing. These people then work under the manager of the product group for the duration of the project. During this time, they report to two managers, i.e., Functional Manager and Product Manager (Calvert, Bailey and Coles, 1995).

It is possible that some projects cover most or all of the company's functional departments depending on their nature and complexity. The dual chain of command in this organisational structure makes it complex, as a result this structure becomes more suited for a temporary setup than as a permanent organisational structure. Figure 2.4 below illustrates a typical matrix structure.



(Adapted from Bartol and Martin, 1994)

Figure 2.4: Example of a Matrix Structure

In conclusion, except in a matrix structure, all other structures described are vertical oriented; that is, who reports to whom, who has responsibility and authority for what parts of the company, and so on. Such vertical integration is sometimes necessary, but may be a hindrance in rapidly changing environments.

2.4.5 Summary of Organisational Structure Designs

In his research of South African construction companies, Oyewobi (2014) revealed that the industry still uses traditional and hierarchical organisational structures with large organisations tilting towards the adoption of a divisional structure.

According to Stokes (2005), functional, divisional and matrix forms of organisations represent pure types of organisational structure. However, at times an organisation will not fit neatly into one of these categories, but would rather utilise some combination of two or more structures. Hybrid structures may exist deliberately in order to gain the maximum advantage of certain structures, i.e., hybrid structuring. A hybrid structure can be beneficial in that it provides the organisation with the ability to embrace the structure that best fits its needs.

Throughout the many discussions on the merits of various organisational structures – it is also made clear that in reconfiguring an organisation to enhance its performance, there is no one appropriate or ideal structure. Further, there is an agreement that many organisations have hybrid structures in which several different structures happily co-exist (Clayton and Fisher, 2006).

Although not discussed in detail in the previous sections, hybrid structuring is a viable option for organisations looking to get the maximum output from their organisational structure. This view is evident in the South African construction industry as some companies have adopted and implemented the hybrid structural approach.

The next section will present the future of organisational structure designs as proposed by authors in the field of management science.

2.5 The Future of Organisational Structure Designs

Vazifedoust, Nasiri and Norouzi (2012) pointed out that organisations with different organisational structural approach have different outputs; in the age of various and quick environmental changes, having a mechanical and inflexible structure can be detriment to the organisation's development, organisations with such characteristics are condemned to decline and annihilation.

Clayton and Fisher (2006) ascertained that the current global environment has an influence on the structure of the organisation and the way in which they evolve. An organisation's structure is largely determined by the diversity in its environment. The design of an organisation must fit with the environment. Effective organisations not only have the proper fit with the environment, but also with the needs of the organisation which are better satisfied when it is properly designed (Silverman *et al.*, 2013).

Meijaard, Brand and Mosselman (2002) argue that the uncertainty and complexity of the firm's environment determines the appropriateness of organisational structures. Organisations should be mechanistic in a stable environment and organic when the environment is turbulent. The most effective structure is a structure which adapts itself to environmental requirements, i.e., mechanistic design is usable in a stable and safe

environment and organic structure serves in a turbulent environment (Vazifedoust, Nasiri and Norouzi, 2012).

Shariat *et al.* (2013) reasoned that one of the purposes of an organisational structure should be to facilitate an accelerated decision making process, show an appropriate response to the environment and resolve conflicts between business units.

Traditional organisational structures are being tested by demands for greater adaptability and flexibility, mechanistic organisational structures are making way for more organic structural approaches. In an attempt to enhance flexibility and meet the challenges of rapid change, organisations have shifted from hierarchical, bureaucratic structures to more organic, flatter, matrix or network structures characterised by empowered teams coordinated by a vision or purpose rather than policies and procedures (Clayton and Fisher, 2006). As the rate of change increases, so does the need for fast and immediate response, which implies higher organisational flexibility (Sofijanova and Zabijakim-Chatleska, 2013).

Oyewobi (2014) argue that an ideal organisational structure is a recipe for superior performance since it impacts the organisation's ability to perform and respond effectively. For this reason, businesses have persistently altered organisational structures in an attempt to achieve superior performance. The performance effect of organisational structure is moderated by changes in the environment and hence, adequate attention is required to have an organisational structure that can match the prevailing environment dynamism (Oyewobi *et al.*, 2013).

The next section discusses a study that was conducted by Robinson (2007) which determined characteristics of historical and current views of organisations.

2.6 Characteristics of Organisations

There are a number of characteristics that shape organisations with regards to business functionality. This section presents some of the characteristics that influence process flow in organisational structures. Erven (2002) concluded that determining an organisational structure for a business is a decision making process. No simple recipe exists for the design of an organisational structure of a business. The best organisational

structure for a particular business depends on the characteristics of its management and employees, nature of the business (production, processing and service), size and geographical spread of its operations.

Robinson (2007) sums up the characteristics of organisations that also affect organisational structures in his research findings of the eighteen characteristics. Table 2.1 below outlines the characteristics by contrasting these characteristics between historical and current organisational views.

Table 2.1: Characteristics of Organisations

Characteristics	Historical View	Current View
1. Organisation	The Pyramid	The Web or Network
2. Focus	Internal	External
3. Style	Structured	Flexible
4. Source of Strength	Stability	Change
5. Structure	Self-sufficiency	Interdependencies
6. Resources	Atoms-physical assets	Bits-information
7. Operations	Vertical integration	Virtual integration
8. Products	Mass production	Mass customisation
9. Reach	Domestic	Global
10. Financials	Quarterly	Real-time
11. Inventories	Months	Hours
12. Strategy	Top-down	Bottom-up
13. Leadership	Dogmatic	Inspirational
14. Workers	Employees	Employees & / free agents
15. Job Expectations	Security	Personal growth
16. Motivation	To compete	To build
17. Improvements	Incremental	Revolutionary
18. Quality	Affordable best	No compromise

(Source: Robinson, 2007)

These characteristics have become vital in the way modern companies implement their business strategy and to their functionality. When an organisation adopts the current view approach and integrates it with employee involvement, the net result has the potential to make them an organisation that functions at maximum output in a highly efficient manner (Robinson, 2007). Some of the organisational characteristics listed in table 2.1 will feature on the discussions around the concept of employee involvement. They will bring a better understanding of the interactions between organisational structures, employee involvement and organisational performance.

2.7 The Concept of Employee Involvement

Definition

Employee involvement refers to opportunities for employees to take part in decisions that affect their work. It is concerned with the capacity of employees to influence decisions as individuals rather than through representatives (Eurofound, 2013).

According to the business dictionary (2014), employee involvement can also be defined as a regular participation of employees in (1) deciding how their work is done, (2) making suggestions for improvement, (3) goal setting, (4) planning, and (5) monitoring of their performance.

It should be noted that the encouragement to employee involvement is based on the thinking that people involved in a process know it best, and on the observation that involved employees are more motivated to improve their performance. The interpretation of the concept of 'employee involvement' in this research will be used consistently with the above definitions. However, for the purpose of this study, the word 'involvement' can be used interchangeably with terms like 'engagement', 'participation' and 'empowerment'.

Scope of Application

The Eurofound (2013) study discovered that in principle, it is possible to distinguish between three levels of employee involvement:

- Strategic Participation: higher level decisions such as investment, workforce structure and product development;
- Organisational Participation: involvement in decisions about work organisation;
- Task Discretion: involvement in decisions about the immediate job task.

This research will only concentrate on the lower level of employee involvement, i.e., task discretion. This selection is informed by the fact that this examination of employee involvement on this research is limited to employees' decision making and does not look into strategic and organisational aspects.

Value

Khattak, Iqbal and Khattak (2013) commented that organisations aspiring to be the best in their sector create a positive work environment by ensuring employee involvement. The involvement of employees requires management to be very attentive in acceptance of feedback from their employees.

Although often equated with delegation, employee empowerment goes further by strengthening the granting authority to those most qualified. Generally explained as allowing employees greater freedom, autonomy and self-control over their work, empowerment also means responsibility for decision making. From the perspective of the employer, granting autonomy to the team or to an individual has meaning only if the group or individual have identical interests with those of the employer (Sofijanova and Zabijakim-Chatleska, 2013).

Motivation

The high involvement approach encourages employee commitment to the success of the organisation. Employees are more motivated to make a business successful if they are involved in their organisation (Silverman *et al.*, 2013). They become emotionally attached to their organisation and highly involved in their job with a great enthusiasm for the success of their employer, going an extra mile beyond their employment contractual agreement (Markos and Sridevi, 2010).

Apostolou (2000) advises that employees and management should recognise that many problems or obstacles to achieving organisational goals can be identified and solved by employees. Employee empowerment means that management recognises this ability, and provides employees with the tools and authority required to continuously improve their performance.

2.7.1 Benefits of Employee Involvement

The process of employee involvement is of mutual benefit to both organisation and employees. It helps both parties make better decisions that lead to better business functionality. Employee involvement enables the organisation to have a better insight on the way it functions and where it can potentially make improvements (Sofijanova and Zabijakim-Chatleska, 2013).

According to Nazrul-Islam (2010), the benefits of employee involvement can be summarised as follows:

- Improved, more innovative and efficient work methods and procedures;
- Better communication between management and workers from cross-training and teamwork;
- Attraction and retention of employees;
- Reduced tardiness, turnover and absenteeism;
- Greater staffing flexibility;
- Increased service and product quality;
- Higher productivity and output;
- Reduced staff support and supervision requirements;
- More effective resolution of conflict and reduced number of grievances;
- Better decisions;
- Expansion of staff skills;
- Improved morale and job satisfaction;
- Less resistance to change.

However, for an organisation to realise the above benefits, it needs to take responsibility by creating a working environment which helps foster the ability and desire for employees to act in an empowered manner. In other words, high involvement approach encourages employee commitment for the success of the organisation. Thus, employees become more motivated to make the business successful if they perceive to be 'involved' in the organisation (Silverman *et al.*, 2013).

There is a common assumption held by many scholars and managers that if employees are adequately informed about matters concerning them, and are afforded the opportunity to make decisions relevant to their work, they become increasingly efficient and the organisation stands to benefit from that (Kuye and Sulaimon, 2011).

Vazifedoust, Nasiri and Norouzi (2012) argue that employee involvement is one of the most important issues that has been felt and considered today, more than any other time. Because every day, quick and various changes in environmental factors increase the

amount of ambiguity, uncertainty, and complexity of organisations' environment. To achieve sustainable competitive advantages and dynamic balance in this turbulent environment, equipping or empowering employees has become a critical principle. Because employees are the only resources that can be exclusive to the organisation and have the capability of upgrading knowledge, skill, and motivation.

Hayward (2005) observed that there is a growing recognition that the primary source of competitive advantage is derived from the company's human resources. Employee involvement is seen as a keystone of organisational development and empowerment of employees. It ensures that employees can utilise their talents to enable them to influence decisions and encourage commitment to the goals of the organisation. According to Sofijanova and Zabijakim-Chatleska (2013), employees who possess the correct knowledge, skills and abilities are of wide strategic importance in their organisation.

In conclusion, the Right Management (2009) study reported that an involved workforce is characterised by employees who are satisfied with their current job and their organisation as an employer. These employees are committed to making the job and organisation successful, and are proud of their achievements.

2.7.2 Organisational Structure and Employee Involvement Relationship

Evaluation of the studies conducted and the processes that are adopted by successful organisations in implementing the employee empowerment indicate that one of the important factors in establishment of empowerment is "organisational structure" (Shariat *et al.*, 2013). In terms of the organisational structure, the degree that skilled and motivated employees are directly involved in determining what work is performed and how this work gets accomplished is crucial (Stiles and Kulvisaechana, 2005). The link between organisational structure and employee involvement is not only applicable in terms of allocating resources on the organisational chart. This relationship goes deeper into the influence that these two variables have on each other.

This section takes these two variables, organisational structure and employee involvement, and analyses their impact on each other. This discussion references two research studies that substantiate the existence of the relationship between these

variables and critically reviews their findings in comparison to the current research. The research studies are summarised in Table 2.2 and 2.3 below.

Table 2.2: Shariat *et al.* (2013) Research Study Summary

Title:	Evaluation of the Relationship between Organisational Structure and Empowerment of Employees (Using Empowerment Analysis in the Agricultural Bank)
Author/s:	Dr. Hosein Shariat, Ali Taheri Heshi, Davood Ghoreshi and Masoone Taheriheshi
Year:	2013
Key Finding/s:	There is a significant relationship between organisational structure and employees' empowerment in Agricultural Bank. –There is a significant relationship between complexity of organisational structure and employees' empowerment. –There is a significant relationship between formalization of organisational structure and employees' empowerment. –There is a significant relationship between centralization of organisational structure and employees' empowerment.

(Source: Shariat *et al.*, 2013)

Shariat *et al.* (2013) investigated the relationship between organisational structure and empowerment of employees using a survey on a sample population of 50 employees at an Agricultural Bank. This study attempted to answer the following question: Is there a relationship between organisational structure (complexity, formalization and centralization) and psychological empowerment factors (competence, self-determination, significance and effectiveness)?
One of the objectives of this study was to identify the appropriate structure to develop the empowerment inside the organisation.

The approach used by Shariat *et al.* (2013) was to identify the strengths and weaknesses of the organisational structures in the psychological empowerment establishment process. Then, examine the existing conditions in terms of the level of employees' empowerment.

The findings of the study confirmed the existence of significant relationships between employee empowerment and the following organisational structural elements: complexity, formalization and centralization. However, this relationship was proven within the parameters of the structural elements and psychological factors measured by the study.

Implications from this study: the effects of bureaucracy created by mechanical structures should be reduced to encourage the implementation of employee empowerment for the organisation to perform at optimal level. Organisations are to facilitate the process of employee involvement that empowers employees to make the necessary decisions relating to the jobs as they possess the expertise in that area.

Table 2.3: Vazifedoust, Nasiri and Norouzi, (2012) Research Study Summary

Title:	Analysing the relationship between organisational structure and employee empowerment in Eastern Azerbaijan
Author/s:	Hossien Vazifedoust, Mohamad Nasiri and Abdollah Norouzi
Year:	2012
Key Finding/s:	There is a significant relationship between organic organisational structure and employee empowerment; i.e., the more organisational structure is organic, the more employee involvement is in the organisation.

(Source: Vazifedoust, Nasiri and Norouzi, 2012)

Vazifedoust, Nasiri and Norouzi (2012) study analysed the relationship between organisational structure and employee empowerment using surveys on a sample population of 190 employees of Eastern Azerbaijan's governship. This study sought to answer the following question: What type of relationship is there between organisational structure and employee empowerment of Eastern Azerbaijan's governorship?

The approach used by Vazifedoust, Nasiri and Norouzi (2012) is very similar to Shariat *et al.* (2013), organisational structure is measure using Stephen Robbins's theory of

three dimension (complexity, formalization and centralization). However, employee empowerment was investigated using Spreitzer's five dimensions theory (feeling of competency, sense of autonomy, sense of trust, sense of meaningfulness and feeling of effectiveness).

The findings revealed that there is a significant relationship between organic organisational structure and employee empowerment; i.e., the more organisational structure is organic, the more employee involvement is observed in the organisation. The existence of the relationship between organisational structure and employee empowerment is confirmed within the measure of the parameters identified.

Implications from this study: organisations need to transform their organisational structure from mechanic state into organic state by reducing organisational complexity, formality and centralization.

Comparing these studies to the current research

These two studies are very similar in their approach when investigating the relationship between organisational structures and employee involvement. They both express the organisational structure in terms of complexity, formalization and centralization, however, employee involvement measure use difference dimensions, i.e., psychological empowerment factors and Spreitzer theory respectively. The current study also proposed a different measure of employee involvement which is decision making. Therefore, the findings from the above studies, confirmed the existence of a relationship between organisational structure and employee involvement. This conclusion is useful to the current research as it establishes the basis from which to proceed when investigating the influence of employee involvement on organisational performance.

In summary, organisations are discovering or rediscovering in some instances that people really are their most important asset. The interest is driven primarily from the view that employee involvement has a positive effect on organisational performance (Vera, 2001). Stiles and Kulvisaechana (2005) argue that there is a large and growing body of evidence that demonstrates a positive linkage between the development of human capital and organisational performance.

Employee Involvement in the South African Context

Employee involvement in South Africa is much of an issue as it is around the world. South African researchers, Matlhape and Lessing (2002) declare that the most important category of the resources of a business are its employees. They are the actual driving force and the lifeblood of any organisation. The best organisations create an environment that makes their best people want to stay. However, for employees to practise this level of commitment and involvement, it is imperative that management consciously transfers skills and the power to take necessary decisions, to them.

When employees are involved, they become empowered to make decisions and solve problems appropriate to their level in the organisation. Involving employees more in decision making has become increasingly common in early 21st century organisations as companies see benefits in keeping employees at all levels actively engaged in core activities. Direct involvement of employees helps the organisation to fulfil its mission and meet its objectives by allowing employees to apply their own ideas, expertise and efforts towards solving problems and making decisions. Employee involvement in decision making has resulted in successful value creation in many organisations (Kok, Lebusa and Joubert, 2014).

According to a recently published survey conducted by Emergence Growth (2013), in partnership with Aon Hewitt, employee engagement in Sub-Saharan Africa is higher than in all other global regions measured. A startling 72% of employees in Sub-Saharan Africa are considered "engaged".

The Sub-Saharan Africa scores correlate very closely with those of other emerging economies, but are significantly higher than all the developed economies around the globe. The closest rated developing region is Latin America at 71%. North America scored 64%, Asia Pacific scored 58%; while the global average is at 58%. As the survey results prove, employee engagement in Sub-Saharan Africa is high but these results are not necessarily felt in the construction sector.

The benefits of employee involvement are well documented, it is expected that businesses will aggressively focus on the concept of employee engagement as a method

of improving performance (Cawe, 2006). Employee engagement is a critical business issue for South Africa if we are to take this country to the next competitive landscape. South African business has been mired by negative perception of underperformance and un-competitiveness from the international community for years (Cawe, 2006). In the midst of these challenges, Kok, Lebusa and Joubert (2014) argue that there is a body of evidence to prove that employee involvement in decision making is a key driver of organisational performance.

2.8 Organisational Performance

Swanepoel (2009) define organisational performance as one of the outputs of an organisation and also refers to the extent to which goals relevant to the specific organisation are attained. Performance can be in relation to the expectation of all stakeholders in the organisation, i.e., shareholders, staff, customers and the community. Wyman (2007) argue that the organisation's performance rests upon the alignment of the following components: the work, people, structure and culture.

The measurement of organisational performance has always been problematic and choosing a viable method for effective evaluation of performance is not an easy task. Traditionally, organisational performance was commonly referred to as financial performance (Swanepoel, 2009). Organisational performance can be measured using both financial and non-financial measures, but measures of performance in the past have been financial driven with focus on accounting measures (Oyewobi *et al.*, 2013).

Financial measures of performance remain the most widely used method of measuring organisational performance (Oyewobi, 2014). It also refers to the profitability of an organisation, i.e., the ability of the organisation to generate revenues that will exceed costs by using the organisation's assets for productive purposes (Swanepoel, 2009).

This research has chosen financial performance as measure of organisational performance, however, it should be noted that there are other measures of performance that could be applied but this study will only focus on financial performance. Oyewobi (2014) argue that financial performance is seen as the most objective measure of performance as it derives its results from the accounting financial data. This information

is usually extensively validated by external stakeholders (as required by the JSE) especially in large organisations.

2.8.1 Financial Performance as a Measure of Organisational Performance

In order to measure financial performance, one has to make reference to the financial statements of a company (Swanepoel, 2009). By analysing the financial statements and by calculating and comparing various ratios, it is possible to determine whether one company is performing better over a specific period of time than another company. Organisations perform at different levels and by benchmarking their performance against competitors, organisations could ascertain in which areas they need to improve or increase performance (Swanepoel, 2009).

However, when conducting the financial assessment of a company, one cannot only use the information provided through financial statements to get to a conclusive judgement. Prevailing economic conditions and other circumstances in the industry in which the company operates should be taken into consideration. It is necessary to compare financial ratios to ratios from previous periods or those of the competitors and the industry averages.

The following financial reports are examined to determine relevant performance ratios for this study:

- Income Statement;
- Balance Sheet.

Income Statement

An income statement provides a financial summary of the firm's operating results over a period of time by comparing revenue with expenses. It summaries how the business generated its income during that specific period. Income can be generated either through operating activities or through non-operating activities, i.e., other income. It also provides a summary of what expenses were incurred in the generation of the income and this can also be related to operating or non-operating activities. If revenue exceeds expenses, the firm is operating at a profit and therefore it is ensured of survival. Most commonly, an income statement covers a one-year period ending at a specified

date; however, monthly or quarterly income statements can also be prepared (Davidson, 2003).

Davidson (2003) specify that net sales, from which various costs are subtracted to obtain gross profit are reported at the top of the income statement. Gross profits are then reduced by all operating expenses to obtain operating profits. Operating profits are further reduced by interest payments on debt, which should be paid whether the company is profitable or not. Taxes further reduce this amount, and financial managers often refer to net profit as the bottom line, denoting that, of all the items on the income statement, net profit draws the greatest attention. The net profit is either paid to the shareholders in the form of dividends or retained by the organisation to support its growth.

Balance Sheet

The balance sheet may be thought of as a snapshot of the firm's financial position at any point in time. The left-hand side of the balance sheet shows the organisation's assets and the right-hand side shows the claims against those assets. A balance sheet has three main elements: assets, liabilities and equity. An asset is defined as a resource which the company controls and from which it expects to derive a future economic benefit. A liability is an obligation that the company needs to honour and will result in an outflow of economic benefits. Equity refers to the owners' or shareholders' interest in the business, which is calculated by subtracting liabilities from assets (Davidson, 2003).

The financial reports described above provide a wealth of data that is available for further interpretation. In order to make the financial results meaningful and easily understandable at a glance, several techniques can be employed (Davidson, 2003).

2.8.2 Description of Financial Analytical Techniques

Management of an organisation looking to monitor the performance of the business has a great advantage over outsiders because they have more detailed financial information about the daily activities of the organisation. However, outside groups must rely on published financial statements and other corporate information bulletins to make decisions (Davidson, 2003).

According to Davidson (2003), there are various analytical techniques available to evaluate financial performance. These methods are:

- Comparative trend analysis;
- Index analysis;
- Common size analysis;
- Ratio analysis.

This study employs both the comparative trend and ratio analysis techniques to evaluate the financial performance of the companies being investigated, because these techniques provide concise information that can be used for assessment purposes.

Comparative Trend Analysis

Financial statements are compared by setting up balance sheets, income statements, equity statements or cash flow statements side-by-side and reviewing the changes that have occurred from year-to-year. The most important factor that is revealed from a comparative analysis is the trend that indicates the direction, rate and amount of change that has occurred. A meaningful trend can only be established if financial information is available for five to ten years. This information is very important to analysts as it helps them to project future results (Davidson, 2003).

Ratio Analysis

Swanepoel (2009) suggests that the most popular analytical technique is ratio analysis. Ratio analysis is defined as the selection of two or more line items which have a meaningful relationship and expressing that relationship as a ratio. These line items are obtained from the financial statements of the company. A vast number of ratios can be identified and used in ratio analysis, however, it is important to ascertain what the objective of the analysis is in order to determine which ratios to use. When using the ratio analysis technique, sets of ratios are developed and grouped together in order to measure various aspects of financial performance. Davidson (2003) indicates that the ratios can be grouped together as follows:

- Profitability Ratios;
- Liquidity Ratios;
- Efficiency Ratios;

- Financial Leverage Ratios;
- Market Ratios.

Although some data can be directly used from financial statements, in most cases further processing is required to bring out the information content of the data. Data processing by the ratio analysis technique has the ability to bring out the maximum information content if the variables that produce the ratios are correctly chosen with regard to the purpose at hand. Ratio analysis is commonly used because of its remarkable simplicity and the information it revealed is so direct to a particular decision-control situation (Davidson, 2003). Ratio analysis assists a great deal in determining the financial health of an organisation.

Swanepoel (2009) advises that the use of specific financial indicators provide reliable and effective representation and measure of stability. These financial indicators also focus on different features of performance and they expose different strengths and weaknesses in a company. In this research, the specific indicators listed below will form the basis of measurement of financial performance.

- Revenue Growth;
- Net Profit Margins Ratio;
- Liquidity Ratio;
- Net Worth (Equity).

Revenue Growth

Revenue growth is assessed using the comparative trend analysis technique. Revenue is defined as the total net sales or income from operations. Revenue growth measures the increase or decrease in the current year's revenue in relation to the prior year's revenue. Consistent growth trends indicate that the company is advancing and business is expanding. It should be noted that revenue growth can be affected by company internal practises and / or external market forces. This indicator is very useful when tracking growth of the company and comparing it to historical data; however, it does not give an indication of the market average when reflecting it against other companies of similar size in the same industry (Davidson, 2003).

Net Profit Margins Ratio

Net profit margin ratio is defined as the net profit or loss expressed as a percentage of revenue. This ratio measures how much of each rand earned by the business is translated into profits, and it also provides insight into the company's pricing policies, cost structure and production efficiency. Net profit margin ratio also indicates how efficient the company is and how well it controls its costs (Swanepoel, 2009). The higher the profit margin, the more effective the company is in converting revenue into actual profit. The ideal is to achieve profitability that is at least higher relative to a competitor's and the same from a previous financial period.

Net profit margin is a commonly cited measure of a firm's success with respect to earnings on sales. There is no single quantum amount that can be used as an indicator of a successful company, and the definitions of a good net profit margin differs considerably across industries (Davidson, 2003).

Net profit margin ratio is calculated using the following formula:
Net Profit Margin Ratio = Net Profit or Loss after Tax / Revenue x 100%

Liquidity Ratio

Liquidity ratio is assessed using the ratio analysis technique. Liquidity ratio measures the ability of a company to meet its short term debt obligations. It indicates the ability of a company to pay off its current liabilities when they fall due. Liquidity ratio is a result of dividing cash and other liquid assets by the short-term borrowings and current liabilities (Swanepoel, 2009). The ratio shows the number of times the short-term debt obligations are covered by the cash and liquid assets. If the value is greater than 1, it means the short-term obligations are fully covered. Generally, the higher the liquidity ratio, the higher the margin of safety that the company possesses to meet its current liabilities. Liquidity ratio greater than 1 indicates that the company is in good financial health and it is less likely to fall into financial difficulties. While a liquidity ratio less than 1 indicates that the company cannot meet its short-term obligations.

The formula for calculating liquidity ratio as follows:
Liquidity Ratio = Current Assets / Current Liabilities

Liquidity ratio can be increased by either increasing current assets or decreasing current liabilities.

Net Worth (Equity)

Net worth (equity) is assessed using the comparative trend analysis technique. Also referred to as 'equity', it is the difference between business assets and liabilities. Net worth is a concept that is a key measure of the value of the company (Davidson, 2003). A consistent increase in net worth indicates good financial health, conversely, net worth may be depleted by annual operating losses or a substantial decrease in asset value relative to liabilities. A company that is consistently profitable will have a rising net worth, as long as these earnings are not fully distributed to shareholders but are retained in the business.

The formula for calculating net worth is as follows:

Net Worth (Equity) = Total Assets – Total Liabilities

Net worth can be increased by either increasing total assets or decreasing total liabilities.

The next section will examine the relationship between employee involvement and organisational performance.

2.9 Employee Involvement and Organisational Performance Relationship

Organisations all over the world have designed different processes to improve performance levels (Khattak, Iqbal and Khattak, 2013). A number of studies have revealed a positive relationship between employee engagement and organisational performance outcomes. Research also indicates that the more engaged employees are, the more likely their employer is to reflect high revenue growth. The level of employee engagement is found to be higher in double-digit growth companies (Markos and Sridevi, 2010).

Employee involvement enables the organisation to have a better insight about the way of functioning and where it can potentially make improvements that would be beneficial for both, the organisation and employees. There are many studies providing evidence

that employee involvement affects the organisational performance (Sofijanova and Zabijakim-Chatleska, 2013).

This section will reference three relevant research studies that are supportive to the current research. The researcher saw a benefit in benchmarking and comparing these literature findings as validation to the current research. Markos and Sridevi (2010) argue that research has gone as far as indicating that the more engaged employees are, the more likely their employer is to exceed the industry average in its profit margins.

Table 2.4: Sofijanova and Zabijakim-Chatleska (2013) Research Study Summary

Title:	Employee Involvement and Organizational Performance: Evidence from the Manufacturing Sector in Republic of Macedonia
Author/s:	Elenica Sofijanova and Vesna Zabijakim-Chatleska
Year:	2013
Key Finding/s:	The effective use of employee involvement is positively related to perceived organisational performance. More precisely, employee participation and empowerment programs, and the use of self-managing teams have a direct and statistically significant correlation to the managerial perception of the organisational performance.

(Source: Sofijanova and Zabijakim-Chatleska, 2013)

Sofijanova and Zabijakim-Chatleska (2013) study explored the relationship between employee involvement in decision making and problem solving, and organisational performance by surveying a sample population of 36 companies belonging to the Macedonian manufacturing industry. This study sought to test the following hypotheses:

Main hypothesis – There is a positive relationship between employee involvement and perceived operational performance.

Sub-hypothesis 1 – There is a positive relationship between employee participation and empowerment and perceived operational performance.

Sub-hypothesis 2 – There is a positive relationship between the use of self-managed teams and perceived operational performance.

The approach used by Sofijanova and Zabijakim-Chatleska (2013) to study employee involvement was to measure two predictor variables: 1) Employee participation and empowerment, and 2) The use of self-managed teams.

The findings proved a positive relationship on all the hypotheses, thus, confirming the main hypothesis that "there is a positive relationship between employee involvement and perceived operational performance".

Implications from this study: organisations need to align their employee involvement and use of self-managed teams in order to reflect improved operational performance. Organisations are further encouraged to adapt employee involvement programs in order to enhance performance, growth and competitiveness at regional and global level.

Table 2.5: Khattak, Iqbal and Khattak (2013) Research Study Summary

Title:	Relationship between Employees Involvement and Organisation Performance in Milieu of Pakistan
Author/s:	Muhammad Arif Khattak, Nadeem Iqbal and Sajid Rahman Khattak
Year:	2013
Key Finding/s:	Results confirmed that Organisational Performance increased in range from 56% to 94% due to employee involvement in Pakistani Organisations. Furthermore, empowerment, team orientation and capacity development contrives strong and positive relationship with organisational performance. Organisations which delegate the authority to employees perform well as compared to those who don't. Organisations who allow their employees to work in teams proved more performance level than those who have non-team based / individualistic structure. In Pakistan those organisations which develop employee's skills and knowledge have performed well as compared to those organisations which don't develop skills of their employees.

(Source: Khattak, Iqbal and Khattak, 2013)

Khattak, Iqbal and Khattak (2013) measured the relationship between employee involvement and organisational performance using a survey on a sample population of

509 organisations in Milieu of Pakistan. This study sought to test the following hypotheses:

Hypothesis 1 – There is a positive and significant relationship between delegation and organisational performance.

Hypothesis 2 – There is a positive and significant relationship between team orientation and organisational performance

Hypothesis 3 – There is a positive and significant relationship between capacity development and organisational performance

The approach used by Khattak, Iqbal and Khattak (2013) to study employee involvement was to measure the three dimensions: delegation, team orientation and capacity development.

The findings proved a positive relationship on all the hypotheses, and, further revealed an increase in organisational performance from 56% to 94%.

Implications from this study: organisations are to develop the skills of their employees and involve them in decision making processes by delegating to them the necessary power and authority. These organisations are to further adapt team-based structures and develop capabilities of their employees to perform well and to compete with prevailing trends in the markets.

Table 2.6: Kuye and Sulaimon (2011) Research Study Summary

Title:	Employee Involvement in Decision Making and Firms' Performance in the Manufacturing Sector in Nigeria
Author/s:	Owolabi Lateef Kuye and Abdul-Hameed Adeola Sulaimon
Year:	2011
Key Finding/s:	The results of the study indicate a statistically significant relationship between employee involvement in decision making and firms' performance as well as reveal a significant difference between the performance of firms whose employee involvement in decision making are deep and the performance of firms whose employee involvement in decision making are shallow.

(Source: Kuye and Sulaimon, 2011)

Kuye and Sulaimon (2011) examined the relationship between employee involvement in decision making and organisational performance using a survey on a sample population of 670 firms in the manufacturing sector in Nigeria. This study sought to test the following hypotheses:

Hypothesis 1 – There is no significant relationship between employee involvement in decision making and firms' performance.

Hypothesis 2 – Employee involvement in decision making has no significant impact on firms' performance.

Hypothesis 3 – There is no significant difference between the performance of firms whose employees' involvement in decision making are (deep) high and performance of firms whose employees' involvement in decision making are (shallow) low.

The approach used by Kuye and Sulaimon (2011) to study employee involvement was based on decision making as the measure of the level of employee involvement.

The findings proved a statistically significant relationship on all the above hypotheses, and, further showed an increase from 56% to 94% in organisational performance.

Implications from this study: organisations are to demonstrate high levels of commitment to employee involvement in decision making for the organisation's performance to enhance.

Summary

Until the second half of 20th century, organisations were using operational and process improvements techniques to increase organisational performance. Employers have realised that by focusing on employee engagement, they can create more efficient and productive workforce. Any initiatives of improvement which are taken by management cannot be fruitful without willful involvement and engagement of employees (Markos and Sridevi, 2010).

Apostolou (2000) also supports the notion that organisations are beginning to realise that employees are their most valuable asset. The return on investment on this asset comes in the form of higher levels of employee motivation, creativity, productivity, and commitment that will move the organisation forward with greater profitability.

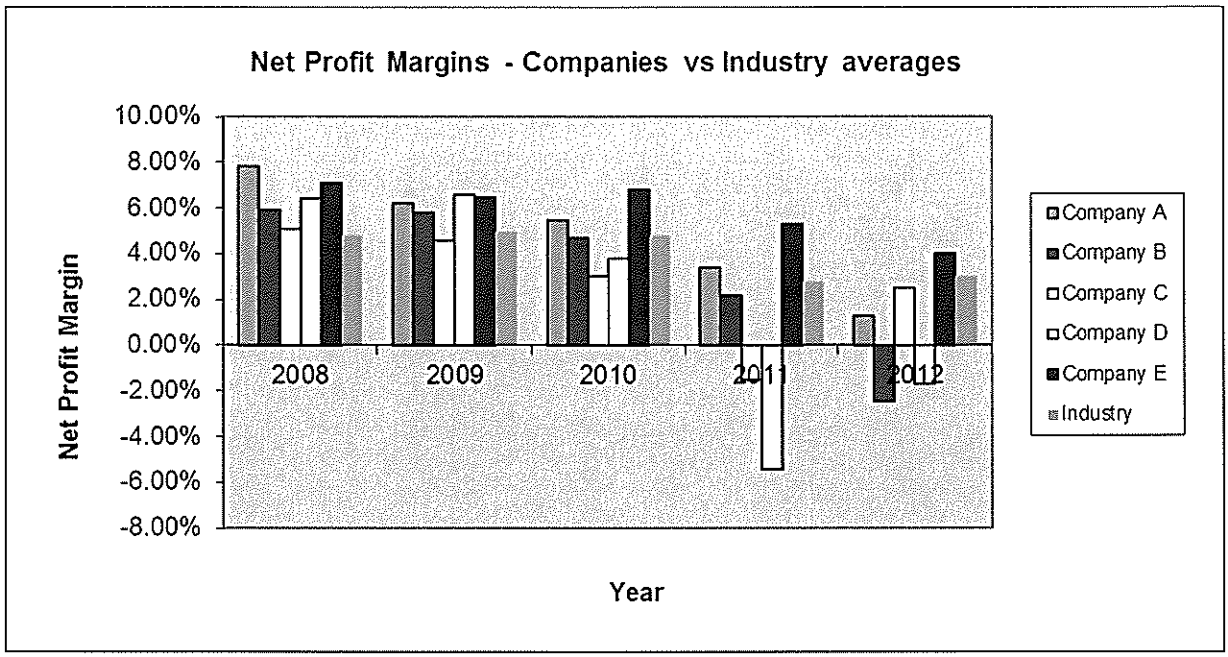
The next section will discuss organisation performance from the South African perspective using the financial data obtained from the construction industry and the construction companies investigated.

2.9.1 Organisational Performance in South Africa

Performance is an increasingly important concern for businesses in South Africa (Hayward, 2005). Organisational performance is considered as the most essential criterion in evaluating organisations. It is a measure of how effectively and efficiently a mechanism / process put in place by an organisation produces. Effective organisational performance should encompass all performance indicators that are pertinent for the existence and growth of an organisation, and the means through which the organisational goals are achieved (Oyewobi, 2014).

This section highlights the organisational performance of the South African construction industry and the five construction companies investigated using net profit margins. Net profit margin is the most commonly used and widely acceptable ratio of measuring company or industry performance for benchmarking purposes. Figure 2.5

shows net profit margins of the companies investigated in comparison to the construction industry averages over a period of five years.



(Source: Annual Report, 2008 to 2012; Construction Industry Report, 2012)

Figure 2.5: Net Profit Margins over a Five Year Period

According to Stats SA, the South African construction industry has reported declining net profit margins between 2008 and 2012. It is also indicated that net profit margins for the construction industry in the year 2012 were the lowest among nine industries contributing to the country's GDP (Construction Industry, Report No.P5002, 2012).

The industry net profit margins serve as an average benchmark, so it is expected that most companies would be on par or exceed the industry margins to be good performers. However, competitor's financial results are also used to gauge the economic environment and how each company has performed under those circumstances.

From the results presented in figure 2.5, only company E was able to report higher margins that the industry averages throughout the five year period. In general, the trend reveals that net profit margins have been decreasing over the reporting period for all the construction companies investigated and subsequently the industry averages have also adjusted accordingly.

2.9.2 Summary of Organisational Performance

According to Bryson (1999), there are theoretical reasons that suggest that performance effects of employee involvement may differ according to establishment and firm size. In seeking to explain the link between employee involvement and firm performance, the empirical literature draws on emerging but limited theoretical propositions.

Most authors identify improved labour productivity as the main mechanism by which employee involvement affects performance. Higher productivity may also come about when employee involvement alters organisational structures in such a way as to enhance employees' ability to control how their own roles are performed.

However, organisations must reflect performance at individual level and organisational level in order to improve their overall performance. All subdivisions of the organisation must perform well to achieve overall performance level. Organisations all over the world have designed different processes to improve performance level at employee and organisational level in order to perk up their overall organisational performance (Khattak, Iqbal and Khattak, 2013). The implementation of these processes in not always done, hence, the issue of performance is still the most considered business aspect regardless of the sector.

The drive for economic performance and competitiveness is a never-ending process upon which the very sustainability of the organisation depends. The global business environment can be very volatile and requires businesses to be adaptive, flexible and responsive in their strategies to achieve economic performance and competitiveness. Business survival dictates critical attention to the competitive realities of profits, competition and people resources be given. Many organisations have chosen the employee involvement approach to improve their organisational performance in response to these challenges (Nazrul-Islam, 2010).

The next section will propose a framework that captures the literature reviewed as a consolidation of the concepts discussed.

2.10 Literature Review Framework

Literature reviewed can be captured and summarised as per the conceptual framework in Figure 2.6 below.

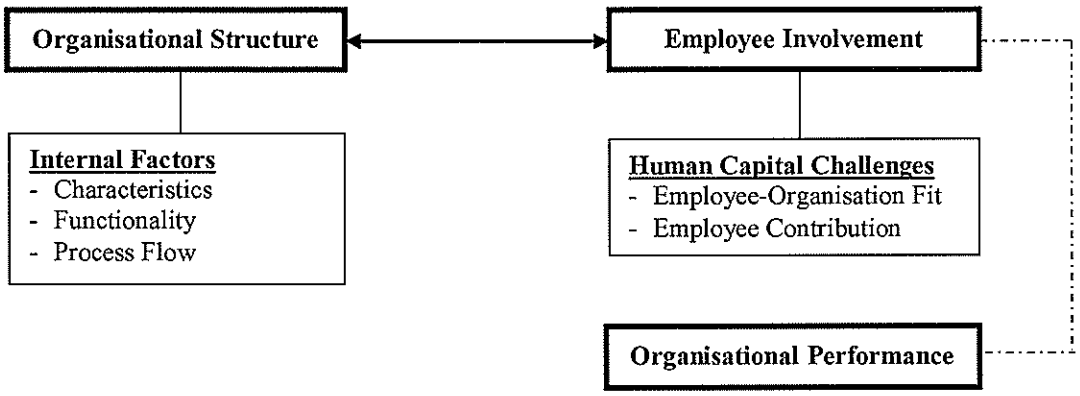


Figure 2.6: Conceptual Framework of Literature Reviewed

The relationship between organisational structure and employee involvement is represented by a solid line with arrows on both ends. This relationship is supported by past research studies from Shariat *et al.* (2013) and Vazifedoust, Nasiri and Norouzi (2012). This research will test and confirm the existence of this relationship from a South African construction industry perspective. Internal factors that are part of the formation of organisational structures are listed and challenges experienced through employee involvement. The dotted line joining employee involvement and organisational performance denotes the generalised relationship that is argued by this study, and supported by previous research from Sofijanova and Zabijakim-Chatleska (2013); Khattak, Iqbal and Khattak (2013) and Kuye and Sulaimon (2011).

2.11 Conclusion

This chapter presented relevant literature concepts applicable to this study. Foundational knowledge based on previous research studies conducted by other authors in the same field of study were presented. The literature concepts were discussed in line with the research questions that are posed by this research.

The main purpose of literature review was to identify gaps in literature and critically examine the key concepts (organisational structures, employee involvement and

organisational performance). From the literature reviewed, a number of key elements were extracted and carried onto the research questionnaire for testing.

The next chapter will describe the research design, research strategy and techniques, sample selection, data validity and reliability, data collection and analysis, and limitations that were noted while conducting the study.

CHAPTER 3
RESEARCH METHODOLOGY

3.1 Introduction

This exploratory research took a quantitative approach to answer the research questions, and to ensure that the research aim and objectives are fulfilled. This chapter details the research design, research strategy and techniques, sample selection, data validity and reliability, data collection and analysis, and limitations that were noted while conducting the study.

3.2 Research Design

There is no research that is conducted from a neutral stand point, every research reflects the researcher's interests and ambitions. These elements do not only determine the subject of the research, but they influence the research approach to solving the problem. Thus, it is essential to ponder the approach to use and the motivation for it before undertaking research. When the choice of research methodology is concluded, the researcher needs to determine the research options that are supported by the approach. Figure 3.1 below shows Research Onion Illustration as proposed by Saunders, Lewis and Thornhill (2003).

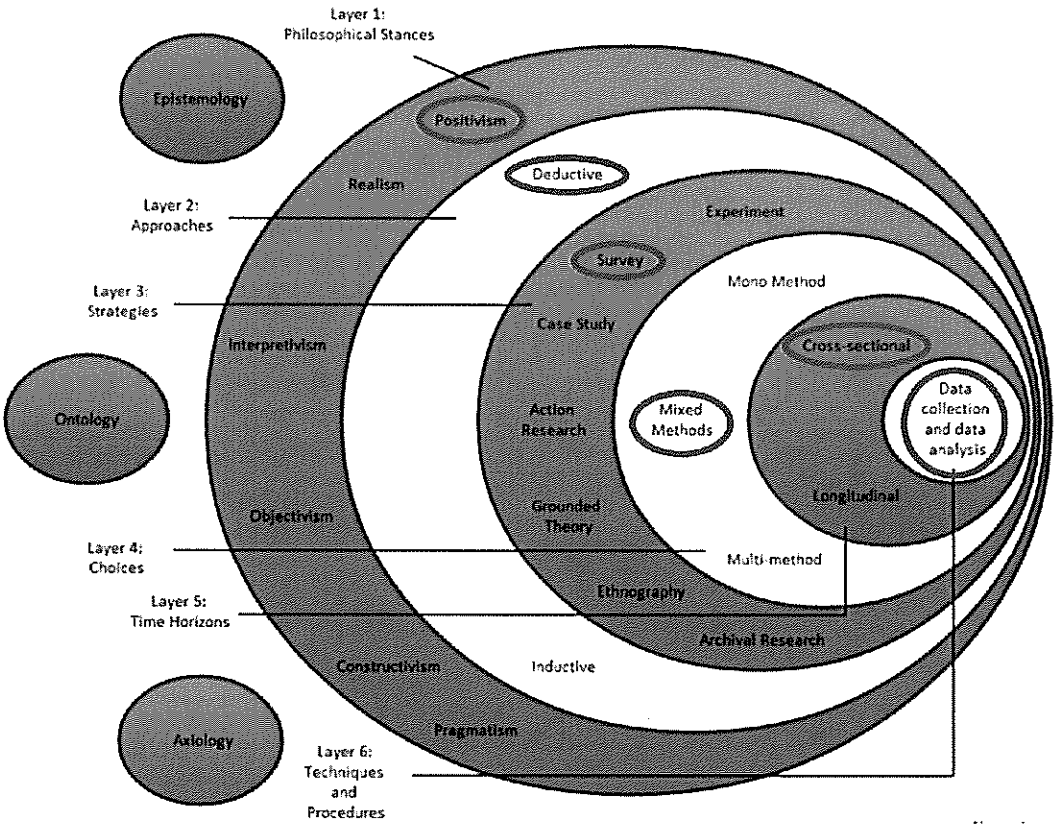


Figure 3.1 Research Onion Illustration (Source: Saunders, Lewis and Thornhill, 2003)

Saunders, Lewis and Thornhill (2003) proposed the "research onion" illustration to highlight the six research options. This illustration comprises of the outer core representing the research philosophy, the next layer, which is the research approach, then the research strategy, then the choices of method and then the time horizon of the study and finally at the core are the research techniques.

Saunders, Lewis and Thornhill (2003) further described that research philosophy points to the appropriate methods of inquiry and also assist researchers on how to conduct the research properly so as to gain knowledge at the end of the research. The research philosophy can also impact on the methodology adopted for the study. This study used a positivism philosophy.

Positivism philosophy is based on the stance which holds that genuine knowledge is derived from and validated by science, and that only scientific knowledge is backed up by quantitative data and statistical analysis. This philosophy is characterised by a

detached approach that seeks out facts or causes of any social phenomena in a systematic way. It is also founded on a belief that the study of human behaviour should be conducted in the same way as studies conducted in natural sciences. Positivism philosophy also seeks to identify, measure and evaluate any phenomena and to provide rational explanation for it (Saunders, Lewis and Thornhill, 2003).

The research design adopted for the study and highlighted in figure 3.1, is the most suitable to address the research problem and questions for the following reasons:

- The positivistic philosophy stance was utilised to establish a causal link for the relationship between employee involvement and organisational performance due to its ability to extract facts in an unbiased and scientific manner.
- The deductive approach is more suited to positivistic approach in the sense that it uses the theory and the study then focussed on proving it with empirical evidence.
- A survey strategy was used because of its capability to gather data from a relatively larger sample.
- A cross sectional time-horizon is suitable for an academic study that is governed by timelines and takes a view of a phenomena at a certain point in time.
- Techniques and procedures used to collect data were mixed methods which employed surveys and interviews, this decision was informed by a desire to obtain a balanced approach to the study. Thus, the use of one or the other would not have yielded the preferred outcome.

Having formulated the research questions based on literature reviewed, the above research approach aligns with the research questions. The approach will be able to assist the research in providing answers to the following questions:

Main Question

What is the most appropriate organisational structure that encourages employee involvement in decision making and thereby, has the likelihood of contributing towards improvement of organisational performance?

Evidence needed to support the conclusion on the main question will be derived from the answers to sub-questions listed below.

Sub-Questions

Sub-Question 1

Which organisational structures are used by the five selected large construction companies in South Africa?

Evidence need to answer this question will be extracted from the current organisational structures that are currently being used by these construction companies at the time the research was conducted.

Sub-Question 2

What are the characteristics of employee involvement by which the organisation's performance is affected?

Elements relating to characteristics of employee involvement included in the questionnaire will provide the necessary deduction to answer this question.

Sub-Question 3

What is the nature of the relationship between the identified organisational structures and the level of employee involvement?

An extrapolation of the nature of the relationship between the identified organisational structures and the level of employee involvement will be detailed through organisation performance results in order to answer this question.

The results obtained from the above research questions will enabled the researcher to generalise the findings so that inferences may be made of the general population of construction employees involved in the research, and the South African construction industry in general. The primary orientation of the study is to focus on answering these research questions and attain results that argue the existence of the relationship between employee involvement and organisational performance.

3.3 Research Strategy and Techniques

The research design took a quantitative approach where five large construction companies were requested to avail their employees to participate in a survey or interview that would elicit their views on the influence of employee involvement on organisational performance. Prior to conducting surveys or interviews, the researcher

used literature reviewed and past research studies as the basis for developing the questionnaire. Appendix A contains the questionnaire used to conduct surveys and interviews.

The research received responses from employees for surveys, and interviews were conducted with management staff. Below is the description of research techniques and their relevance to the study.

Questionnaire

The questionnaire contained demographical information and rating statements that relate to organisational structures, employee involvement and organisational performance. 37 statements were used to rate key elements of organisational structures, employee involvement and organisational performance, and were evaluated on a 5 point Likert scale.

This scale generated numerical data used for data analysis. The scale is based on the level of agreeability and varies from '1' for 'strongly disagree' to '5' for 'strongly agree'. Some statements had negative connotation to avoid the influence of acquiescence and extremity bias, therefore, the scales were reversed when carrying out data analysis. For example, a positive statement "strongly agree" initially has a score of 5, while "strongly disagree" has a score of 1. A negative statement "strongly disagree" gets a 1 "i.e., a score of 5" and "strongly agree" gets 5 "i.e., a score of 1".

The structure of the questionnaire is as follows:

- Section A - Demographics;
- Section B - Relevant to Management Only;
- Section C - Organisational Structures and Employee Involvement;
- Section D - Organisational Performance.

Surveys

Surveys were randomly issued to staff employees to complete. The benefits of conducting surveys for research are two-fold: they are quick to administer and they provide significant volumes of data in a relatively short turnaround time (Remenyi *et*

al., 1998). Because these surveys were self-administered, employees were able to complete the questionnaire in the comfort of their own space, which minimises biased response associated with group influence.

Interviews

Interviews enabled the researcher to be more flexible in adapting questions to suit each session. The motivation for conducting interviews was to get additional voluntary information that could otherwise not be obtained through surveys. Section B of the questionnaire is dedicated to management and applicable for interviews only.

3.4 Sample Selection

According to Saunders, Lewis and Thornhill (2003), a sample is a part of the entire population carefully selected to represent that population. This study elected to use random sampling technique to compile a sample population for both surveys and interviews. The justification for using random sampling technique on this study was to eliminate the possibility that the sample is biased towards the researcher selecting the sample. A total sample population of 71 respondents was obtained for this study.

All construction companies investigated possess the highest CIDB (Construction Industry Development Board) Contractor Grading of level 9GB and have active operations in all nine provinces in South Africa. Questionnaires were sent to the company's Human Resource Departments for distribution to employees. However, interviews were requested with management staff dependent on their availability.

3.5 Validity and Reliability

According to Hair *et al.* (2003), validity is the extent to which the scales under consideration truly represent the concept being measured. In other words, it is a question of how far we can be sure that a test or instrument measures the attribute that it is suppose to measure. There are three different types of validity, namely: construct, internal and external validity.

Construct validity determines whether the instruments are the accurate measure of reality. Internal validity evaluates whether the research design is capable of eliminating bias and the effect of extraneous variables. External validity defines the domains to

which the results of the research may be generalised (Easterby-Smith, Thorpe and Lowe, 2002).

According to Easterby-Smith, Thorpe and Lowe (2002), reliability is primarily a matter of stability, if an instrument is administered to the same individual on two different occasions the question is whether it will yield the same results.

A statistical reliability method, Cronbach's alpha coefficient, was used to check the internal consistency of data collected. Easterby-Smith, Thorpe and Lowe (2002) advised that on exploratory research, the reliability coefficient with a value less than 0.6 is considered to have poor internal consistency, 0.6 to 0.7, acceptable and greater than 0.8 means good internal consistency. Table 3.1 gives guidelines of internal consistency.

Table 3.1: Cronbach's Alpha Internal Consistency Guideline

Reliability Coefficient	Results
< 0.6	Poor
0.6 to 0.7	Acceptable
>0.8	Good

(Source: Easterby-Smith, Thorpe and Lowe, 2002)

3.6 Data Collection

The study used both primary and secondary data. Primary data is the information obtained directly from originators or respondents. It refers to the responses obtained through surveys and interviews. The data serves to extract first-hand information from subjects being studied.

While secondary data relates to literature from books, journals, articles and past research work that forms part of the theory. Research methodology indicates that it is beneficial to the research if data is obtained through more than one method to ensure that evidence is analogous and compatible. This study gathered primary data through two sources, namely: surveys and interviews.

There are three main kinds of data that are encountered in management research, nominal, ordinal and interval data. Nominal data implies no more than labelling of

different categories. Ordinal data is the classification of responses on a range of answers, e.g., rating order. Interval data is the classification of answers to give a certain interval. This research relied on ordinal data using agreement rating statements. The reason for the use of ordinal data is that questionnaires can be completed with ease and analysis tend to be relatively easier to conduct (Remenyi *et al.*, 1998).

3.7 Data Analysis

The analysis of data derived from the responses followed a three step process:

- Cross-checking;
- Data capturing;
- Statistical analysis and relevant illustrations.

Data analysis was performed using two different methods. Demographical data was analysed using a descriptive statistical method. The results generated by the descriptive statistical method were presented in a percentage format. Each statement on the demographic section was expressed as a percentage of the respondents who participated on the surveys and / or interviews.

Data from the rating of statements was analysed using a descriptive statistical method called percentage agreement. Each statement's response was gauged against the answers with rating 4 and 5. In other words, all rating 4 and 5 responses were tallied and expressed as a percentage of the total responses. That figure gave the weighting of agreeability on each statement.

3.8 Research Limitations

It must be noted that there were no proven limitations that were encountered while conducting this research. However, it is felt that the reluctance to expose bad practise within companies could have encouraged some employees to supply misleading information when completing questionnaires. While it is difficult to substantiate this as a potential limitation, the consistency of the findings from literature and previous studies reveal a positive basis from which to work from.

Academic research in its nature tends to repel people who do not see themselves as academics or students. The construction industry is historically known for low levels of education due to its unspectacular working environment. One cannot help but wonder if there are potential respondents who were lost to the study because they did not identify with its content based on the perceived educational levels required to participate. It certainly would have been great to get more respondents and observe the impact this would have on the research findings.

3.9 Conclusion

This chapter discussed the research methodology used by the study. The research is exploratory in nature and takes a quantitative approach. A review of research options was conducted, describing the appropriate research design adopted for the study, and discussing research strategy and techniques, and sample selection. The chapter further defined the method of measuring validity and reliability of data collected. Data analysis and types of statistical analysis methods used were clarified.

The next chapter presents research data and interpretation of the research results.

CHAPTER 4
DISCUSSION OF RESULTS

4.1 Introduction

This chapter discusses the results of the surveys and interviews conducted. Data was received from a sample population of 71 respondents, and an overall response rate of 33% was obtained. This response rate is considered to be reasonably high since the questionnaire is relatively long. It should be noted that the majority of the respondents were managers and this provides some level of reliability on data collected.

Data analysis was conducted and the relationship between organisational structures and employee involvement will be explored. The analysis will further present answers to specific research questions that were posed by the study. The existence of the relationship between employee involvement and organisational performance will be argued. Research findings will be discussed and compared to literature reviewed. The research objectives will be reviewed to ensure that the research aim is fulfilled.

4.2 Reliability of Data Analysed

Internal reliability was measured using Cronbach's alpha reliability coefficient, Appendix B contains a complete set of data used to compute the internal reliability coefficient. Overall, the study achieved a test mean of 119.30 and test standard deviation of 30.47. The standard error of measurement on the data is 4.53. The internal reliability coefficient recorded by this study is 0.98, which is very good for an exploratory study.

The overall reliability coefficient achieved concurs that the study has fulfilled more than the required internal reliability criteria and provides dependable data for the purpose of analysis and reporting on the research findings.

4.3 Demographic Profile of Respondents

The characteristics of the sample population are summarised using the following demographic categories: Years of Service, Formal Qualification, Status in the Company, Functional Division, Age Distribution and Gender Breakdown. A total number of respondents and percentages are calculated and reflected under each

category. Below are detailed analysis and interpretation of the results as per the abovementioned categories.

Section A: Demographics

Years of Service

The results from all the five construction companies indicate that employees who have been with the company for less than a year constitute 15.5%, one to three years are 26.8%, four to five years 8.5%, six to ten years are 7.0%, eleven to twenty years are 28.2%, twenty one to thirty years are 9.9% and more than thirty years are 4.2%. Figure 4.1 below gives graphical representation of the results.

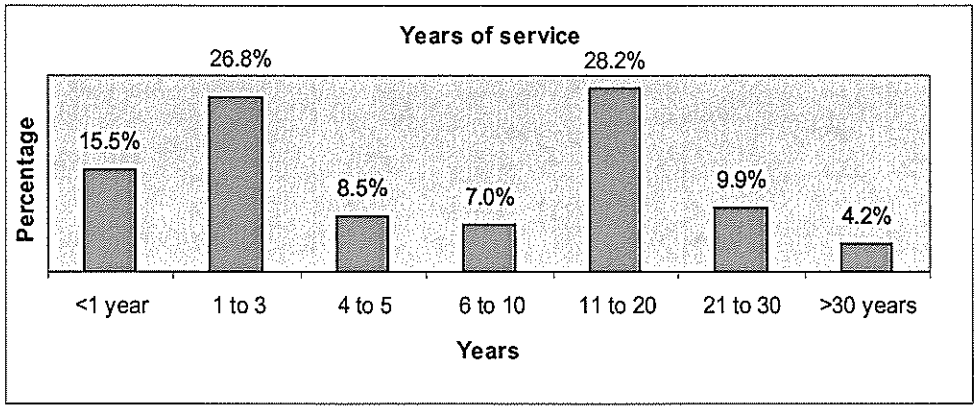


Figure 4.1: Years of Service

The highest participation came from respondents with eleven to twenty years of service in the same company at 28.2%. These were people who understand the culture of the company and were required to participate in research of this nature. The fact that most of them are part of management is an added benefit and gives credibility to the research findings. The experience or contribution this group brings to the study is vital.

The second highest group (26.8%) are people with one to three years of service, these are predominantly junior employees who are being asked to participate in company activities in order to gain some understanding of the company culture. The assumption is that they have some free time in their schedules to accommodate company activities as part of their career development. The above groups combined constitute 55% of the total population surveyed or interviewed.

The least participation was from people who have been with the company for more than thirty years at 4.2%. The low response from this group is predominantly caused by their unavailability and constant busyness associated with management level staff. Another contributing factor could be that this group is small in the construction companies investigated.

Formal Qualifications

The results from all the five construction companies show the formal educational background of respondents as follows: matric – 4.2%, diploma – 12.7%, national higher diploma – 33.8, degree – 38.0% and post graduate degree – 11.3%. Figure 4.2 below gives graphical representation of the results.

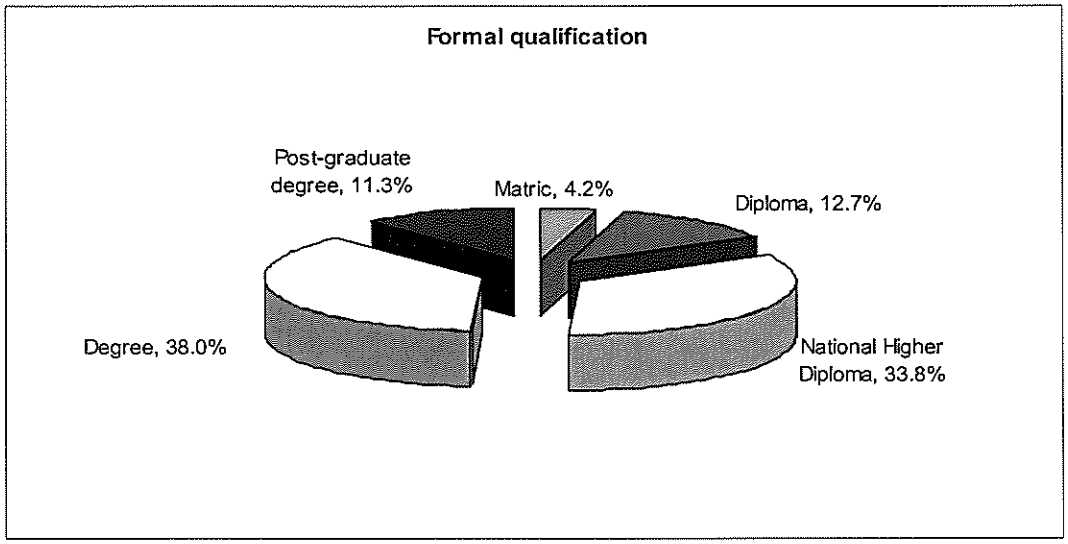


Figure 4.2: Formal Qualifications

Most of the respondents had degrees as their qualification at 38.0%. Followed closely by a group of people with national higher diploma at 33.8%. These two groups combined constitute 71.8% of the total population surveyed or interviewed, which stresses the importance of qualifications when working for large construction companies.

The least respondents are people who have matric as their qualification at 4.2%, this was expected since formal qualifications are seen to be a necessary requirement when entering the industry. Gone are the days when people were trained on the job and relied on experience to advance within the company. Another reason could be that this

research repelled potential respondents who did not identify with the contents of this research.

It must be stated that no participant declared that they possess no formal qualifications, the researcher notes this as a very interesting finding given the history of the construction industry. However, all managers who participated indicated that they possess as a minimum a diploma as their formal qualification.

Status in the Company

The results from all the five construction companies illustrate that staff complement consists of 7.0% administrative, 5.6% supervisory, 18.3% directors, 2.8% associate partners, 49.3% managers, 15.5% staff and 1.4% senior executive. Figure 4.3 below gives graphical representation of the results.

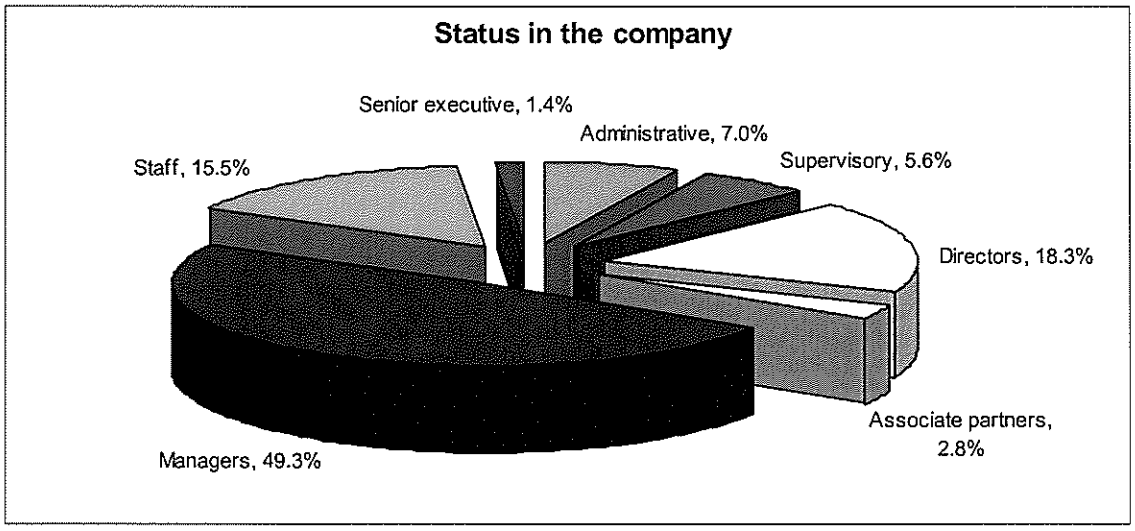


Figure 4.3: Status in the Company

Nearly half of the respondents were managers at 49.3%, as already noted this group forms the core of the business. They are much more in control of their busy schedules and can accommodate other activities in their day. 26 out of 44 managers had a minimum of eleven to twenty years of service with the same company, this experience gives credibility to the results because these respondents bring valuable understanding of the company.

Again, the least participation (1.4%) came from people high up in the organisations, senior executives. As stated earlier, this is due to time pressures and unavailability of senior management to take part in researches. And also the fact that the number of executives is much smaller compared to managers and employee population, and access to them is quite limited.

Functional Divisions

Respondents from all the five construction companies were drawn from four different divisions: 76.1% operations, 9.9% finance, 7.0% human resources and 7.0% support services. Figure 4.4 below gives graphical representation of the results.

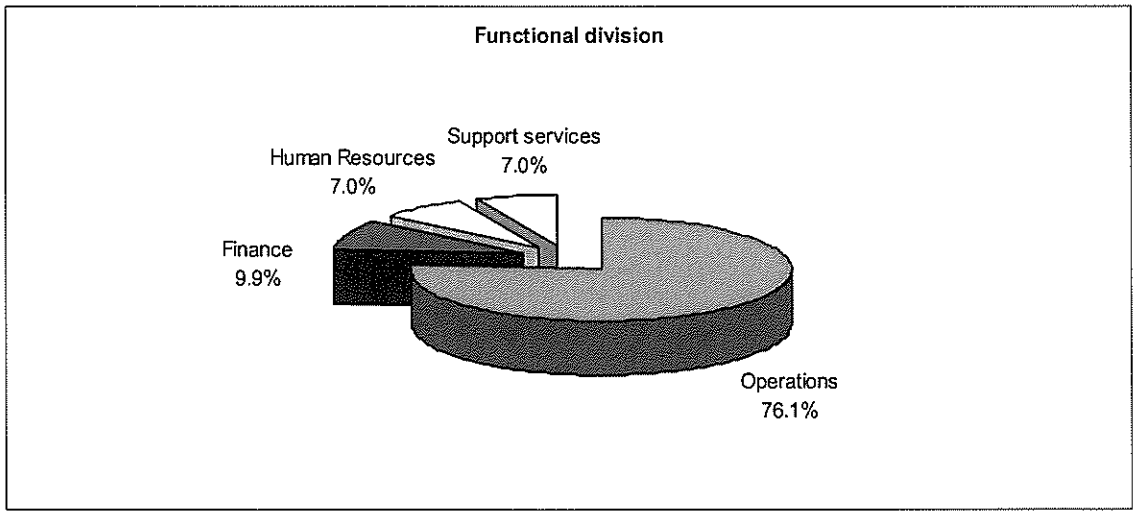


Figure 4.4: Functional Divisions

As one would expect, most respondents (76.1%) are from the operations division. This comes as no surprise since most of the construction staff population is in operations. These employees bring their multi-facet knowledge of the company, and this knowledge is likely to give this research a robust input.

The least participative divisions were human resources and support services, both at 7.0%, this could be attributed to the fact that these divisions are generally small compared to operations divisions.

Age Distribution

The sample from all the five construction companies consists of 29.6% of respondents between the age of eighteen and twenty nine, 32.4% between thirty and thirty nine years, 19.7% between forty and forty nine years and 18.3% between fifty and fifty nine years. Figure 4.5 below gives graphical representation of the results.

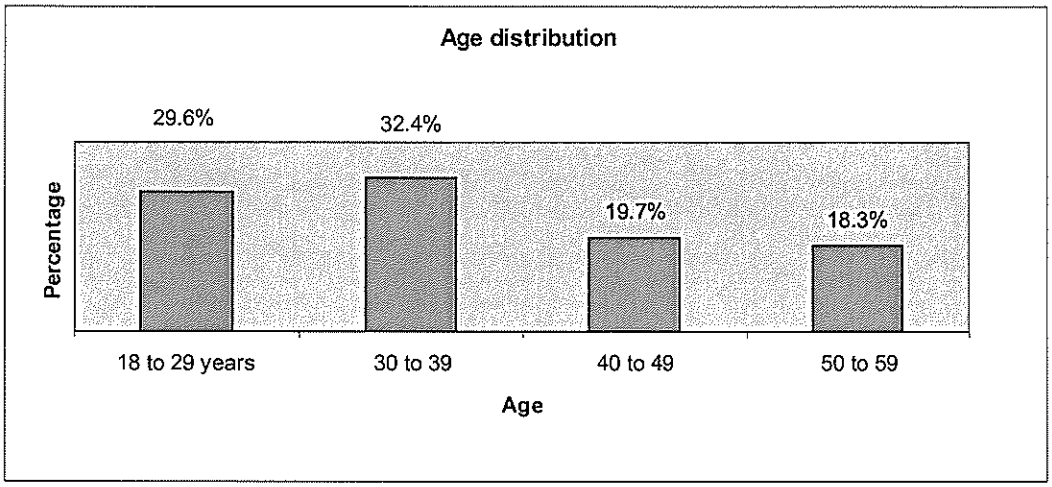


Figure 4.5: Age Distribution

Most respondents (32.4%) were between the ages of thirty to thirty nine years. This represents the average age range of managers who are the most participative group. The second highest group was the eighteen to twenty nine age group which generally corresponds to new recruits or junior employees in the company.

The least participation came from a group, fifty to fifty nine at 18.3%. This age group generally corresponds to that of senior management.

Gender Breakdown

Table 4.1 below shows the gender breakdown from all the five construction companies.

Table 4.1: Gender Breakdown

Gender	Number	%
Male	56	78.9
Female	15	21.1
Total	**71**	**100%**

As anticipated the majority gender that participated were male at 78.9%, and females at 21.1%. This is an accurate reflection of the gender demographics in the construction industry. It must be further noted that males are predominately in operations, while their female counterparts are mostly found in support services like human resources and finance, which are smaller divisions compared to operations.

Out of the 44 managers who participated, only 5 managers were female and 39 were male, which gives a ratio of more than 1:7.

Management Breakdown

Table 4.2 below shows the breakdown between managers and employees drawn from all the five construction companies.

Table 4.2: Management Breakdown

Group of Respondents	Number	%
Managers	44	62.0
Employees	27	38.0
Total	**71**	**100.0%**

From the respondents who participated, 62.0% were managers and 38.0% were employees. This came as no surprise since the 'status in the company' and 'age distribution' categories have already indicated the likelihood of having more managers than employees participating. This could be caused by the fact that this research is slightly more applicable to management, thus, it is natural that it would attract more interest from managers than employees.

Section B: Demographics – Management Only

Number of Employees Breakdown

From all the five construction companies that participated, 64.3% of their managers said the company employs less than six thousand, 7.1% said the company had employees between six thousand and one to seven thousand, and 28.6% said the company had employees more than ten thousand. Table 4.3.3 below shows the breakdown of the number of employees in the company.

Table 4.3: Number of Employees Breakdown

Number of Employees	%
Less than 6 000	64.3
6 001 to 7 000	7.1
More than 10 000	28.6
Total	**100.0**

The results are a reflection of managers from different companies investigated. This research has shown that there are companies on both ends of the scale, although a substantial number (64.3%) is on the lower end. There are 28.6% of companies on the upper end, and this is an indication of the very large construction companies investigated. The remaining companies are located in the mid-range and they account for 7.1%.

Number of Management Layers

From all the five construction companies that participated, 42.9% of their managers said the company had three to five layers, 28.6% said the company has five to seven layers, 14.3% said the company has seven to nine layers 2.4% said the company has nine to twelve layers and 11.9% said the company has more than twelve layers. Figure 4.6 below gives graphical representation of the results.

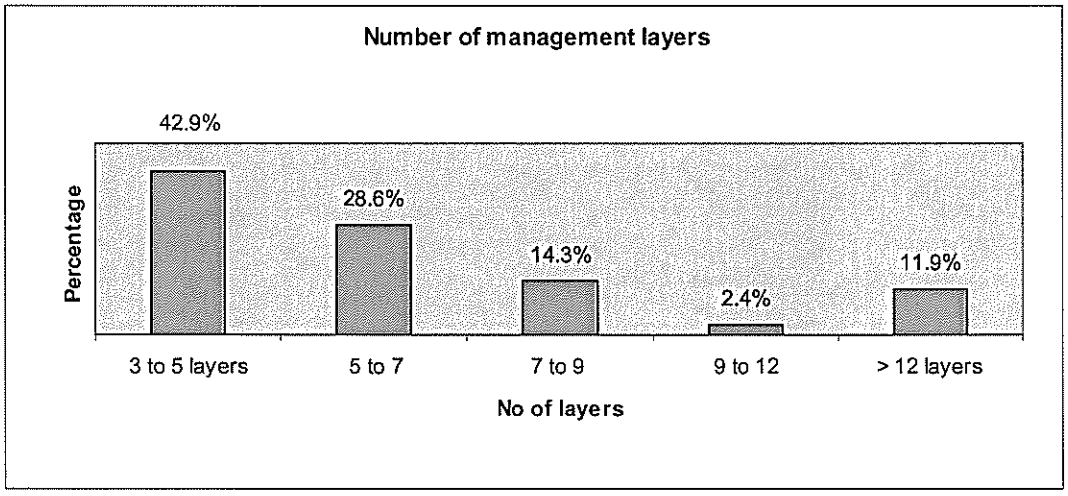


Figure 4.6: Number of Management Layers

Most managers who participated indicated that their companies had three to five layers at 42.9% and the least, nine to twelve layers at 2.4%. The results show that large companies do not necessarily use multi-layered structures; only 11.9% of the

companies use more than 12 layers of management on their structure. The results also imply that these companies use flatter structures than hierarchical structures.

Management Levels Distribution

From all the five construction companies that participated, the management levels breakdown is as follows: 22.7% - level one, 29.5% - level two, 25.0% - level three, 15.9% - level four and 6.8% - level five. Figure 4.7 below gives graphical representation of the results.

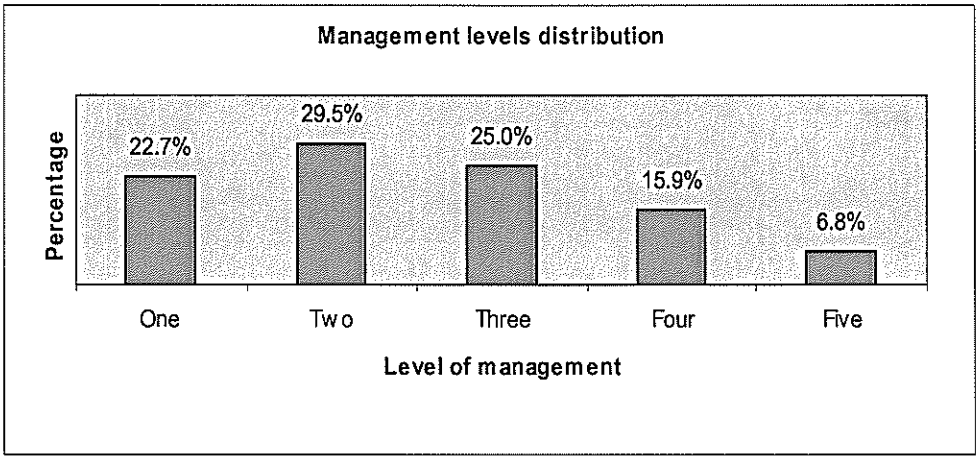


Figure 4.7: Management Levels Distribution

Most managers (29.5%) who participated indicated that they were in management level two, and the least being 6.8% in level five. However, management levels of respondents are almost evenly distributed between level one and level four. This distribution ensured that a fairly good representative sample (from the top down) has been obtained for data analysis.

The least respondents coming from level five at 6.8%, the research did not attract a lot of managers at this level perhaps this is caused by the fact that managers at this level are very close to operations, thus, quite busy to participate in researches.

4.4 Discussion of Quantitative Results

This research used quantitative methods to empirically test and confirm the relationship between organisational structure and employee involvement, and further proposed a generalisation of the link between employee involvement and organisational

performance. A complete set of quantitative data is included in Appendix C showing the ratio of agreeability on each statement. The ratio gives the rate of agreement (agreeability ratio) on all elements measured. Table 4.4 below contains guidelines used for analysis of agreeability ratios.

Table 4.4: Agreeability Ratios Guideline

Agreeability Ratio	Results
50% and less	Poor
51% to 59%	Average
60% to 69%	Good
70% to 79%	Very Good
80% and above	Exceptional

Section B: Relevant to Management Only

This section presents results on organisational structures and organisational performance elements as seen from the manager's point of view. Table 4.5 and 4.6 reflect different elements and their corresponding agreeability ratios.

Table 4.5: Organisational Structure (Manager's Responses Only)

ID Code	Element	Agreeability Ratio	Result
B1	Process Flow	63.6	Good
B2	Hybrid Effectiveness	63.6	Good
B3	Structural Design Focus	53.3	Average
B4	Structural Review	57.8	Average

Process flow is a critical element of organisational structure, it ensures the functionality and effectiveness of the organisation. Appropriate process flow design within the company does not only encourage employee involvement but it also creates a perfect environment for employee involvement to flourish. Companies investigated had a fairly good process flow (63.6%) within their structures.

One aspect of organisational structures tested was the effectiveness of the concept of hybrid or combined structural design employed by companies. Research results support the notion that hybrid designs are the way to go when the company cannot decide on one type of organisational structure suited for their business. These companies are able to customise their organisational structure to suit their needs in order to meet the expected performance targets.

Although it is common knowledge in management science that the design of an organisation structure has to be focused around work not people, the research results give an average confirmation (53.3%) to this statement. This could be caused by respondents who are not familiar with organisational structural design principles, however, the results are still positive and validating to this established management principle. Another closely linked statement sought to understanding the regularity of structural review, the results were a high average (57.8%). Although the results are still positive, the fact is that some respondents were not aware of the process of structural review when it takes place as this is conducted and aligned to strategic goals at executive level.

In summary, regardless of the organisational structure the organisation adopts, it is critical that the design is effective and the process flow supports the business functionality.

Table 4.6: Organisational Performance (Manager's Responses Only)

ID Code	Element	Agreeability Ratio	Result
B5	Performance Goals	65.9	Good
B6	Financial Performance	84.1	Exceptional
B7	Productivity	75.6	Very Good
B8	Employee Contribution	88.9	Exceptional
B9	Effective Performance	95.6	Exceptional
B10	Poor Performance	66.7	Good
B11	Efficiency	84.4	Exceptional

Setting realistic performance goals forms a strong base for a company to work from if it wants to achieve good performance. These goals have to be accompanied by an appropriate structural design in order to realise them. A combination of these two aspects gives rise to a stable and profitable company.

The research also tested perception of the respondents on how they rate the financial performance and productivity in their companies, these statements received a resounding confirmation of 84.1% and 75.6% respectively, in support that these companies were the best performing companies in the industry.

The research further confirmed that employee contribution and efficiency form the building blocks towards organisational performance. Effective performance is driven by high levels of productivity, which is a function of an effective organisational structural design. Overall organisational performance can be traced back to these building blocks as they are directly responsible for its increase or decrease.

In general, the results established that high performance is driven by efficiency and effective effort put in by employees as well as the company's support of employee initiatives. However, poor performance can be a result of structural deficiencies in the organisation.

In summary, it should be noted that all the above elements provided positive and cohesive results that are complementary to organisational performance.

Section C: Organisational Structure and Employee Involvement

This section presents results on organisational structure and employee involvement elements. Table 4.7, 4.8 and 4.9 detail different elements and their corresponding agreeability ratios.

Table 4.7: Employee Involvement

ID Code	Element	Agreeability Ratio	Result
C1	Core values	85.5	Exceptional
C2	Support system	60.0	Good
C3	Vision and Mission	61.4	Good
C4	Respect	75.7	Very Good

The results acknowledge that employees want to work in an environment that is aligned to their core values, and in a company with good vision and mission. Other elements that are crucial to the livelihood of employees is the support system provided by the company as well as high levels of conduct that are characterised by true respect.

In summary, in order to feel that they are involved, employees want to identify and be part of a company that reflects these key elements in its business philosophy.

Table 4.8: Organisational Structure

ID Code	Element	Agreeability Ratio	Result
C5	Process Flow	92.9	Exceptional
C6	Chain of Command	43.5	Poor
C7	Interpretation of Organisational Chart	66.7	Good
C8	Structural Efficiency	55.7	Average
C9	Authorisation	76.8	Very Good
C10	Delegation of Authority	55.1	Average
C11	Job Definition	51.5	Average
C12	Task Discretion	60.0	Good
C13	Decision Making	58.6	Average
C14	Structural Deficiencies	54.3	Average

In general, all the above results indicate positive confirmation of the statements posed to respondents about the functionality of their organisational structure except for the chain of command element. The results seem to suggest that all companies surveyed apply the same principles of organisational structural design.

It can be seen on the results that the majority of the companies have designed their organisational charts to be simple and clear. This enables employees to work efficiently and that improves productivity in the organisation. The application of authorisation and task discretion is also positively endorsed by the results.

Employees have expressed that their organisational structure clearly depicts who has the formal authority to make decisions in the company. This is also accompanied by the fact that structural deficiencies that see some employees being underutilised in their current organisational structure are minimal. These findings are a great part of employee involvement because inappropriate structures may lead to poor involvement of employees.

In summary, the results further support the need to have an efficient process flow for the company to reflect adequate levels of employee involvement. However, the only concern still remains the dual chain of command that exists on some of these companies' organisational structures.

Table 4.9: Employee Involvement

ID Code	Element	Agreeability Ratio	Result
C15	Equipping	67.1	Good
C16	Roles and Responsibilities	71.8	Very Good
C17	Resourcing	47.9	Poor
C18	Employer Expectations	88.7	Exceptional
C19	Employee Authority	48.6	Poor
C20	Employee Consultation	25.7	Poor
C21	Employee Contribution	66.2	Good
C22	Assurance of value	83.1	Exceptional

The above results revealed both positive and negative characteristics of employee involvement elements tested. Positive aspects confirmed that companies invest in the development of their employee and that employees are able to meet their expectations as they contribute towards the success of the company. However, the most important aspect is the fact that companies value their employees and that on its own determines the level of employee involvement that the company is able to achieve.

However, there were negative elements that seem to suggest that not all companies investigated provide adequate resources for their employees to be able to perform their work efficiently. The issue around employee consultation is also a concern for companies that participated on this study. These companies need to attend to these issues as soon as possible because they have potential to negatively influence employee involvement.

The employee authority, which gives more decision making to employees; and consultation that relates to communication between employees and the organisation; need to be seriously considered by companies while keeping in mind that employee involvement is a two-way process between employees and the organisation.

Section D: Organisational Performance

This section presents results on organisational performance elements. Table 4.10 details different elements and their corresponding agreeability ratios.

Table 4.10: Organisational Performance

ID Code	Element	Agreeability Ratio	Result
D1	Involved Employee	71.0	Very Good
D2	Performance Alignment	62.0	Good
D3	Employee Performance	69.0	Good
D4	Performance Rewards	80.0	Exceptional

All the above elements reflect a positive contribution towards organisational performance. These results confirm that involved employees contribute to organisational performance as long as the structure is aligned to encourage employee involvement. In that case, employee involvement has a fair chance of positively influencing organisational performance.

In summary, the overall index score for the study is 136.3 from a total of possible 185 points (37 statements multiplied by 5 points per statement), which gives a percentage index of 73.7%. It can be concluded that the research has a high percentage of agreeability.

4.5 Confirming the existing relationship between Organisation Structures and Employee Involvement

The previous section discussed quantitative results from surveys and interviews conducted. This data provided an overall conclusion of the findings using numerous elements that were tested or evaluated by this study. This section details specific elements that are used to confirm and support the existence of the relationship between organisational structures and employee involvement. This discussion is summarised into three essential categories needed to substantiate the existence of this relationship, namely: structural, employee and organisational essentials.

Structural Essentials

For an organisation to have a structure that has an effect on employee involvement, there are minimum elements that should be reflected and actively maintained throughout its lifetime. Three structural essential elements are, Structural Design Focus, Process Flow and Structural Efficiency. Table 4.11 below provides a descriptive data of the above elements.

Table 4.11 Structural Essential Elements

Element	N	Mean	Std. Dev.	Agreeability Ratio (%)
Structural Design Focus	45	3.31	1.00	53.3
Process Flow	70	4.43	0.63	92.9
Structural Efficiency	70	3.51	0.96	55.7

Structural Design Focus – refers to the management science principle that guides organisations when developing their organisational structure based on their work and not people. Although this is a proven management principle, some organisations still disregard this fundamental theory, and that leads to a dysfunctional relationship between organisational structure and employee involvement.

Process Flow – an organisation stands no chance of achieving employee involvement if their structure does not cater for an appropriate level of process flow. Lack of or absence of appropriate level of process flow within a structure discourages employee involvement and limits business success for the organisation. In general, good process flow brings about an increase in employee involvement.

Structural Efficiency – closely linked to process flow is the element of structural efficiency. Structural efficiency is a direct contributor to employee involvement, structural limitations destroy employee involvement and organisational performance in general. Organisations need to be aware of the dangers posed by inefficient structures to employees, as that makes the process of employee involvement even more difficult.

Employee Essentials

Below are two elements, Authorisation and Task Discretion, which are essential to the relationship between organisational structure and employee involvement, discussed from the employee's viewpoint. Table 4.12 below provides a descriptive data of the above elements.

Table 4.12 Employee Essential Elements

Element	N	Mean	Std. Dev.	Agreeability Ratio (%)
Authorisation	69	4.03	0.92	76.8
Task Discretion	70	3.46	0.93	60.0

Authorisation – this element defines the very essence of employee involvement, if organisations attempt to implement employee involvement, they need to ensure that appropriate authorisation is addressed. The structure of the organisation has to define and provide the necessary authority for employees to act within their task discretion parameters. In general, the better the level of authority given to employees, the higher the employee involvement within the organisation.

Task Discretion – is closely linked to authorisation, but it goes further by encouraging employees to act out the authority given to them to perform their tasks. The art of introducing and creating a balance between authorisation and task discretion is a critical process in every organisation's success.

Organisational Essentials

Below are three elements, Core values, Support system and Employee Consultation, which are essential to the relationship between organisational structure and employee involvement, discussed from the organisation's viewpoint. Table 4.13 below provides a descriptive data of the above elements.

Table 4.13 Organisational Essential Elements

Element	N	Mean	Std. Dev.	Agreeability Ratio (%)
Core values	69	4.12	0.85	85.5
Support system	70	3.59	0.88	60.0
Employee Consultation	70	2.93	0.92	25.7

Core values – it is highly recommended for organisations to hire employees who have core values that are aligned to their business's core values. This will ensure that employees identify with the organisation and are dedicated to the success of the organisation.

Support system – when the organisation is seen to be supportive of employee' initiatives, employees tend to respond positively by engaging with the organisation's vision and goals.

Employee Consultation – the process of employee consultation is one of the most common elements that limit employee involvement in most organisations. If an organisation wants to be successful in the implementation of employee involvement, their consultation process needs to be the best in the industry and among its competitors.

All the identified essential elements discussed above substantiate the relationship between organisational structures and employee involvement. However, it should be mentioned that these are not the only elements that denote this relationship. Previous research studies by Shariat *et al.* (2013) and Vazifedoust, Nasiri and Norouzi (2012), have identified other variables that are instrumental in the formation of this relationship as discussed in section 2.7.2.

From the interpretation of empirical data, it can be concluded that there is a positive relationship between the organisational structure and employee involvement.

4.6 Discussion of Financial Results

Table 4.14 below reflects the financial results of the five construction companies investigated. The period of assessment is five years from 2008 to 2012.

Table 4.14: Financial Results over a Five Year Period

	Financial Results for Period 2008 to 2012								
	2012		2011		2010		2009		2008
		% Change		% Change		% Change		% Change	
Company A									
Revenue (R'000)	40,885	19	34,324	1	33,981	1	33,772	14	29,622
Net Profit Margin Ratio (%)	1.3		3.4		5.5		6.2		7.8
Liquidity Ratio	0.71		0.86		1.62		1.69		1.08
Net Worth (Equity) (R'000)	12,912	0	12,915	8	11,917	9	10,886	3	10,529
Company B									
Revenue (R'000)	6,834	10	6,230	16	5,389	16	4,662	34	3,474
Net Profit Margin Ratio (%)	-2.47		2.17		4.68		5.81		5.93
Liquidity Ratio	0.87		1.09		1.10		1.12		1.13
Net Worth (Equity) (R'000)	1,824	-1	1,837	7	1,715	14	1,500	89	792
Company C									
Revenue (R'000)	8,783	-5	9,207	-19	11,338	-6	12,090	36	8,900
Net Profit Margin Ratio (%)	2.5		-1.5		3.0		4.6		5.1
Liquidity Ratio	1.20		1.12		1.12		1.06		1.08
Net Worth (Equity) (R'000)	1,877	-17	2,266	-12	2,561	6	2,408	19	2,023
Company D									
Revenue (R'000)	35,406	16	30,535	-4	31,962	-2	32,684	17	27,896
Net Profit Margin Ratio (%)	-1.7		-5.4		3.8		6.6		6.4
Liquidity Ratio	0.97		1.00		1.27		1.12		1.11
Net Worth (Equity) (R'000)	7,102	33	5,321	-26	7,177	8	6,634	14	5,825
Company E									
Revenue (R'000)	17,893	21	14,767	-3	15,201	3	14,769	37	10,784
Net Profit Margin Ratio (%)	4.0		5.3		6.8		6.5		7.1
Liquidity Ratio	1.21		1.23		1.18		1.12		1.06
Net Worth (Equity) (R'000)	3,956	17	3,372	11	3,032	27	2,385	38	1,732
Notes: All monetary figures are reflected in millions.									

(Source: Annual Reports, 2008 to 2012)

The assessment of the financial results for each company is derived using a 5 point relative scoring system where '5' points are awarded to the best achiever in each category and '1' point to the worst achiever. The point scoring system applies a relative grading method amongst the five construction companies. The scores are added to give the overall points achieved by each company. Below are the specific indicators and ratios results used to evaluate financial performance.

Revenue Growth

There are two criterion used to award scores for the revenue growth:

- Increasing revenue year-to-year during the financial period;
- Highest average percentage change in revenue.

Table 4.15: Revenue Growth Scoring

	Average Change	Points Achieved	Comments
Company A	8.8%	4	
Company B	19.0%	5	
Company C	1.5%	1	
Company D	6.8%	2	
Company E	14.5%	3	Decrease in revenue (2010 to 2011).

Company B achieved the most consistent revenue growth year-to-year throughout the five year period. This shows that they are advancing and business expansion is taking place. Ideally, revenue should be increasing as a result of expansion and general advances by the company. However, there are no general guidelines that determine revenue growth as this is completely driven by individual company's business strategy.

It is worth noting that the rest of the companies experienced shrinkage in their revenue at some or other stage during this period.

Net Profit Margin Ratio

There are two criterion used to award scores for profit margin ratio:

- Positive profit margins throughout the financial period;
- Highest average profit margin ratio throughout the financial period.

Table 4.16: Net Profit Margin Ratio Scoring

	Average Ratio	Points Achieved	Comments
Company A	4.8%	4	
Company B	3.2%	3	
Company C	2.7 %	2	
Company D	1.9%	1	
Company E	5.9%	5	

Company E achieved the best and most consistent profit margins year-to-year throughout the five year period. This indicates that they were the most profitable company that controls its costs and expenses very well. The net profit margin ratio also measures how much revenue is converted into profits and it can be said that company

E has a fairly good revenue growth trend although it was not the best in this group. It is ideal for the profit margins to be increasing in relation to revenue growth.

The rest of the companies except company A have reflected loss in profit at some or other stage during this period. Company A is the only other company that achieved positive profit margins throughout the financial period, however, it should be noted that their average profit margin of 4.8% is lower than company E's at 5.9%.

Liquidity Ratio

There are two criterion used to award scores for liquidity ratio:

- Liquidity ratio greater than 1 throughout the financial period;
- Highest average liquidity ratio throughout the financial period.

Table 4.17: Liquidity Ratio Scoring

	Average Ratio	Points Achieved	Comments
Company A	1.19	3	Ratio less than 1 in 2012.
Company B	1.06	1	
Company C	1.12	4	
Company D	1.09	2	
Company E	1.16	5	

Company E also led the liquidity ratio with the best values achieved year-to-year throughout the financial period, these values ensure that current debts are covered by the current assets. Company E achieved liquidity ratios above 1 throughout the financial period. A minimum liquidity ratio of 1 is required for a company trading under normal circumstances. However, the greater the liquidity ratio, the lesser the risk of financial difficulty for the company.

Company C also achieved liquidity values above 1 throughout the reporting period, but their average ratio of 1.12 is slightly lower that company E's which is 1.16. The rest of the companies achieved values below 1 at some or other stage, which goes to show that they were not able to meet their short-term obligations during those specific periods.

Net Worth (Equity)

There are two criterion used to award scores for net worth (equity):

- Increasing net worth (equity) year-to-year during the financial period;
- Highest average percentage change in net worth (equity).

Table 4.18: Net Worth (Equity) Scoring

	Average Change	Points Achieved	Comments
Company A	5.00%	4	
Company B	27.25%	3	Decrease in net worth (2011 to 2012).
Company C	-1.00%	1	
Company D	7.25%	2	
Company E	23.25%	5	

Company E continued to show the strongest growth by reporting consistent increase in net worth throughout the reporting period. This further confirms its state of good financial health as already seen in their net profit margins and liquidity ratios. It is expected that consistent profitability yields an increase in net worth.

The rest of the companies have shown very little improvement on their net worth and were inconsistent throughout the financial period. All other companies reported a decrease in net worth at some or other stage during the reporting period.

Table 4.19 below details the overall financial scoring results achieved by each company.

Table 4.19: Financial Ranking of Companies

	Revenue Growth	Profit Margin	Liquidity Ratio	Net Worth (Equity)	Total Points
Company A	4	4	3	4	15
Company B	5	3	1	3	12
Company C	1	2	4	1	8
Company D	2	1	2	2	7
Company E	3	5	5	5	18

Based on the overall scoring results the ranking in terms of financial performance is contained on table 4.20 below:

Table 4.20: Financial Ranking of Companies

Ranking	Company	Total Points
1	Company E	18
2	Company A	15
3	Company B	12
4	Company C	8
5	Company D	7

According to table 4.20 Company E has consistently out-performed its competitors when evaluated over the five year period (2008 to 2012). Company E was the most profitable, achieved good liquidity and had an increasing net worth throughout this period. Company E was the top achiever, company A at second place, with company B, C and D achieving third, fourth and fifth places respectively.

4.7 Answers to Research Questions

The research confirmed the existence of the relationship between organisational structure and employee involvement, with a view of establishing a generalisation between employee involvement and organisational performance. This section attempts to answer the research questions raised by the study.

Sub-Questions

Sub-Question 1: Which organisational structures are used by the five selected large construction companies in South Africa?

From the research conducted it was discovered that 40% of the large construction companies (Company B and C) have adopted a divisional structure as their organisational structure; while 60% (Company A, D and E) use a hybrid (divisional and geographical) structure. It is not surprising that none of these companies use a functional or matrix structure because of the limitations brought by these structures. A functional structure bears limitations on the way business is conducted, while matrix structures are highly inconvenient due to the dual chain of command.

It can be seen that most large construction companies are more inclined to use a structure that allows them maximum input into their design, than adopt a standardised type of structure that could be restrictive to their business functionality.

Sub-Question 2: What are the characteristics of employee involvement by which the organisation's performance is affected?

Having investigated employee involvement in detail, the research identified three characteristics, Productivity, Decision Making and Equipping, by which the organisation's performance is affected. Table 4.21 below provides a descriptive data of the above characteristics.

Table 4.21 Characteristics of Employee Involvement

Element	N	Mean	Std. Dev.	Agreeability Ratio (%)
Productivity	45	3.76	0.88	75.6
Decision Making	70	3.41	1.07	58.6
Equipping	70	3.63	1.05	67.1

1) *Productivity* – in an organisation where employees are involved, the performance of employees and subsequently the organisation is higher than on organisations where employees are not able to make decisions relating to their jobs. Employees tend to be most productive in an environment where they are involved, and they give more than what is required because they use that as a reward to the organisation for developing an environment that inspires employee involvement.

2) *Decision Making* – decision making leads to a sense of ownership of organisational decisions. Organisations are to ensure that decision making is clearly communicated to all stakeholders to encourage employees to act under the appropriate authority on issues pertaining to their job or task scope.

3) *Equipping* – to implement a successful process of employee involvement, organisations need to invest in development and equipping of their employees to react appropriately to issues affecting their job, and to be able to exercise the authority implied to them, they need to possess the necessary skills and expertise.

It should be appreciated that all the above characteristics require both parties (organisation and employees) to play their respective roles in order to make success of the process of employee involvement. No success can be achieved if one party does not fulfil their obligations, it is a two-way process where the organisation and employees need to find each other.

Sub-Question 3: What is the nature of the relationship between the identified organisational structures and the level of employee involvement?

The findings revealed that from the companies investigated, there are two types of organisational structures that are used by large construction companies in South Africa, type A – divisional structures, and type B – hybrid (divisional and geographical) structures. In order to adequately address this question, it is important to make a distinction between these two independent structures so as to establish independent relationships between them and employee involvement.

Type A is a pure form of organisational structure that is commonly used as it is or in combination with other structures to establish a hybrid. The nature of the relationship between type A structure and employee involvement is derived from the following factors:

- Due to standardisation, type A structure is more mechanical in its approach to employee involvement, and it does not always allow flexibility for employees to exercise their authority and decision making.
- The greatest advantage of type A structure is the focused design it provides, for employee involvement to be implemented correctly, it needs to fit into an established pattern of operation. The simplicity in this approach enhances the understanding of employee involvement within the organisation.

Type B structure is a combination of type A and geographical structure. The nature of the relationship between type B structure and employee involvement is determined by the following:

- The flexibility provided by the hybrid structure ensures that employee involvement is enhanced and constantly improved throughout the organisation. This exercise gives rise to a 'fit for purpose' approach improvements.

- The flexibility in this relationship does not only safeguard the efficiency of the structure, but it also ascertains that an adaptive attitude is embraced to serve both the structure and employee involvement.

In conclusion, the level of employee involvement seem to be higher on type B – hybrid structure. This can be attributed to the level of flexibility that these structures possess and their formation that seeks to accommodate organisational requirements better than type B – divisional structure.

Main Question

What is the most appropriate organisational structure that encourages employee involvement in decision making and thereby, has the likelihood of contributing towards improvement of organisational performance?

This question will be addressed in parts to unpack the key aspects of the answer, the parts would be a collection of the previous answers discussed:

1. Appropriate organisational structure: based on sub-question 1 and financial performance ranking in section 4.6, a hybrid (divisional and geographical) structure is most suited for large construction companies.

2. Encourage employee involvement: as already seen in sub-question 3, the two identified types of organisational structures are applicable, however, because of superior financial performance demonstrated by construction companies utilising type B structure, it can be concluded that a hybrid (divisional and geographical) structure is most encouraging to employee involvement and has a high likelihood of contributing to organisational performance.

In summary, hybrid (divisional and geographical) structures have proven to be the most appropriate organisational structures that are encouraging to employee involvement, the construction companies using this type of structure have attained the best financial results by becoming the first and second ranked companies in the overall financial assessment.

Relationship between Employee Involvement and Organisational Performance

Having explored and confirmed the relationship between organisational structures and employee involvement, the nature of the relationship is slightly different on each of the two types (type A and B) of structures discussed. A casual generalisation of the link between employee involvement and organisational performance can be extrapolated from the preceding discussions. Based on organisational performance, it was observed that companies utilising hybrid structures have generally outperformed companies with divisional structures. Because employee involvement is linked to the type of structure applicable, it can be deduced that hybrid structures are more encouraging to employee involvement. And thus, employee involvement has a positive relationship with organisational performance.

4.8 Comparison between Research Findings and Literature Reviewed

In as much as there is an abundance of literature that supports the positive impact of employee involvement on organisational performance, relevant literature is non-existent in the context of the construction industry in South Africa.

The research findings discussed in the proceeding sections are compared to corresponding literature concepts. Table 4.22 below details key arguments that are relevant to this study.

Table 4.22 Comparison between Research Findings and Literature Reviewed

Research Findings	Literature Concept
From the large construction companies investigated, 60% use hybrid (divisional and geographical) structures.	Functional, divisional and matrix forms of organisations represent pure types of organisational structure. However, hybrid structures exist in order to gain the maximum advantage of certain structures (Stokes, 2005 & Clayton and Fisher, 2006).
Two of the three (67%) hybrid structured companies (Company E and	The hybrid structure can be beneficial in that it provides the organisation with the

A) achieved the best organisational performance.	ability to embrace the structure that best fits its needs and enhance its performance (Stokes, 2005 & Clayton and Fisher, 2006).
The results revealed that there is about 11.9% chance that companies investigated use multi-layers of management.	Oyewobi (2014) revealed that the industry still uses traditional and hierarchical organisational structures with large organisations tilting towards the adoption of a divisional structure.
From the five construction companies that were investigated, 56.5 percent of the respondents acknowledged that there is a presence of dual chain of command in their current organisational structures.	Dual levels of reporting are common in a matrix structure (Grobler, 2005). A major disadvantage of a matrix structure lies with conflict often created by these dual lines of authority (Stokes, 2005).
For the relationship between the organisational structure and employee involvement to be established, structural, employee and organisational essentials are to be fulfilled. The influence of these essential elements is enriched by a flexible organisational structure.	Stiles and Kulvisaechana (2005) argue that there is a large and growing body of evidence that demonstrates a positive linkage between the development of human capital and organisational performance.
Hybrid structured organisations are more accommodating to employee involvement, the higher the level of employee involvement in an organisation, the better the performance of the organisation.	Employee involvement is higher on organisations that have achieved high organisational performance (Markos and Sridevi, 2010).

Discussion of Research Objectives

This research is guided by the following objectives:

- To identify different organisational structures which exist in large construction companies in South Africa.
- To determine characteristics of employee involvement by which the organisation's performance is affected.
- To establish the relationship between the identified organisational structures and the level of employee involvement.
- To recommend the most appropriate organisational structure that encourages employee involvement and thereby improves organisational performance.

The abovementioned objectives were intended to guide the research and ensure that the research aim is achieved. The discussion on these research objectives is based on the research answers contained in section 4.7.

The first objective of the study sought to identify the organisational structures that are utilised by large construction companies in South Africa. Two types of organisational structures were determined as a divisional structure and hybrid (combination of divisional and geographical) structure.

The second objective looked to establish characteristics of employee involvement by which the organisation's performance is affected. These characteristics were recognised as: Productivity, Decision Making and Equipping of employees to have the necessary skills to perform their jobs.

The third objective sought to examine the relationship between identified organisational structures and the level of employee involvement. The level of employee involvement seem to be higher on organisational structures utilising hybrid structures. This can be attributed to the level of flexibility that these structures possess and their formation that endeavours to accommodate organisational requirements.

The fourth objective was to recommend the most appropriate organisational structure that encourages employee involvement and thereby improves organisational

performance. Hybrid structures have proven to be the most appropriate organisational structures that are encouraging to employee involvement, the companies using this type of structure attained the best financial results and became the first and second ranked companies in the overall financial assessment.

4.9 Conclusion

This chapter presented results on the reliability of data collected, the demographic profile of respondents and further discussed the results from quantitative analysis conducted. The existence of the relationship between organisational structures and employee involvement was confirmed. The analysis further detailed answers to research questions that were posed by the study. The existence of the relationship between employee involvement and organisational performance was successfully argued. Research findings were discussed and compared to literature reviewed. Research objectives were reviewed to ensure that the research aim was met.

The next chapter will discuss the key research findings, draw conclusions from these findings and propose appropriate recommendations. Implications of this study for the South African construction industry will be discussed in light of the key arguments and discussions of the findings. In conclusion, areas for further research will be highlighted for other researchers to explore.

CHAPTER 5
CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The study investigated the relationship between organisational structures and employee involvement in large construction companies in South Africa. The research sought to confirm and support the existing relationship as proven by previous research studies. The main focus of the research was to establish a relationship between employee involvement and organisational performance by a way of generalisation of the link between these two concepts.

5.2 Key Findings

Below are the key findings based on the study conducted:

- From the large construction companies investigated, 60% use hybrid (divisional and geographical) structures as their organisational structure.
- Two of the three (67%) hybrid structured companies (Company E and A) achieved the best organisational performance, ranked number 1 and 2 respectively.
- The results revealed that there is about 11.9% chance that companies investigated use multi-layers of management in their organisational structure.
- From the five construction companies that were investigated, 56.5 percent of the respondents acknowledged that there is a presence of dual chain of command in their current organisational structures.
- For the relationship between the organisational structure and employee involvement to be established, structural, employee and organisational essentials are to be fulfilled. The influence of these essential elements is enriched by a flexible organisational structure.
- Hybrid structured organisations are more accommodating to employee involvement, the higher the level of employee involvement in an organisation, the better the performance of the organisation.

5.3 Summary of Conclusions

Based on the literature reviewed and the discussion of the research findings, the following conclusions can be drawn:

- The best organisational structural design is not necessarily a pure and traditional type such as: functional, divisional or matrix structure. It is an organisational structure that is flexible and accommodating to changes in the environment the organisation operates in.
- Organisations can be similarly structured, but may differ substantially in their effectiveness. It can be concluded that organisational success lies largely in the way organisations involve their employees in decision making relating to their jobs, and the quality of human resources at its disposal.
- When implemented properly, employee involvement impacts the customer experience and, subsequently, the overall organisational performance through display of high productivity and profitability.
- Hybrid structures are beneficial to companies because they provide the organisation with the ability to choose the best fit for the needs of their business, while delivering a balance between customer focus and the use of economies of scale, which leads to increased profits.

5.4 Recommendations

Based on the research findings and conclusions of this study, the following recommendations are proposed for large construction companies in South Africa.

- If companies are serious about achieving high levels of organisational performance, the first place to look at is the suitability of the organisational structure used by the organisation. A structure that is flexible and adaptable is key to the process of improving organisational performance.
- A presence of dual chain of command in an organisational structure reduces the effectiveness of the most critical element of the structure: process flow. Companies need to develop a strategy that roots out dual chain of command before it impacts on their business functionality and subsequently, their performance.
- Human resources are a 'know' secret weapon for companies seeking to be competitive in the construction industry. The quality of employees that are

engaged by the company can lead to an increase or decrease in its organisational performance. Companies are to ensure that they understand the limitations brought by the quality of employees they possess. To be the best in the industry, organisations need to review the quality of their employees and provide the necessary skills transfer / training if required.

- It is important that organisations find ways to clearly communicate successes that demonstrate how the organisation is performing. The process should be clearly communicated to employees so that they see the connection between their work (task discretion) and the organisational successes, but also to gain an understanding of how they support the overall organisational performance, which ties directly to involvement levels.
- It is recommended that in order to be highly competitive and efficient, a large construction company has to use a combination of different structures suited to their business. A hybrid of divisional and geographical structures is the most suitable structure for the following reasons:
    a. It allows the business to provide their services in a packaged manner.
    b. Due to the nature of the project environment, it is critical that companies are able to service work in different locations.
    c. Flexibility offered by hybrid structures enables the company to reach their maximum potential.

5.5 Implications of the Study

Table 5.1 below details key arguments presented and the corresponding implications of this study to the South African construction industry and the body of knowledge in management science.

Table 5.1 Summary of Key Arguments and Implications

Key Arguments	Implications
Globisation has led to an increase in competition.	South African construction companies must constantly seek for opportunities to participate on projects outside the country. There are substantial work opportunities that are available in other developing economies such as, Nigeria, Ghana, Kenya, Congo, etc. At this point in time, the construction industry is not able to sustain all its role players.
The construction industry is showing signs of shrinkage as evidenced by their contribution to the GDP.	The South African government has to finally unlock the infrastructure expenditure that has been on everybody's radar for a long time. This country as a developing economy still reflects huge infrastructural backlogs, and this expenditure could ignite the much needed growth and development for the entire economy.
Best practise standards applicable to organisational development and performance are significant.	South Africa's large construction companies are to expand and show real growth in as far as competing at global stage with some of the biggest construction firms in the world. This would lead to growth and expansion of all construction companies and effectively the development of the entire construction industry. The attempt to attain best practise international standards will also lead to improvements in poor performances that have constantly plagued the industry in the recent past.

5.6 Conclusion

This study, though exploratory, revealed the probable magnitude of the role employee involvement plays in improving organisational performance. This research provides a substantial step towards a better understanding of the relationship between employee involvement and organisational performance in large construction companies.

The findings discussed oblige companies to consider the way their organisational structure are designed and the effect of employee involvement to their performance.

The suggestions proposed by the research are by no means conclusive, further recommendations can be drawn from this research.

The chapter concluded by detailing the implications of this study for the South African construction industry and the body of knowledge in management science.

5.7 Further Research Areas

This section features proposed areas for further research emanating from this study. This study draws its sample from five large construction companies in South Africa. In order to establish a more holistic interpretation of organisational performance it would be necessary to go beyond size to analyse construction companies in a broader context. Alternatively, a supplementary research of the entire construction industry could be done in a few years' time to provide a comparison to these research findings.

This study has selected to measure organisational performance using financial variables such as: revenue growth, net profit margin ratio, liquidity ratio and net worth (equity) of the companies investigated. It is known that there are other non-financial performance measures are applicable, and the use of non-financial performance measures could give an interesting view to the research findings of this study.

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APPENDIX A

COVER LETTER AND QUESTIONNAIRE

P O Box 291623
Melville
2109

Dear Respondent,

Survey: Determining Organisational Structures that Encourage Employee Involvement: Case of Large Construction Companies in South Africa

The construction industry in South Africa is also besieged by poor performance like any other developing country. Employee involvement is been felt as one of the contributing factors towards the success of any construction company. Inappropriate organisational structure may lead to poor involvement of employees, hence, the identification of appropriate organisational design is of paramount importance.

This research entitled "Determining Organisational Structures that Encourage Employee Involvement: Case of Large Construction Companies in South Africa" is conducted at the School of Construction Economics and Management, University of the Witwatersrand, to explore typical organisational structures that are prevalent in large construction companies, and investigate their behaviour towards employee involvement.

The aim of the study is to investigate the level of employee involvement on various organisational structures of large construction companies. The following objectives have been identified for this research:

- To identify different organisational structures which exist in large construction companies in South Africa.
- To determine characteristics of employee involvement by which the organisation's performance is affected.
- To establish the relationship between the identified organisational structures and the level of employee involvement.
- To recommend the most appropriate organisational structure that encourages employee involvement and thereby improves organisational performance.

Feedback from representatives of a reputable company such as yours will assist us achieve these objectives. We would therefore be grateful if you can complete the attached questionnaire and return it us at your soonest convenience. We assure you that your responses will be treated with strictest confidentiality and will be used solely for the purpose of this research.

Your assistance in this regard will be greatly appreciated. If you require further clarification please do not hesitate to contact the researcher at 072 490 0500.

Yours sincerely,

Xolisa Mnyani
(Researcher)



QUESTIONNAIRE

Determining Organisational Structures that Encourage Employee Involvement: Case of Large Construction Companies in South Africa

Please answer the following questions by marking the appropriate box with a cross (X).

SECTION A – Demographics

This section of the questionnaire deals with demographical information. Although some of the questions may be sensitive, we require this information in order to analyse the sample of respondents.

1. How long have you been with the company? Please choose an appropriate bracket.

☐ < 1 YEARS ☐ 1 – 3 YEARS ☐ 4 – 5 YEARS ☐ 6 – 10 YEARS

☐ 11 – 20 YEARS ☐ 21 – 30 YEARS ☐ > 31 YEARS

2. What is your highest formal qualification?

☐ Primary Education ☐ Secondary Education ☐ Matric ☐ Diploma

☐ National Higher Diploma ☐ Degree ☐ Post-Graduate Degree

☐ Other, please specify.....

3. What is your role in the company?

☐ Senior Executive ☐ Administrative ☐ Supervisory

☐ Director / Partner ☐ Associate Partner ☐ Manager

☐ Staff ☐ Other, specify.....

4. Under which division?

☐ Operations ☐ Finance ☐ Human Resources ☐ Marketing

☐ Support Services ☐ Other, please specify.....

5. What is your current age bracket?

☐ Less than 18 years ☐ 18 – 29 years ☐ 30 – 39 years

☐ 40 – 49 years ☐ 50 – 59 years ☐ 60 years or older

6. Gender?

☐ Male ☐ Female

7. Are you part of management of the company?

☐ YES **(If yes, proceed and answer all the questions that follow)**

☐ NO **(If no, please omit section B)**

SECTION B – Relevant to Management Only

This section is to be completed by people who are part of company management.

1. How many people does your company employ?

☐ < 6 000 ☐ 6 001 – 7 000 ☐ 7 001 – 8 000 ☐ 8 001 – 9 000

☐ 9 001 – 10 000 ☐ > 10 000

2. How many layers of management do you have in the company?

☐ 3 – 5 ☐ 5 – 7 ☐ 7 – 9 ☐ 9 – 12 ☐ >12

3. Where do you fit within the management structure of the company? i.e. Top level being level 1, etc.

☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Level 4 ☐ Level 5

4. Please indicate your answer on a 5-point scale where, 1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Neutral (N), 4 = Agree (A) and 5 = Strongly Agree (SA).

	SD	D	N	A	SA
	1	2	3	4	5
The current structure enhances communication and process flow between all levels.					
In my opinion, a hybrid structure can be effective.					
The organisational structure is developed around work not people.					
The review of organisational structure is done frequently.					

5. Please indicate your answer on a 5-point scale where, 1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Neutral (N), 4 = Agree (A) and 5 = Strongly Agree (SA).

	SD	D	N	A	SA
	1	2	3	4	5
The company has set itself as being the best in the industry.					
The overall financial performance of the company is great.					
Individual performance drives organisational performance.					
Employees make a significant contribution to organisational performance.					
Efficiency is an important factor in the company.					
Performance issues can be traced back to poor organisational structure.					
Organisational performance can be expressed as a function of efficiency.					

SECTION C – Organisational Structures and Employee Involvement

The following questions relate to employee involvement, design and functionality of organisational structures.

1. Please indicate your answer on a 5-point scale where, 1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Neutral (N), 4 = Agree (A) and 5 = Strongly Agree (SA).

	SD	D	N	A	SA
	1	2	3	4	5
Employees have a good working relationship in the company.					
The company has adequate support system for its employees.					
The company has guidelines outlining the process flow of the structure.					
There is a positive interaction between employees.					

2. Please indicate your answer on a 5-point scale where, 1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Neutral (N), 4 = Agree (A) and 5 = Strongly Agree (SA).

	SD	D	N	A	SA
	1	2	3	4	5
The organisational chart is clear and understandable.					
The organisational chart does not depict a dual chain of command.					
The organisational chart can be easily interpreted to others.					
I work most efficient in the current organisational structure.					
I can act on anything as long as I have the authority to do so.					
Work is delegated to all employees in a fair manner.					
Jobs are clearly defined and logically structured.					
The company allows employees at all levels to make decisions pertaining to their own work.					
It is sometimes unclear who has the formal authority to make decisions in the company.					
My capabilities are not being used to the fullest in the current structure.					

3. Please indicate your answer on a 5-point scale where, 1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Neutral (N), 4 = Agree (A) and 5 = Strongly Agree (SA).

	SD	D	N	A	SA
	1	2	3	4	5
I think the company provides enough opportunities for career development.					
Roles and responsibilities are clearly defined in our company.					
I always have all the necessary resources to perform my work efficiently and effectively.					
I know what is expected of me and the tasks I need to perform.					
The company encourages employee involvement on employee specific tasks.					
The company consults with employees when making decisions that affect their tasks.					
My contribution is valued and taken seriously.					
Employees are valued in our company.					

SECTION D – Organisational Performance

This section specifically focuses on performance related questions.

1. Please indicate your answer on a 5-point scale where, 1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Neutral (N), 4 = Agree (A) and 5 = Strongly Agree (SA).

	SD	**D**	**N**	**A**	**SA**
	1	**2**	**3**	**4**	**5**
I am always involved in my current work situation.					
The current organisational structure encourages performance.					
The company views its employees as contributors to performance.					
Above average performance by employees is rewarded.					

I appreciate the time you took to complete this questionnaire, please include any additional comments below:

.....

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.....

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Would you like to obtain a summary of the findings of this survey?

☐ YES ☐ NO

If yes, kindly provide your contact details below:

Name (optional):.....

E-mail Address:.....

Fax Number:.....

Please fax / email the completed questionnaire to 086 515 5612 or mnyanix@webmail.co.za

APPENDIX B

CRONBACH'S ALPHA RELIABILITY RESULTS

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ
1	CRONBACH'S ALPHA RELIABILITY RESULTS																																										
2																								STATEMENTS																SUMMED	MEAN	STD DEV		
3	RESPONDENTS	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30	Q31	Q32	Q33	Q34	Q35	Q36	Q37	SCORE	INDIV	INDIV	z-score	t-score
4	PERSON 1	5	4	3	4	5	5	3	4	4	4	4	5	3	4	4	5	4	5	4	4	5	4	3	5	5	5	4	4	4	3	3	4	5	5	5	4	5	157	4.24	0.72	1.24	62
5	PERSON 2												5	5	5	4	5	5	5	5	5	5	5	2	4	4	4	4	4	3	3	3	3	5	4	4	4	4	109	4.19	0.65	-0.34	47
6	PERSON 3												4	4	5	4	5	3	4	4	3	4	4	4	4	5	4	5	5	5	5	4	5	4	4	4	4	5	111	4.27	0.60	-0.27	47
7	PERSON 4	4	4	3	4	4	5	4	5	5	4	4	4	3	4	4	4	4	4	3	4	4	3	4	4	2	3	2	3	2	4	4	4	5	3	3	4	4	138	3.73	0.77	0.61	56
8	PERSON 5	2	3	4	3	3	4	4	5	5	5	5															3	4	3	4	2	2	4	5	4	3	4	4	85	3.70	0.97	-1.13	39
9	PERSON 6	3	4	2	5	4	5	4	5	5	3	4	5	4	4	4	5	5	4	4	5	4		5	3	3	4	3	4	5	4	3	4	5	4	4	4	4	147	4.08	0.77	0.91	59
10	PERSON 7	3	3	3	4	3	4	3	4	5	2	2	4	2	2	4	4	4	4	3	4	4	3	4	3	4	5	4	2	4	4	3	4	5	3	3	2	4	128	3.46	0.87	0.29	53
11	PERSON 8	4	4	4	4	3	4	4	4	5	2	4	4	2	4	4	4	4	4	5	4	4	4	4	4	4	4	4	2	4	3	4	4	4	3	4	4	4	141	3.81	0.66	0.71	57
12	PERSON 9												5	4	2	5	4	2	5	5	3	4	4	4	5	4	5	4	5	5	3	3	4	4	5	5	4	5	108	4.15	0.92	-0.37	46
13	PERSON 10	3	4	4	2	3	3	4	4	4	3	3	4	3	2	2	4	2	2	3	3	4		2	2	4	3	4	2	4	3	3	4	4	3	3	3	4	114	3.17	0.77	-0.17	48
14	PERSON 11	4	4	4	4	4	4	4	5	5	4	4	4	4	4	4	5	2	4	4	5	5	5	5	4	4	5	5	4	4	5	5	5	5	4	4	2	4	157	4.24	0.72	1.24	62
15	PERSON 12	4	3	4	4	5	5	5	5	5	4	4	4	3	4	5	5	2	5	3	5	3	3	2	2	5	4	4	5	5	5	4	5	5	4	2	3	5	150	4.05	1.03	1.01	60
16	PERSON 13			1	4			2	4	4	4	3		4	4	4	4	2	3	4	2	3	3	1	4	4		3	2	4			4	5		4	4		90	3.33	1.04	-0.96	40
17	PERSON 14												5	5	5	5	5	2	5	5	5	5	5	3	2	1	4	2	4	5	4	3	3	5	4	4	5	5	106	4.08	1.23	-0.44	46
18	PERSON 15	4	4	3	4	4	5	4	4	5	3	5	5	4	5	4	5	4	4	3	5	4	3	4	3	3	4	4	5	4	4	3	3	5	4	5	4	4	150	4.05	0.70	1.01	60
19	PERSON 16	5	5	4	3	5	5	2	5	5	3	5	5	4	1	2	5	5	3	5	5	3	3	3	4	5	4	5	4	5	3	3	4	5	4	4	3	3	147	3.97	1.09	0.91	59
20	PERSON 17												2	3	3	4	4	3	4	4	3	3		4	3	3	3	4	4	3	2	3	3	4	3	3	4		82	3.28	0.61	-1.22	38
21	PERSON 18	5	5	4	5	5	5	5	5	5	4	4	5	4	5	4	5	5	5	5	5	5	5	4	4	5	4	5	5	5	5	4	4	5	5	5	4	5	174	4.70	0.46	1.80	68
22	PERSON 19												5	3	5	5	4	1	1	2	4	1	1	2	1	1	1	2	2	5	1	1	2	1	4	3	1	1	80	2.31	1.54	-1.95	31
23	PERSON 20	3	3	4	3	4	3	4	4	4	3	4	5	5	5	5	5	5	5	4	5	4	5	4	3	5	5	5	5	5	5	5	5	5	5	3	3	4	161	4.35	0.79	1.37	64
24	PERSON 21	1	3	3	2	4	4	4	4	2	4	4	3	3	4	1	4	2		3	3	1	3	4	2	1	1	3	2	5	3	3	2	3	3	1	3	4	102	2.83	1.11	-0.57	44
25	PERSON 22	5	4	4	4	4	4	4	4	4	4	4	5	3	3	4	5	5	5	4	5	5	4	4	4	5	4	5	3	5	4	3	5	5	4	4	4	4	156	4.22	0.63	1.20	62
26	PERSON 23	1	1	5	1	1	3	1	1	4	5	4	1	1	2	1	3	1	1	1	4	1	1	2	1	1	1	2	1	2	2	1	3	2	1	2	2		89	1.66	1.21	-1.85	33
27	PERSON 24												5	4	4	4	4	4	4	3	4	4	4	3	3	3	4	4	3	4	3	3	4	5	4	4	4	3	98	3.77	0.59	-0.70	43
28	PERSON 25	3	2	4	1	3	4	4	2	4	3	5	2	2	1	2	4	2	4	2	4	3	2	3	4	2	3	2	3	2	3	5	3	2	3	4			107	2.89	1.02	-0.40	46
29	PERSON 26	3	4	3	2	5	5	3	5	5	4	4	5	4	4	4	5	2	4	4	5	4	4	4	4	4	4	4	3	5	4	3	4	5	4	4	4	5	149	4.03	0.80	0.97	60
30	PERSON 27	4	4	3	4	3	3	4	4	4	4	4	4	4	4	4	4	4	3	3	3	4	3	3	3	2	3	4	4	3	4	3	3	4	5	4	4	4	134	3.62	0.59	0.48	55
31	PERSON 28	5	4	1	4	5	4	4	4	4	3	4	4	4	4	4	4	5	4	4	2	4	4	4	4	2	4	4	3	4	4	4	4	5	4	4	3	4	142	3.84	0.80	0.75	57
32	PERSON 29	4	4	4	4	4	4	4	5	4	4	4	4	3	4	4	5	5	4	4	4	3	4	3	2	3	4	4	4	4	4	3	4	5	4	4	4	5	146	3.95	0.62	0.68	50
33	PERSON 30												4	3	2	4	5	2	3	2	4	2	2	3	4	1	4	4	4	3	3	3	4	4	3	4	4		85	3.27	0.90	-1.13	39
34	PERSON 31	5	3	4	3	4	4	4	5	5	3	4	5	4	4	4	5	5	5	4	5	3	3	4	3	4	4	4	4	4	4	4	4	4	4	4	4	3	149	4.03	0.64	0.97	60
35	PERSON 32	2	3	3	2	4	4	4	4	4	4	3	4	2	4	3	3	2	2	2	4	2	2	4	1	1	4	3	2	3	5	2	2	4	4				109	2.95	1.03	-0.34	47
36	PERSON 33												5	4	4	4	4	4	3	3	4	4	4	4	3	3	3	3	4	4	4	3	4	4	3	4	4	4	97	3.73	0.53	-0.73	43
37	PERSON 34	4	3	4	4	4	4	3	3	4	4	5	5	3	4	4	4	2	2	4	4	2	2	2	3	4	4	4	2	4	2	2	4	5	3	4	2	4	127	3.43	0.98	0.25	53
38	PERSON 35												4	4	4	3	5	2	3	4	4			3	3	4	4	4	4	4	5	3	2	3	4	3	3	4	4	90	3.60	0.76	-0.96	40
39	PERSON 36	3	3	4	4	2	4	3	4	4	4	4	4	4	4	4	5	5	5	4	4	4	4	4	4	4	4	4	4	4	3	4	4	5	4	4	4	4	145	3.92	0.55	0.84	58
40	PERSON 37												2	2	4	1	3	1	1	1	3	1	1	3	1	1	1	2	1	2	1	1	2	1	2	1	5	1	45	1.73	1.08	-2.44	26
41	PERSON 38	4	3	2	3	4	4	4	5	4	3	3	4	3	3	4	4	4	4	4	4	3	3	4	3	4	4	4	3	4	4	3	4	5	4	4	4	4	137	3.70	0.62	0.58	56
42	PERSON 39												4	4	4	4	3	2	3	3	4	4	3	4	4	3	4	4	3	3	3	3	4	4	4	3	4	4	91	3.50	0.58	-0.93	41
43	PERSON 40	4	4	4	4	2	4	2	4	4	4	4	4	4	4	2	4	1	4	3	5	5	3	4	5	5	4	4	4	4	4	4	4	4	2	4	4		139	3.76	0.89	0.65	56
44	PERSON 41	4	4	2	4	4	4	4	5	5	4	4	5	4	2	5	5	3	4	4	5	4	4	4	4	5	5	5	4	5	5	4	5	5	4	4	5	5	158	4.27	0.77	1.27	63
45	PERSON 42												4	5	4	4	5	1	2	3	2	2	2	5	2	3	2	4	1	5	2	2	3	3	2	3	4	1	78	2.92	1.29	-1.42	36
46	PERSON 43	3	3	2	4	5	4	4	4	4	5	4	4	4	2	4	4	3	4	4	2	4	4	4	4	4	4	4	3	5	3	2	4	4	5	4	3	3	137	3.70	0.81	0.58	56
47	PERSON 44												4	5	4	5	5	2	2	2	2	2	2	1	5	1	2	2	2	4	2	2	2	4	3	2	4	4	75	2.88	1.31	-1.45	35
48	PERSON 45	4	4	3	4	4	4	4	5	5	4	5	4	4	4	5	5	2	4	4	5	4	4	4	4	4	5	5	4	4	4	4	5	4	4	4	4		154	4.16	0.60	1.14	61
49	PERSON 46												4	3	2	2	5	4	3	3	3	4	4	4	3	2	2	3	4	4	2	2	3	3	4	3	3	3	82	3.15	0.83	-1.22	38
50	PERSON 47												4	4	3	4	4	2	2	3	4	3	4	3	3	3	4	4	3	4	4	3	3	4	4	3	3		91	3.50	0.71	-0.93	41
51	PERSON 48												3	4	1	3	4	2	4	4	3	4	4	4	4	3	3	4	3	4	4	3	3	4	4	4	4	4	91	3.50	0.70	-0.93	41
52	PERSON 49	3	2	4	3	3	3	4	4	5	4	4	3	4	4	3	4	4	3	3	2	3	3	3	4	3	3	3	3	3	2	2	3	4	3	2	3	3	110	3.22	0.71	-0.01	50
53	PERSON 50												5	5	3	4	5	5	5	5	5	5	5	5	4	4	5	5	4	4	4	4	4	4	4	4	4	4	117	4.50	0.58	-0.08	49
54	PERSON 51	3	4	4	2	3	2	3	3	4	3	1	4	4	4	4	5	4	4	2	3	2	3	1	2	2	3	3	3	4	2	2	4	4	2	2	3	4	112	3.03	0.99	-0.24	48
55	PERSON 52	4	4	5	3	5	5	5	4	5	3	4	5	4	4	4	5	4	5	4	4	4	4	3	4	5	4	4	5	5	4	3	4	5	5	4	4	5	158	4.27	0.65	1.27	63
56	PERSON 53	4	4	3	4	4	4	4	5	4	4	4	4	3	3	5	4	3	4	3	4	4	3	4	4	4	4	4	4	4	4	4	5	5	4	4	4	5	147	3.97	0.55	0.91	59
57	PERSON 54	4	4	2	3	5	5	5	5	4	4	4	4	4	4	4	5	5	5	5	5	4	4	4	4	4	5	4	4	4	4	3	4	5	4	4	4	5	156	4.22	0.67	1.20	62
58	PERSON 55	4	3	4	4	3	2	4	5	5	4	4	4	3	1	4	4	2	3	4	5	4	4	2	3	4	4	4	4	4	3	2	3	5	4	4	4	5	135	3.65	0.95	0.52	55
59	PERSON 56	4	4	2	4	3	4	2	4	4	4	4	4	2	2	4	4			4	4	4	3	4	4	4	4	4	2	4	4	3	4	4	4	4	4	4	131	3.64	0.72	0.38	54
60	PERSON 57	4	4	1	2	4	4	4	3	4	4	4	4	2	1	1	4	3	2	2	4	3	2	4	1	5	4	2	2	5	3	3	2	3	4	4	4	4	117	3.16	1.19	-0.08	49
61	PERSON 58												4	3	3	4	4	3	3	4	4	3	3	4	4	4	3	4	4	4	4	3	3	3	4	4	4	4	94	3.62	0.50	-0.83	42
62	PERSON 59												3	3	2	2	4	2	4	2	5	1	3	4	5	1	3	2	3	4	1	1	3	3	5	3	4	2	75	2.88	1.24	-1.45	35
63	PERSON 60	4	4	4	3	4	4	5	5	5	4	5	4	4	4	4	4	4	4	4	4	4	3	4	4	4	4	3	4	2	4	4	4	4	4	4	4	4	147	3.97	0.55	0.91	59
64	PERSON 61	3	4	4	2	4	5	4	4	5	4	5	4	3	4	4	5	4	4	4	4	3	4	4	4	4	4	4	4	4	4	3	4	4	3	4	4	4	145	3.92	0.60	0.84	58
65	PERSON 62												5	5	5	5	5	3	5	5	5	4	4	3	4	4	3	4	3	4	4	4	5	5	5	5	4	4	112	4.31	0.74	-0.24	48
66	PERSON 63												3	4	5	3	4	3	4	3	5	2	4	3	4	3	2	4	2	4	5	4	2	3	4				90	3.46	0.95	-0.96	40
67	PERSON 64												4	4	5	3	3	2	1	3	4	2	2	3	3	1	3	3	1	3	2	1	3	3		3	3	3	68	2.72	1.02	-1.68	33
68	PERSON 65												3	4	2	1	5	4	5	3	3	2	4	2	4	3	1	4	2	4	2	1	3	3	4	2	2	1	74	2.65	1.22	-1.49	35
69	PERSON 66	4	4	4	4	2	4	4	4	3	4	4	5	4	2	4	5	5	4	4	5	4	3	4	2	3	4	5	3	4	2	2	4	5	4	3	4	4	139	3.76	0.89	0.65	56
70	PERSON 67	4	5	4	2	4	4	5	5	5	2	2	5	3	4	4	5	5	4	5	3	5	3	3	4	4	4	5	4	3	5	4	3	5	3	4	4	5	149	4.03	0.96	0.97	60
71	PERSON 68												4	3	2	4	4	3	3	3	4	4	3	4	4	3	3	4	4	3	4	3	3	3	4	4	4	3	90	3.46	0.58	-0.96	40
72	PERSON 69	4	2	3	4	3	4	4	5	4	3	4	4	4	3	4	5	4	4	4	4	4	4	4	4	2	4	4	4	4	4	4	4	5	3	4	4	4	142	3.84	0.65	0.75	57
73	PERSON 70	4	4	3	4	4	5	4	5	5	5	5	4	4	2	4	5	2	4	4	4	4	4	4	5	4	4	4	4	4	4	3	4	5	4	4	4	4	150	4.05	0.70	1.01	60
74	PERSON 71												5	5	5	5	5	1	4	5		4		3	5	5	5	5	5	5	5	3	4	5	3	5	5	5	107	4.46	1.02	-0.40	46
75																																											
76	ITEM MEANS	3.66	3.59	3.31	3.30	3.75	4.07	3.76	4.27	4.40	3.69	3.98	4.12	3.59	3.43	3.70	4.43	3.13	3.68	3.51	4.03	3.39	3.39	3.46	3.41	3.34	3.63	3.75	3.28	4.13	3.34	2.93	3.69	4.31	3.75	3.51	3.66	3.87					
77																																										
78	ITEM ST.DEVS.	0.94	0.82	1.00	0.98	0.94	0.76	0.88	0.86	0.65	0.73	0.84	0.85	0.88	1.19	1.08	0.83	1.29	1.12	0.96	0.92	1.09	0.97	0.93	1.07	1.27	1.05	0.87	1.08	0.75	1.05	0.92	0.84	0.92	0.76	0.98	0.77	0.98					
79																																										
80	ITEM VARS.	0.88	0.67	0.99	0.96	0.89	0.58	0.78	0.75	0.43	0.54	0.70	0.72	0.77	1.41	1.17	0.69	1.67	1.25	0.92	0.85	1.18	0.95	0.86	1.14	1.62	1.11	0.76	1.18	0.57	1.10	0.85	0.70	0.85	0.57	0.97	0.60	0.95					
81																																										
82	SUM ITEM VARS	33.26																																									
83																																										
84	TEST MEAN	119.30																																								
85																																										
86	TEST STD. DEV.	30.47																																									
87																																										
88	TEST VAR.	928.27																																								
89																																										
90	K (# ITEMS)	71.00																																								
91																																										
92	K-1	70.00																																								
93																																										
94	Cronbach's alpha	0.98																																								
95																																										
96	Standard Error of Measurement	(Std.Dev. Of Test)(Sq. Root of 1-Cronbach's alpha)																																								
97	Standard Error of Measurement	4.53																																								

APPENDIX C

AGREEABILITY RATIO ANALYSIS

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL
1	AGREEABILITY RATIO ANALYSIS																																					
2		STATEMENTS																																				
3	RESPONDENTS	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30	Q31	Q32	Q33	Q34	Q35	Q36	Q37
4	PERSON 1	5	4	3	4	5	5	3	4	4	4	4	5	3	4	4	5	4	5	4	4	5	4	3	5	5	5	4	4	4	3	3	4	5	5	5	5	5
5	PERSON 2												5	5	5	4	5	5	5	5	5	5	5	2	4	4	4	4	4	3	3	3	3	5	4	4	4	4	4
6	PERSON 3												4	4	5	4	5	3	4	4	3	4	4	4	4	5	4	5	5	5	5	4	5	4	4	4	4	4	5
7	PERSON 4	4	4	3	4	4	5	4	5	5	4	4	4	3	4	4	4	4	4	3	4	4	3	4	4	2	3	2	3	2	4	4	4	5	3	3	4	4
8	PERSON 5	2	3	4	3	3	4	4	5	5	5	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	4	3	4	2	2	4	5	4	3	4	4
9	PERSON 6	3	4	2	5	4	5	4	5	5	3	4	5	4	4	4	5	5	4	4	5	4	.....	5	3	3	4	3	4	5	4	3	4	5	4	4	4	4
10	PERSON 7	3	3	3	4	3	4	3	4	5	2	2	4	2	2	4	4	4	4	3	4	4	3	4	3	4	5	4	2	4	4	3	4	5	3	3	2	4
11	PERSON 8	4	4	4	4	3	4	4	4	5	2	4	4	2	4	4	4	4	4	4	5	4	4	4	4	4	4	4	2	4	3	4	4	4	3	4	4	4
12	PERSON 9												5	4	2	5	4	2	5	5	3	4	4	4	5	4	5	4	5	3	3	4	4	5	5	4	5	5
13	PERSON 10	3	4	4	2	3	3	4	4	4	3	3	4	3	2	2	4	2	2	3	3	4	.....	2	2	4	3	4	2	4	3	3	4	4	3	3	3	4
14	PERSON 11	4	4	4	4	4	4	4	5	5	4	4	4	4	4	4	5	2	4	4	5	5	5	5	4	4	5	5	4	4	5	5	5	5	4	4	2	4
15	PERSON 12	4	3	4	4	5	5	5	5	5	4	4	4	3	4	5	5	2	5	3	5	3	3	2	2	5	4	4	5	5	5	4	5	5	4	2	3	5
16	PERSON 13	.....	.....	1	4	.....	.....	2	4	4	4	3	.....	4	4	4	4	2	3	4	2	3	3	1	4	4	.....	3	2	4	.....	.....	4	5	.....	4	4	.....
17	PERSON 14												5	5	5	5	5	2	5	5	5	5	5	3	2	1	4	2	4	5	4	3	3	5	4	4	5	5
18	PERSON 15	4	4	3	4	4	5	4	4	5	3	5	5	4	5	4	5	4	4	3	5	4	3	4	3	3	4	4	5	4	4	3	3	5	4	5	4	4
19	PERSON 16	5	5	4	3	5	5	2	5	5	3	5	5	4	1	2	5	5	3	5	5	3	3	3	4	5	4	5	4	5	3	3	4	5	4	4	3	3
20	PERSON 17												2	3	3	4	4	3	4	4	3	3	.....	4	3	3	3	4	4	3	2	3	3	4	3	3	4	4
21	PERSON 18	5	5	4	5	5	5	5	5	5	4	4	5	4	5	4	5	5	5	5	5	5	5	4	4	5	4	5	5	5	5	4	4	5	5	5	4	5
22	PERSON 19												5	3	5	5	4	1	1	2	4	1	1	2	1	1	1	2	2	5	1	1	2	1	4	3	1	1
23	PERSON 20	3	3	4	3	4	3	4	4	4	3	4	5	5	5	5	5	5	5	4	5	4	5	4	3	5	5	5	5	5	5	5	5	5	5	5	3	4
24	PERSON 21	1	3	3	2	4	4	4	4	2	4	4	3	3	4	1	4	2	.....	3	3	1	3	4	2	1	1	3	2	5	3	3	2	3	3	1	3	4
25	PERSON 22	5	4	4	4	4	4	4	4	4	4	4	5	3	3	4	5	5	5	4	5	5	4	4	4	5	4	5	3	5	4	3	5	5	4	4	4	4
26	PERSON 23	1	1	5	1	1	3	1	1	4	5	4	1	1	2	1	3	1	1	1	4	1	1	2	1	1	1	2	1	2	2	2	1	3	2	1	2	2
27	PERSON 24												5	4	4	4	4	4	4	3	4	4	4	3	3	3	4	4	3	4	3	3	4	5	4	4	4	3
28	PERSON 25	3	2	4	1	3	4	4	2	4	3	5	2	2	1	2	4	2	4	2	4	3	2	3	4	2	3	2	3	2	3	2	3	5	3	2	3	4
29	PERSON 26	3	4	3	2	5	5	3	5	5	4	4	5	4	4	4	5	2	4	4	5	4	4	4	4	4	4	4	3	5	4	3	4	5	4	4	4	5
30	PERSON 27	4	4	3	4	3	3	4	4	4	4	4	4	4	4	4	4	3	3	3	4	3	3	3	2	3	4	4	3	4	3	3	4	5	4	4	4	4
31	PERSON 28	5	4	1	4	5	4	4	4	4	3	4	4	4	4	4	4	5	4	4	2	4	4	4	4	2	4	4	3	4	4	4	4	5	4	4	3	4
32	PERSON 29	4	4	4	4	4	4	4	5	4	4	4	4	3	4	4	5	5	4	4	4	3	4	4	3	2	3	4	4	4	4	3	4	5	4	4	4	5
33	PERSON 30												4	3	2	4	5	2	3	2	4	2	2	3	4	1	4	4	4	4	3	3	3	4	4	3	4	4
34	PERSON 31	5	3	4	3	4	4	4	5	5	3	4	5	4	4	4	5	5	5	4	5	3	3	4	3	4	4	4	4	4	4	4	4	4	4	4	4	3
35	PERSON 32	2	3	3	2	4	4	4	4	4	4	3	4	2	4	3	3	2	2	2	4	2	2	4	1	1	4	3	2	3	2	2	3	5	2	2	4	4
36	PERSON 33												5	4	4	4	4	4	3	3	4	4	4	4	3	3	3	3	4	4	4	3	4	4	3	4	4	4
37	PERSON 34	4	3	4	4	4	4	3	3	4	4	5	5	3	4	4	4	2	2	4	4	2	2	2	3	4	4	4	2	4	2	2	4	5	3	4	2	4
38	PERSON 35												4	4	4	3	5	2	3	4	4	.....	3	3	4	4	4	4	4	4	3	2	3	4	3	3	4	4
39	PERSON 36	3	3	4	4	2	4	3	4	4	4	4	4	4	4	4	5	5	5	4	4	4	4	4	4	4	4	4	4	4	4	3	4	4	4	4	4	4
40	PERSON 37												2	2	4	1	3	1	1	1	3	1	1	3	1	1	1	2	1	2	1	1	2	1	2	1	5	1
41	PERSON 38	4	3	2	3	4	4	4	5	4	3	3	4	3	3	4	4	4	4	4	4	3	3	4	3	4	4	4	3	4	4	3	4	5	4	4	4	4
42	PERSON 39												4	4	4	4	3	2	3	3	4	4	3	4	4	3	4	3	4	4	3	3	3	4	3	3	4	4
43	PERSON 40	4	4	4	4	2	4	2	4	4	4	4	4	4	4	2	4	1	4	3	5	5	3	4	5	5	4	4	4	4	4	4	4	4	4	2	4	4
44	PERSON 41	4	4	2	4	4	4	4	5	5	4	4	5	4	2	5	5	3	4	4	5	4	4	4	4	5	5	5	4	5	5	4	5	5	4	4	5	5
45	PERSON 42												4	5	4	4	5	1	2	3	2	2	2	5	2	3	2	4	1	5	2	2	3	3	2	3	4	1
46	PERSON 43	3	3	2	4	5	4	4	4	4	5	4	4	4	2	4	4	3	4	4	2	4	4	4	4	4	4	4	3	5	3	2	4	4	5	4	3	3
47	PERSON 44												4	5	4	5	5	2	2	2	2	2	2	1	5	1	2	2	2	4	2	2	2	4	3	2	4	4
48	PERSON 45	4	4	3	4	4	4	4	5	5	4	5	4	4	4	5	5	2	4	4	5	4	4	4	4	4	5	5	4	4	4	4	4	5	4	4	4	4
49	PERSON 46												4	3	2	2	5	4	3	3	3	4	4	4	3	2	2	3	4	4	2	2	3	3	4	3	3	3
50	PERSON 47												4	4	3	4	4	2	2	3	4	3	4	3	3	3	4	4	3	4	4	3	4	5	4	4	3	3
51	PERSON 48												3	4	1	3	4	2	4	4	3	4	4	4	4	3	3	4	3	4	4	3	3	4	4	4	4	4
52	PERSON 49	3	2	4	3	3	3	4	4	5	4	4	3	4	4	3	4	4	3	3	2	3	3	3	4	3	3	3	3	3	2	2	3	4	3	2	3	3
53	PERSON 50												5	5	3	4	5	5	5	5	5	5	5	5	4	4	5	5	4	5	5	4	4	4	4	4	4	4
54	PERSON 51	3	4	4	2	3	2	3	3	4	3	1	4	4	4	4	5	4	4	2	3	2	3	1	2	2	3	3	3	4	2	2	4	4	2	2	3	4
55	PERSON 52	4	4	5	3	5	5	5	4	5	3	4	5	4	4	4	5	4	5	4	4	4	4	3	4	5	4	4	5	5	4	3	4	5	5	4	4	5
56	PERSON 53	4	4	3	4	4	4	5	4	4	4	4	4	3	3	5	4	3	4	3	4	4	3	4	4	4	4	4	4	4	5	5	4	4	4	4	4	5
57	PERSON 54	4	4	2	3	5	5	5	5	4	4	4	4	4	4	4	5	5	5	5	5	4	4	4	4	4	5	4	4	4	4	3	4	5	4	4	4	5
58	PERSON 55	4	3	4	4	3	2	4	5	5	4	4	4	3	1	4	4	2	3	4	5	4	4	2	3	4	4	4	4	3	2	3	5	4	4	4	4	5
59	PERSON 56	4	4	2	4	3	4	2	4	4	4	4	4	2	2	4	4	.....	4	4	4	3	4	4	4	4	4	4	4	2	4	4	3	4	4	4	4	4
60	PERSON 57	4	4	1	2	4	4	4	3	4	4	5	4	2	1	1	4	3	2	2	4	3	2	4	1	5	4	2	2	5	3	3	2	3	4	4	4	4
61	PERSON 58												4	3	3	4	4	3	3	4	4	3	3	4	4	4	3	4	4	4	4	3	3	3	4	4	4	4
62	PERSON 59												3	3	2	2	4	2	4	2	5	1	3	4	5	1	3	2	3	4	1	1	3	3	5	3	4	2
63	PERSON 60	4	4	4	3	4	4	5	5	5	4	5	4	4	4	4	4	4	4	4	4	3	4	4	4	4	3	4	2	4	4	4	4	4	4	4	4	4
64	PERSON 61	3	4	4	2	4	5	4	4	5	4	5	4	3	4	4	5	4	4	4	4	3	4	4	4	4	4	4	4	4	4	3	4	4	4	3	4	4
65	PERSON 62												5	5	5	5	5	3	5	5	5	4	4	3	4	4	3	4	3	4	4	4	5	5	5	5	4	4
66	PERSON 63												3	4	5	3	4	3	4	3	5	2	4	3	4	3	2	4	2	4	2	4	4	5	4	2	3	4
67	PERSON 64												4	4	5	3	3	2	1	3	4	2	2	3	3	1	3	3	2	1	3	3	.....	3	3	3	3	3
68	PERSON 65												3	4	2	1	5	4	5	3	3	2	4	2	4	3	1	4	2	4	2	1	3	3	4	2	2	1
69	PERSON 66	4	4	4	4	2	4	4	4	3	4	4	5	4	2	4	5	5	4	4	5	4	3	4	2	3	4	5	3	4	2	2	4	5	4	3	4	4
70	PERSON 67	4	5	4	2	4	4	5	5	5	2	2	5	3	4	5	5	4	5	3	5	3	3	4	4	4	5	4	3	5	4	3	5	5	3	4	4	5
71	PERSON 68												4	3	2	4	4	3	3	3	4	4	4	4	3	3	4	4	3	4	3	3	3	4	4	4	3	4
72	PERSON 69	4	2	3	4	3	4	4	5	4	3	4	4	4	3	4	5	4	4	4	4	4	4	4	4	2	4	4	4	4	4	4	4	5	3	4	4	4
73	PERSON 70	4	4	3	4	4	5	4	5	5	5	5	4	4	2	4	5	2	4	4	4	4	4	4	5	4	4	4	4	4	4	3	4	5	4	4	4	4
74	PERSON 71												5	5	5	5	5	1	4	5	.....	4	.....	3	5	5	5	5	5	5	5	3	4	5	3	5	5	5
75																																						
76	SUMMED SCORE	161	158	149	151	165	179	169	192	198	166	179	284	251	240	259	310	216	254	246	278	234	224	242	239	234	254	266	233	263	234	205	262	306	259	249	260	271
77																																						
78	MIN SCORE	1	1	1	1	1	2	1	1	2	2	2	1	1	1	1	3	1	1	1	2	1	1	1	1	1	1	2	1	2	1	1	1	1	2	1	1	1
79																																						
80	MAX SCORE	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
81																																						
82	VALID RESPONSES (N)	44	44	45	45	44	44	45	45	45	45	45	69	70	70	70	70	69	69	70	69	69	68	70	70	70	70	71	71	71	70	70	71	71	69	71	71	70
83																																						
84	MEAN SCORE	3.66	3.59	3.31	3.36	3.75	4.07	3.76	4.27	4.40	3.69	3.98	4.12	3.59	3.43	3.70	4.43	3.13	3.68	3.51	4.03	3.39	3.39	3.46	3.41	3.34	3.63	3.75	3.28	4.19	3.34	2.93	3.69	4.31	3.75	3.51	3.66	3.87
85																																						
86	STD DEVIATION	0.94	0.82	1.00	0.98	0.94	0.76	0.88	0.86	0.65	0.73	0.84	0.85	0.88	1.19	1.08	0.83	1.29	1.12	0.96	0.92	1.09	0.97	0.93	1.07	1.27	1.05	0.87	1.08	0.75	1.05	0.92	0.84	0.92	0.76	0.98	0.77	0.96
87																																						
88	RATING OF 4 OR 5	28	28	24	26	29	37	34	40	43	30	38	59	42	43	53	65	30	45	39	53	38	34	42	41	38	47	51	34	63	34	18	47	59	49	44	49	56
89																																						
90	% AGREE	63.6	63.6	53.3	57.8	65.9	84.1	75.6	88.9	95.6	66.7	84.4	85.5	60.0	61.4	75.7	92.9	43.5	66.7	55.7	76.8	55.1	51.5	60.0	58.5	54.3	67.1	71.8	47.9	88.7	48.6	25.7	66.2	83.1	71.0	62.0	69.0	80.0
91																																						
92																																						
93																																						
94	Overall index score	136.3																																				
95	Total possible score	185.0																																				
96	% Overall index score	73.7%																																				
97																																						
98	..... DENOTES THAT THE RESPONDENT DID NOT ANSWER THE QUESTION!																																					