

**Predictors of Work Engagement and Organisational  
Commitment in the Mining Industry.**

**Nicole Crous**

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Supervisor: Shaida Bobat

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## **Declaration**

Short dissertation submitted in partial fulfilment of the requirements for the degree of Masters of Arts (Industrial Psychology) at the School of Psychology at the University of KwaZulu-Natal, South Africa.

I declare that this dissertation is my own unaided work. All citations, references and borrowed ideas have been duly acknowledged. I confirm that an external editor was not used.

This dissertation is being submitted for the degree of Masters of Social Science in Industrial and Organisational Psychology, School of Applied Human Sciences, College of Humanities, University of KwaZulu-Natal, South Africa.

None of the present work has been previously submitted for any degree or for examination at any other university.

Nicole Crous

**Student name**

213653061

**Student number**

January 2015

**Date of submission**

A handwritten signature in black ink, appearing to read 'Nicole Crous', written over a faint rectangular box.

**Student signature**

## Acknowledgements

*“Perseverance is the hard work you do after you get tired of doing the hard work you already did.” Newt Gingrich*

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## Abstract

The fast-paced business world is characterised by the international pressure on organisations to excel in all aspects, this raises the question of how employees in today's business world will cope and whether they will stay committed to their organisation. The present study revolves around the question of whether individuals working in the mining industry have sufficient motivation and energy to be fully engaged in their work and in turn demonstrate high levels of organisational commitment. The present study will investigate the factors which are most likely to predict work engagement and organisational commitment in the mining industry.

The objective of the present study was three-fold. Firstly, it attempted to determine the relationship between organisational commitment, work engagement, six areas of worklife, job demands and job resources of employees working within the mining industry in South Africa. Secondly, it attempted to determine the predictive value that the measures hold for organisational commitment of workers in the mining industry and finally, it attempted to determine the mediating role of work engagement in the relationship between various areas of worklife, job demands and resources, and organisational commitment of employees working in the mining industry. In other words, determining whether engagement as key mediating variable, explains how contextual variables such as six areas of worklife, job demands and job resources influence important organisational outcome variables, such organisational commitment.

A quantitative research design was used in accordance to the aims and objectives mentioned above. A convenience sampling strategy was used to collect the data. The research participants of the present study was drawn from a sample of employees within the mining industry. The sample (n=96) was selected using a non-probability convenience sampling method. The JSE, OCQ, AWS and JDRS as well as a biographical data sheet questionnaires were used as measuring instruments. Independent sample t-test, Pearson product-moment correlation coefficients, hierarchical multiple regression, and moderation and mediation tests were used to analyse the data.

Pearson product-moment correlation coefficient confirmed that Job resources (Growth opportunity, Job security and advancement) are positively related to organisational commitment. It also showed that the six areas of worklife (values) positively related to work

engagement and organisational commitment. Hierarchical multiple regression indicated that, from all the measures under investigation; Value, Advancement, and Job Engagement serve as the most powerful predictor of organisational commitment. Finally moderation and mediation test revealed that Job engagement moderates the effect of workload on organisational commitment and job engagement mediates the effect of value on organisational commitment.

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# CHAPTER ONE

## Background and Rationale

### 1.1 Introduction

The aim of the present study is to investigate the predictors of work engagement and organisational commitment. The study will examine the relationship between the six areas of work life, job resources, job demands, work engagement and organisational commitment of employees working within the Mining Industry in South Africa. The current chapter will discuss, the problem statement, research questions and research objectives as well as the research methodology used by the present study. The chapter closes off by stating the chapter divisions of this dissertation.

### 1.2 Problem Statement

In recent times, the fast-paced business world is characterised by the international pressure on organisations to excel in all aspects, this raises the question of how employees in today's business world will cope and whether they will stay committed to their organisation. The present study revolves around the question of whether individuals working in the mining industry have sufficient motivation and energy to be fully engaged in their work and in turn demonstrate high levels of organisational commitment.

The mining industry in the South African context is one of the most difficult industries in which to work (Rothmann & Joubert, 2007), it is characterised by extremely high job demands and unpleasant working conditions (Khulumani Support Group, 2006). Furthermore it is continuously faced with a shortage of qualified talent required to meet rigorous production needs. Taking into consideration the most obvious aspects of working in the mining industry, including various job demands (excessive time spent working with heavy duty machines, working with explosives, in intense underground temperatures etc.) and insufficient resources (e.g. no participation in decision making, limited task variety) (Calitz, 2004) it becomes apparent why work engagement and organisational commitment is at an ultimate low. These extreme job demands and limited job resources can have devastating impact not only on the employees, but also on the mining industry and the South African economy as a whole. The

present study will investigate the factors which are most likely to predict work engagement and organisational commitment in the mining industry.

The mining industry has been the bedrock of South African economy for more than a century, contributing greatly to employment opportunities, the gross domestic product and export earnings in the South African economy (Van Schalkwyk, Du Toit, Bothma & Rothmann, 2010). The mining industry in South Africa has established itself as one of the world's foremost suppliers of high quality mineral products as a result the mining industry plays an authoritative role in directing the movement of our economy it also serves as the largest employer in the country. According to Van Schalkwyk et al. (2010), the South African mining industry is continuously faced with vast challenges. These challenges include; "increased demand for productivity, labour unrest, skills shortages, loss of scarce technical skills due to emigration and high turnover rates" (Van Schalkwyk, Du Toit, Bothma & Rothmann, 2010).

Organisational commitment is widely accepted as a positive organisational outcome which is not only advantageous for both the organisation as well as the individual employee (Liou, 2008; Lok & Crawford, 2001, as cited in Saks, 2008). The fundamental basis common to all definition of organisational commitment presented by the literature; is the relationship between an individual and their organisation. According to Bakker et al. (2011), organisational commitment can be defined as "the willingness of employees to exert higher efforts on behalf of the organisation, a strong desire to stay in the organisation, and accept major goals and values of the organisation" (p.6). The above mentioned definitions of organisational commitment, serves as a valid rationale for using commitment as an outcome of engagement.

There is a great deal research literature and empirical studies that have explored the relationship between organisational commitment and job engagement. Modern literature commonly identifies the construct of organisational commitment as a facet of work engagement therefore the two concepts are viewed as being positively correlated (Baker, 2011). In other words, employees who demonstrate a high level of engagement also tend to demonstrate higher levels of commitment their organisation. According to Schaufeli et al. (as cited in Baker 2011), "work engagement is not only positively related to organisational commitment, but is also an antecedent of organisational commitment" (p.5). Through thoroughly revising the literature surrounding engagement it becomes evident that empirical research has only begun to appear in recent years (Sakes, 2008). Saks (2008) provides a summary of the most significant studies

that have measured engagement as well as engagement models and theories that have been developed and tested in recent literature. This will briefly be discussed below.

Firstly, Kahn (1990, as cited in Saks 2008) established that employees showed higher levels of engagement in conditions which provided more “psychological meaningfulness and psychological safety and when they were more psychologically available” (Saks, 2008). May, Gilson, and Harter (2004 as cited in Saks, 2008) investigated Kahn’s three psychological conditions of engagement (i.e., cognitive, emotional, and physical) (Saks, 2008). The study showed that meaningfulness, safety, and availability were significantly related to engagement (Saks, 2008).

Secondly, Saks (2008) puts forth that the work of Maslach, Schaufelli, and Leiter (2001; as cited in Saks; 2008) showed that engagement and burnout are two opposite poles of a continuum as measured by the Maslach Burnout Inventory (MBI), they also coined the notion of the six areas of worklife. They demonstrated that the six areas of worklife that leads to burnout will also result in engagement, this finding plays an essential part of the present study. The six areas of worklife presented by Maslach, Schaufelli, and Leiter (2001) include; workload, control, rewards and recognition, community and social support, perceived fairness, and value (Saks 2008). According to Baker (2010) the six areas of work-life; “provide a cohesive set of dimensions that have been previously linked both theoretically and empirically to burnout and engagement (e.g., Demerouti, Bakker, de Jonge, Janssen, & Schaufeli, 2001; Laschinger, in press; Leiter, Laschinger, Day, & Gilin-Oore, 2009)” (Baker 2010, p.6). Fundamental to the present study is their expectation that engagement mediates the link between these six work–life factors and various work outcomes such as organisational commitment (Saks, 2008).

The job demands–resources (JD-R) model by Demerouti, Bakker, Nachreiner, and Schaufeli, (2001) served as the theoretical framework for the present study. The JD-R model divides the work environment into job demands and job resources. According Demerouti et al, (2001, as cited in Saks; 2008); “Job demands refer to physical, psychological, social, or organisational features of a job that require physical and/or psychological effort from an employee and are related to physiological and/or psychological costs (e.g., work overload, job security, role ambiguity, role conflict)” (Saks, 2008, p.18). They further provide a definition for Job resources which refer to “physical, psychological, social, or organisational features of a job

that are functional in that they help achieve work goals, reduce job demands, and stimulate personal growth, learning, and development (job control, performance feedback, and social support)” (Saks, 2008). Simply put, the JD-R model shows that when job demands are low and employees possess the necessary resources to perform their jobs and cope with these demands, employees will demonstrate higher levels of engagement (Saks, 2008) and in turn be more committed to their organisation.

The researcher proposes that the six areas of worklife as presented by Leiter and Maslach (1999) potentially provides a functional way to conceptualise “climate for engagement”. As mentioned above, the six areas which include; workload, control, reward, community, fairness, and values. The literature shows that these dimensions are similar to dimensions of existing models and measures of organisational climate (Baker, 2010). The concept of organisational climate is central to the study of organisations, according to Saks (2008) climate is regarded as; “an important determinant of attitudinal, behavioural and performance related outcomes”. Organisational climate refers to “employees’ shared perceptions about formal and informal organisational structures, events, practices, policies, and procedures that are rewarded, supported, and expected in their organisational context” (Reichers & Schneider, 1990 p.112).

Patterson et al. (as cited in Bakker, Arnold B., Albrecht, Simon L. and Leiter, Michael P. 2011), emphasised the absence of supporting theory for research and practice on organisational climate that may lead to higher levels of employee engagement and commitment to their organisations. Baker et al. (2011) contended “the development of well-validated and theoretically grounded models and measures” (pg. 5.). The present study aims to demonstrate the relationship between climate (representing the six areas of worklife), job resources, job demands, engagement and organisational commitment. The six areas of worklife has been identified as a “core set of engagement-related climate dimensions analogous which will lead to organisational outcomes such as organisational commitment” (Saks, 2008 p.3).

According to Baker et al. (2011); when the six areas of worklife are measured at the level of the organisation as climate constructs, they can be modelled in such a way as to influence employee perceptions of job demands and job resources (measured at the level of the individual). This in turn has previously shown to influence engagement (Bakker; Albrecht &

Leiter; 2011), resulting in positive organisational outcomes such as organisational commitment (Schaufeli et al., 2001; as cited in Baker et al., 2011).

Drawing from the JD-R model (Bakker & Demerouti, 2007) and its extension the Dual Process Model, the researcher argues that when an organisation provides an employee with a climate of engagement that fosters the individual's perception of the organisation being supportive, involving, and challenging their psychological needs are accommodated. This in turn results in the employee investing more time and energy in their work and by being psychologically involved and committed to their organisation. In effect, the present study will investigate engagement as a key mediating variable. The researcher positions that engagement, as an explanatory mechanism demonstrates the manner in which contextual variables such as climate and job resources impact on significant organisational outcome variables such as organisational commitment.

It is the aim of the researcher to further develop, refine, and integrate the measures and perspectives relating to the various constructs. It is the researchers hope that the insights gained from the present study will provide important information to the organisation which will be useful in the formulation of interventions. These interventions will be aimed to increase employees' levels of engagement and organisational commitment. To the knowledge of the researcher, the amount of studies addressing the relationships between the constructs under investigation have been few. This gap in the literature is the driving force behind the present study which will investigate the relationship between climate for engagement (representing the six areas of worklife) job demands, job resources, work engagement and organisational commitment of employees working in the mining industry in South Africa using a cross sectional survey.

### **1.3 Objectives of the Research Study**

The objective of the present study is three-fold. The first objective is aimed at determining the relationships between organisational commitment, work engagement, six areas of worklife, job demands and job resources of employees working in the mining industry. Secondly, the present study attempts to determine the predictive value that the measures hold for organisational commitment of workers in the mining industry. The third and final objective is to determine the mediating role of work engagement in the relationship between various areas of worklife, job demands and job resources, and organisational commitment of employees working in the mining industry. In other words, the present study will determine

whether engagement mediates the relationship between contextual variables such as six areas of worklife, job demands and job resources and organisational commitment. A cross sectional study will be used to address the above objectives.

#### **1.4 Research Questions**

The following research questions could consequently be identified for this investigation:

- How are the six areas of work-life, job resources, job demands, work engagement and organisational commitment conceptualised within the research literature?
- To what extent are job resources and job demands related to work engagement?
- To what extent are job resources and job demands related to organisational commitment?
- To what extent are the six areas of worklife positively related to work engagement?
- To what extent are the six areas of worklife positively related to organisational commitment?
- Which of the measures under investigation serve as the most powerful predictor of organisational commitment?
- To what extent does work engagement mediate the relationship between job resources and organisational commitment?
- To what extent does work engagement mediate the relationship between the six areas of worklife and organisational commitment?

#### **1.5 Ethical considerations**

Prior to commencement of the present study certain ethical considerations were taken into account. Firstly, employees in the mining organisation were informed of the present study through a detailed letter stating the aims and rationale of the study. The same letter provided information with regards to what is expected if each participant if they wish to take part in the study. The participants are told what happens to their questionnaires, where it would be kept and for how long, as well as how the data will be disposed of (Appendix 1). The researcher emphasised that participation in the present study is completely voluntary, and furthermore that the questionnaires they were required to complete would be anonymous and confidential. It was made clear that participants could withdraw from the study at any given time and for any reason. The collected data will be stored in the supervisor's office under lock and key for a period of five years, this is done to protect the data and to prevent the misuse of the data. After

the data has been securely stored for five years it will be disposed of using a shredder. The names and contact numbers of the supervisor and researcher were put on the letter in case the participants wished to contact us should they have any questions regarding the study.

## **1.6 Structure of the dissertation**

The introductory section (**Chapter one**) introduces the context of this study. The problem statement, the research questions, the objectives and the research methodology of the study are provided.

In **Chapter two**, relevant literature regarding climate for engagement (representing the six areas of work life), job resources, job demands, work engagement and organisational commitment will be discussed. The theoretical framework that informs this study, the JD-R model (Bakker & Demerouti, 2007) and its extension, the *Dual Process Model* (Schaufeli & Bakker, 2004), is also discussed.

**Chapter three** outlines the research methodology of the study. Details of the following are given; research design, sampling methods, instrument used in the study, data collection and procedures followed, and lastly, data analysis.

The results of the statistical analysis are presented in **Chapter four**. Independent sample t-test, Pearson product-moment correlation coefficients, hierarchical multiple regression, and moderation and mediation tests were used to analyse the data.

**Chapter five** focuses on the discussion of the findings of the study in relation to the literature with consideration of previous parallel studies.

**Chapter six** is the concluding section of the dissertation, limitations of the study are included in this section. Implications for interventions and possible recommendations for future research are highlighted.

## **1.8 Conclusion**

Within the present study the rationale and the steps in the research process were discussed. The problem statement, research objective, research methods as well as the chapter divisions were also stated. In chapter two, the literature review is discussed.

## CHAPTER TWO

### Literature Review and Theoretical Framework

#### 2.1 Introduction

In this chapter each of the constructs under investigation will be defined and discussed, the chapter will also examine existing literature and research findings pertaining to these constructs. Firstly, the construct of organisational commitment will be examined. Next, the concept of work engagement will be discussed. Following this, the relationship between work engagement and organisational commitment will be examined in terms of current literature and research findings. Thirdly, climate for engagement representing the six areas of worklife shall be defined and discussed. Next, job resources and job demands shall be defined and discussed. The next section of this chapter explores the state of current literature and research findings in terms of the theoretical framework underlying the present study, namely The *Job Demands Resources Model* (JD-R) of Demerouti, Schaufeli, Nachreiner et al. (2001) and its extension, the *Dual Process Model* of Schaufeli and Bakker (2004). The JD-R/Dual Process Model serves as the theoretical framework for this study. The above mentioned models are appropriate as the theoretical framework underlying the research, the reason being that these models permit the inclusion for the integration of all of the constructs under investigation in the present study.

#### 2.2 Organisational Commitment

##### 2.2.1 Defining Organisational Commitment.

Organisational commitment is a desirable organisational outcome, it has many benefits not only to the organisation but also to the employee. It is for this reason that the present study will aim to investigate which of the other variables under investigation serve as the most powerful predictor of organisational commitment. Before commencing on this journey it is essential to gain a comprehensive understanding of the construct. The fundamental basis common to all definitions of organisational commitment presented by the literature is the undeniable relationship between an individual employee and their organisation. An individual will only show commitment towards their organisation if their goals and values are aligned to the organisation. Organisational commitment is defined by Porters, Steers, Mowday and Boulin (1974, as cited in Fields, 2011), as; “the willingness of employees to exert higher efforts on behalf of the organisation, a strong desire to stay in the organisation, and accept major goals and values of the organisation” (p.70).

### 2.2.2 The Three-Component Conceptualisation of Organisational Commitment.

The three-component conceptualisation of organisational commitment, is a highly recognised model. The model is presented by Allen and Meyer (1990), and its importance for the present study lies in the fact that it forms the foundation for most of the existing literature around organisational commitment. Meyer & Allen (1991); state that an important aspect to note about this model is; that the three dimensions of organisational commitment are not mutually exclusive or exhaustive, an employee can experience all three forms of commitment in varying degrees and at different times (Meyer & Allen, 1991, as cited in Fields, 2011). The three components proposed by Allen and Meyer (1990, 1991) are *affective commitment*, *continuous commitment* and *normative commitment*. Each one of the three components are regarded as a psychological state underlying an individual's relationship with his or her organisation, it is this psychological state that determines whether or not an employee decides to continue membership within the organisation (Allen & Meyer, 1990). These components will be discussed below.

The first of the three components of organisational commitment proposed by Allen and Meyer (1990); is *affective commitment*. Affective commitment is defined as; "an employee's identification with, involvement in, and attachment to the organisation" (p. 8). Mowday, Steers, and Porter (1979; as cited in Fields, 2011) further states that; the level of an employee's affective organisational commitment hinges on the strength of the positive feelings the employee demonstrates towards his or her organisation, along with the willingness to enhance their emotional bond to that organisation. According to Liou (2008), there are numerous positive outcomes resulting from of affective commitment, "affective commitment among employees improves the operational aspects of the organisation. Such improvements include greater job satisfaction and involvement, as well as an increase in job performance" (Liou, 2008, p. 118).

The second component of organisational commitment, is *continuance commitment*. Continuance commitment occurs when the individual evaluates the cost of leaving or quitting a certain activity or the organisation. This component proposes that employees will remain with his or her current organisation for two reasons, first because there are perceived to be minimal alternatives, and secondly due to the high costs associated with leaving the organisation (Allen & Meyer, 1990, as cited in Fields 2011). Unlike affective commitment, research has shown that there exists no relationship between continuance commitment and

performance of an employee (Meyer & Allen, 1997). In support of this, Liou (2008) found that individuals with a high level of continuance commitment, merely performs the minimum requirements of their job.

The third and final component of organisational commitment, *normative commitment*, is the sense of obligation an employee has toward his or her organisation. Simply put, an individual will remain loyal to their organisation because it is the correct and moral thing to do (Allen & Meyer, 1990). Meyer and Allen (1991) explains that employees with strong affective commitment continue employment with the organisation because they want to do so. Employees whose primary link to the organisation is based on continuance commitment remain because they need to do so. Finally, normative commitment reflects a feeling of obligation to continue employment. Employees with a high level of normative commitment feel that they ought to remain with the organisation (Fields, 2011).

## **2.3 Work Engagement**

### **2.3.1 Defining Work Engagement.**

Work Engagement was conceptualised by Kahn (1990) as; “the harnessing of organisational members’ selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances” (p. 649). Kahn (1990) further posits that it is the simultaneous employment and expression of a person’s preferred self that aids in the connections to work and others.

### **2.3.2 Theoretical Approaches to Engagement**

There is a great deal research literature and empirical studies that have explored the relationship between organisational commitment and job engagement. Modern literature commonly identifies the construct of organisational commitment as a facet of work engagement, therefore the two concepts are viewed as being positively correlated (Baker, 2011). In other words, employees who demonstrate a high level of engagement also tend to demonstrate higher levels of commitment their organisation. According to Schaufeli et al. (as cited in Baker 2011), “work engagement is not only positively related to organisational commitment, but is also an antecedent of organisational commitment” (p.5). Through thoroughly revising recent literature surrounding engagement it becomes evident that empirical research has only begun to appear in recent years (Saks, 2008). Saks (2008) provides a summary of the most significant studies that have measured engagement as well as engagement

models and theories that have been developed and tested in recent literature. This will briefly be discussed below.

Firstly, Kahn (1990, as cited in Saks 2008) established that employees showed higher levels of engagement in conditions which provided more psychological meaningfulness and psychological safety and when they were more psychologically available (Saks, 2008). May, Gilson, and Harter (2004 as cited in Saks; 2008) investigated Kahn's three psychological conditions of engagement (i.e., cognitive, emotional, and physical) (Saks 2008). The study showed that meaningfulness, safety, and availability were significantly related to engagement (Saks, 2008).

Secondly, Saks (2008) puts forth that the work of Maslach, Schaufelli, and Leiter (2001 as cited in Saks, 2008) showed that "engagement and burnout are two opposite poles of a continuum as measured by the Maslach Burnout Inventory (MBI)", they also coined the notion of the six areas of worklife. They demonstrated that the six areas of worklife that lead burnout will also result in engagement. Fundamental to the present study is their expectation that engagement mediates the link between these six worklife factors and various work outcomes such as organisational commitment (Saks, 2008).

The final theoretical approach to engagement which was provided by (Saks 2008), and is relevant to the present study, is the job demands–resources (JD-R) model. The JD-R Model, founded by Demerouti, Bakker, Nachreiner, and Schaufeli, (2001) served as part of the theoretical framework for the present study. According to the JD-R model, the work environment can be divided into demands and resources. Job demands refer to physical, psychological, social, or organisational features of a job that require physical and/or psychological effort from an employee and are related to physiological and/or psychological costs (e.g., work overload, job security, role ambiguity, role conflict) (Saks, 2008). Job resources refer to physical, psychological, social, or organisational features of a job that are functional in that they help achieve work goals, reduce job demands, and stimulate personal growth, learning, and development (job control, performance feedback, and social support). When demands are low and individuals have the necessary resources to perform their roles and cope with demands, they will be more engaged.

Through revision of recent literature it is evident that there exists numerous theoretical models as well as a number of measures of engagement. The aim of the present study is to further develop, refine, and integrate these measures and perspectives.

### **2.3.3 Work Engagement as the Antithesis of Burnout.**

Traditionally, the construct of work engagement has been conceptualised as being the polar opposite of burnout (Maslach & Leiter, 1999). Maslach and Leiter (1999) defines work engagement as; “an energetic state of involvement with personally fulfilling activities that enhance ones sense of professional efficacy” (p.112). Therefore this multi-dimensional concept of engagement provides us with a complex and systematic perspective on employees’ relationships with their work, in addition to distinct concepts such as organisational commitment, job satisfaction and job involvement. Originally, research studies involving burnout were done, portraying burnout as; “a psychological syndrome in isolation and that was characterised by three distinct components: exhaustion, cynicism and inefficacy” (Maslach & Leiter, 2008). According to Maslach and Leiter (2008, as cited in Field, 2011), the increase in empirical research gave rise to a shift in attention from burnout to its positive opposite, work engagement, and with it the positive opposite of its three components. This view lead to the new conceptualisation of work engagement and burnout as being two distinct ends along a continuum (Maslach & Leiter, 2008). Employees’ psychological relationships to their jobs have been conceptualized by Leiter and Maslach (2005) as “a continuum between the negative experience of burnout and the positive experience of engagement” (Leiter & Maslach, 2005). This burnout–engagement continuum is important because of its practical significance which is that engagement represents a desired goal for any burnout intervention. In addition, it also leads managers to focuses on the specific factors such as increasing employees’ energy, vigour and resilience; enhancing their involvement and absorption levels; and finally to safeguard their dedication and sense of efficacy and success on the job (Leiter & Maslach, 1999, as cited in Fields, 2011). In recent studies one can clearly observe a change in the conceptualisation of work engagement, as it is now more dominantly viewed as a construct in its own right. Work engagement can therefore be conceptualised as being independent of, and unrelated to burnout. This conceptualisation of work engagement serves as the foundation for the most recent literature on the construct (Gonzalez-Roma, Schaufeli, Bakker, & Lloret, 2002).

### **2.3.4 The Components of Work Engagement**

Recent literature, as mentioned earlier, favours the conceptualisation of work engagement as independent and distinct from burnout (Schaufeli et al., 2002). Schaufeli et al., (2002) states that work engagement as a construct in its own right can be defined as "... a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication, and absorption" (Schaufeli et al., 2002, p. 74, as cited in Fields 2011). The three components of work engagement, namely; vigour, dedication, and absorption will be discussed below.

According to Bakker et al. (2011), The first component, *vigour*, is described as "high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence even in the face of difficulties" (Bakker et al., 2011, p. 304). The second component, *dedication*, is characterised by "... being strongly involved in one's work, and experiencing a sense of significance, enthusiasm, inspiration, pride, and challenge" (Bakker et al., 2011, p. 304). Finally, the third component, *absorption*, refers to "...being fully concentrated and happily engrossed in one's work, whereby time passes quickly and one has difficulties with detaching oneself from work" (Bakker et al., 2011, p. 305).

### **2.3.5 The Definition of Work Engagement Adopted by the Present Study.**

To conclude, the theoretical approaches and models of work engagement mentioned above serve as the foundation of what has been covered by recent literature. According to Shuck (2010, as cited in Fields 2011), "no single approach dominates in the field, neither in methodology nor in definition" (p. 46). From the overview of these approaches the most important to note is that, while each approach proposes a different perspective, the varying approaches remain clear and unanimous in conclusion: the development of employee engagement inside organisations has the potential to significantly impact important organisational outcomes. The present study aims to examine the impact of work engagement as well as the other constructs under investigation and their effect on organisational commitment. The conceptualisation of work engagement which was proposed by Schaufeli et al. (2002), discussed above, will guide the present study. The reason being that this approach has been validated and used widely within the South African context (Barkhuizen & Rothmann, 2006; Coetzee & Rothmann, 2005). The key objectives of the study detaches itself from the construct of burnout, in other words the researcher will utilise the conceptualisation of work

engagement as being independent and distinct from burnout. The reason for this being, is that the present study has its foundation in a more positively oriented psychology and will therefore not focus on negative psychological states, such as the components of burnout. It is thus, for the aforementioned reasons that work engagement will be defined in the present study as, "... a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication, and absorption" (Schaufeli et al., 2002, p. 74).

### **2.3.6 Empirical Findings on Work Engagement.**

This construct of work engagement is considered a human resource strength, it is beneficial not only to the organisation but also to the individual employee. According to Bakker et al. (2004); employees with higher levels of work engagement have far better in-role fit and extra-role performance, this in turn leads to improved financial results for the organisation. (Xanthopoulou, Bakker, Demerouti & Schaufeli, 2009). A study conducted by Demerouti, Bakker, De Jonge, Janssen and Schaufeli (2001), showed that work engagement is not only advantageous at an organisational level but also at an individual level, as their study proved that engagement positively correlates with good health. Bakker et al (2008); provide key reasons why employees with higher levels of engagement perform better on the job than disengaged workers. They state that, engaged employees often experience positive emotions, including happiness, joy, and enthusiasm; experience better health; create their own job and personal resources; and transfer their engagement to others (Bakker & Demerouti; 2008).

From the literature and research done on the construct of work engagement it can be denoted that there exists an immense gap in knowledge, the present study will set out to address this gap. Through revision of the literature it becomes apparent that negative psychological states such as burnout has dominated the literature. The researcher is therefore aware that there is an increasing need for empirical research, specifically within the South African context, which focusses primarily on positive psychological states. It is therefore the aim of the present study to address this gap in knowledge by conducting research around the positive organisational behaviour constructs of work engagement and organisational commitment.

### **2.3.7 The Relationship between Work Engagement and Organisational Commitment.**

One of the research questions guiding the present study examines the extent to which work engagement mediates the relationship between job resources and the six areas of worklife and organisational commitment. In order to further investigate, it is important to establish,

through reviewing the literature that a positive relations exists between work engagement and organisational commitment. There is a great deal research literature and empirical studies that have explored the relationship between work engagement and organisational commitment. Current literature frequently incorporates the construct of organisational commitment as a facet of work engagement; one can therefore say that these two constructs are positively correlated (Chalofsky & Krishna, 2009; Rothmann & Jordaan, 2006, as cited in Fields, 2011). In other words, employees that are highly engaged in their work also tend to demonstrate higher levels of commitment to their organisation. Further and most importantly, Schaufeli et al. (2001) stated that modern literature proposes that not only is work engagement positively related to organisational commitment, but is also an antecedent of organisational commitment. These finding are essential to the present study.

While reviewing the literature, a trend among studies conducted on work engagement and organisational commitment became apparent. Recent literature showed how work engagement and organisational commitment are being linked with job resources and job demands. Drawn from these research findings is a model which is particularly useful for the present study in achieving its objectives. The model not only incorporates the relationships between work engagement and organisational commitment but also includes job resources and job demands. This brings the paper to the next section, defining and discussing job resources and job demands, followed by a detailed review of the *Job Demands Resources Model* as part of the theoretical framework of the present study.

## **2.4 Climate for engagement**

In studying organisational effectiveness, climate is fundamental. According to Bakker et al. (2011) “climate is regarded as an essential determinant of attitudinal, behavioural and performance related outcomes” (Bakker; Albrecht & Leiter, 2011, p. 5). In spite of the large number of diverse conceptualizations and measures of organisational climate, there exists a vast agreement that organisational climate refers to; “employees’ shared perceptions about formal and informal organisational structures, events, practices, policies, and procedures that are rewarded, supported, and expected in their organisational context” (Reichers & Schneider, 1990; as cited in Baker at al., 2011).

Researchers are constantly involved in the debate surrounding the conceptualisation of climate, irrespective of the extensive practical application of climate surveys currently being used within organisations as diagnostic tools. Researchers are still arguing whether; “climate is best conceptualized as a broad, general construct (i.e., as organisational climate) or as a more specifically focused construct, such as service climate, climate for innovation, or climate for safety” (Bakker; Albrecht & Leiter, 2011, p 4).

Patterson et al. (as cited in Bakker et al., 2011), emphasised the absence of supporting theory for research and practice on organisational climate that may lead to higher levels of employee engagement and commitment to their organisations. Baker et al. (2011) contended “the development of well-validated and theoretically grounded models and measures” (pg. 5.). The present study aims to demonstrate the relationship between climate (representing the six areas of worklife), job resources, job demands, engagement and organisational commitment. The six areas of worklife has been identified as a “core set of engagement-related climate dimensions analogous which will lead to organisational outcomes such as organisational commitment” (Saks, 2008).

The researcher proposes that the six areas of worklife as presented by Leiter and Maslach (1999) potentially provides a functional way to conceptualise “climate for engagement”. As mentioned above, the six areas which include; workload, control, reward, community, fairness, and values. The literature shows that these dimensions are similar to dimensions of existing models and measures of organisational climate (Baker, 2010). According to Baker (2010) the six areas of work-life; “provide a cohesive set of dimensions that have been previously linked both theoretically and empirically to burnout and engagement (e.g., Demerouti, Bakker, de Jonge, Janssen, & Schaufeli, 2001; Laschinger, (in press). Leiter, Laschinger, Day, & Gilin-Oore, 2009)” (Baker 2010, p.6). According to Baker et al. (2011), when the six areas of worklife are measured at the level of the organisation as climate constructs, they can be modelled in such a way as to influence employee perceptions of job demands and job resources (measured at the level of the individual). This in turn has previously shown to influence engagement (Bakker Albrecht & Leiter, 2011), resulting in positive organisational outcomes such as organisational commitment (Schaufeli et al., 2001; as cited in Baker et al., 2011).

Drawing from the JD-R model (Bakker & Demerouti, 2007) as well the Dual Process Model (Schaufeli & Bakker, 2004), the researcher argues that when an organisation provides an employee with a climate of engagement (represented by the six areas of work-life) that fosters

the individual's perception of the organisation being supportive, involving, and challenging their psychological needs (job resources) are accommodated. This in turn results in the employee investing more time and energy in their work (engagement) and by being psychologically involved and committed to their organisation (organisation commitment). In effect, the present study will investigate engagement as a key mediating variable. The researcher positions that engagement, as an explanatory mechanism demonstrates the manner in which contextual variables such as climate and job resources impact on significant organisational outcome variables such as organisational commitment.

#### **2.4.1 The six areas of worklife as a conceptualisation of climate for engagement**

In this section the six areas of worklife will be discussed.

##### *Workload*

A frequently discussed source of burnout is work overload (Leiter & Maslach, 1999). As previously mentioned the six areas have a direct impact on how employees perceive job demands and job resources (Leiter & Maslach, 1999). The first of the six areas, overload occurs when job demands exceeds human limits otherwise known as our job resources. Increased workload has a consistent positive relationship with burnout; conversely it has a consistent negative relationship with engagement (Leiter & Maslach, 1999). Therefore, an increase in workload, increases job demands, which in turn leads to a decrease in engagement (Maslach et al., 2001). According to Leiter and Maslach (1999); both qualitative and quantitative work overload contribute to exhaustion by depleting the capacity of people to meet the demands of the job. It is important to note that workload do not necessarily lead burnout, the critical point, however transpires when employees are incapable of recovering from work demands. To elaborate on this, acute fatigue can result from a particular demanding event at work, for example meeting strict deadlines or trying to resolve a crisis at work. These strenuous job demands however do not have to lead to burnout; the effect of the overload on the employee is decreased when they are granted the opportunity to recuperate during restful periods at work or at home. Work overload does not always have a negative impact on employees, in contrast, a sustainable workload often provides employees with the opportunity to use and refine the skills they already possess, and it also aids them in becoming more effective in new areas. In other words workload can have a positive relationship with job resources (Landsbergis, 1988), which in turn will have an impact on engagement.

### *Control*

The demand–control theory of job stress presented by Karasek and Theorell (1990, as cited in Leiter & Maslach, 2009) is of particular importance as it identifies the crucial role that personal control plays in the workplace. According to Leiter and Maslach (1999); the positive side of control, which includes the active participation in organisational decision-making has been consistently found to be associated with higher levels of efficacy and lower levels of exhaustion (Leiter & Maslach; 1999). It can therefore be said that personal control over workplace hazards and stresses leads to an increase in employees’ job resources such as energy and health at work (Leiter, 2005). A decrease in control brings about an increase in role ambiguity, which is the absence of direction and control in one’s work. The most difficult problem with control arise when an employee experiences role conflict. The literature provides studies that have shown a strong link between role conflict and the exhaustion dimension of burnout (Cordes & Dougherty, 1993; Maslach et al., 1996; as cited in Leiter & Maslach, 1999). This in turn leads to lower levels of engagement and negatively effects organisational outcomes such as commitment.

### *Reward*

The third constituent of areas of worklife is reward. Various research studies have reported that that insufficiently rewarding an employee for their efforts at work (whether financial, institutional, or social) has a direct effect on an employee’s vulnerability to burnout (Leiter & Maslach, 1999) and thus less engagement. According to Maslach et al., (2005) the lack of recognition and rewards for the work of the employee from management and stakeholders diminishes is closely associated with feelings of inefficacy (Maslach et al., 2005). On the contrary, congruence in the reward dimension between the employee and the job means that there are both material and psychological rewards and consequently opportunities for intrinsic satisfaction (Richardson, Burke, & Leiter, 1992, as cited in Leiter & Maslach, 1999), these increased job resources in turn leads to higher degree of engagement.

### *Community*

The next area involves community; referring to the general quality of social interaction at work, According to Leiter et al. (2002) this includes; issues of conflict, mutual support, closeness, and the capacity to work as a team. Research concerning the topic of burnout, has traditionally focused predominantly on social support received from supervisors, co-workers, and family members (Leiter & Maslach, 1999). “A sense of community has been found to buffer the

impact of feelings of inequity at work” (Truchot & Deregard, 2001; as cited in Maslach et al., 2005). Social support, despite its form has been reported to be closely linked to a higher degree of engagement (Leiter & Maslach, 1999). According to Maslach and Leiter (2008), research on community orientation has provided a distinct but consistent perspective, demonstrating that burnout is less likely to occur within a positive and supportive workplace environment. When an organisation provides an employee with a supportive climate that fosters the individual’s perception of the organisation being supportive, involving, and challenging their psychological needs are accommodated. This in turn results in the employee investing more time and energy in their work and by being psychologically involved and committed to their organisation.

### *Fairness*

The fifth component of the six areas of worklife that will be discussed is fairness. According to Maslach and Leiter (2008); “fairness is the extent to which decisions at work are perceived as being fair and equitable” (p.503). Literature on procedural justice demonstrates that fairness of the process is far more favourable to employees than fairness of the actual outcome (Maslach & Leiter, 2008). According to Walster et al. (1973, as cited in Maslach & Leiter, 2008), fairness is central to equity theory which posits that perceptions of equity or inequity are based on people’s determination of the balance between their inputs. Inputs may include an employee’s time, effort, and expertise and outputs includes rewards and recognition. Bakker et al. (2011) stated that an imbalance in terms of fairness in the workplace is predictive of burnout. In sum, employees who perceive their organisations as both fair and supportive are less susceptible to burnout and are more accepting of major organisational change ((Maslach & Leiter, 2008).

### *Values*

The final component of the six areas of worklife is values. According to Leiter and Maslach (2005); values refers to “the cognitive– emotional power of job goals and expectations”. They go on to describe values as the ideals and motivations that originally attracted people to their jobs, and thus they are the motivating connection between the worker and the workplace, which goes beyond the utilitarian exchange of time for money or advancement. (Leiter & Maslach, 2005). When a gap exists between the employee and the organisation’s values, it is typically a result of a values conflict on the job. In such a case, employees are forced to make a trade-off between the work they want to do and work they have to do (Leiter et al., 2002). One way to narrow the gap created by the value conflicts is to bring personal expectations in line with those of the organisation ; a further resolution for an employee would be to leave the organisation in

search of more fulfilling career opportunities (Leiter & Maslach; 2005). Present research on the topic has shown that a conflict in values is related to all three dimensions of burnout (Leiter & Harvie, 1997, as cited in Leiter & Maslach, 2005). According Leiter and Maslach (2005); “the structural model of burnout suggests that values may play a key role in predicting levels of burnout and engagement” (Leiter & Maslach, 2005). As with the other areas of worklife there is also a positive side to values, as stated by Leiter et al. (2007) “consistent organisational and personal values on knowledge sharing are associated with greater professional efficacy” (p. 305), in other words a congruency in values will lead desired job resources which will in turn lead to higher levels of work engagement and organisational commitment.

The present study will investigate which of these six areas of worklife serve as the most powerful predictors of work engagement and organisational commitment. In the next section the relevance of these worklife areas as a climate for engagement will be discussed.

#### ***2.4.2 Job–Person Incongruity,***

The researcher proposes that the six areas of worklife as presented by Leiter and Maslach (1999) potentially provides a functional way to conceptualise “climate for engagement”. As mentioned above, the six areas which include; workload, control, reward, community, fairness, and values. For an organisation to create effective climate for engagement, it is essential that there exists a job-person fit.

According to Leiter et al. (2002); a constant theme throughout the research literature on organisational risk factors is concerned with the problematic relationship between the employee and the organisational environment. The researcher proposes that problems will arise when the job of the employee is not aligned with the six areas of work-life, for example when job demands exceed the capacity of the individual to cope with the workload effectively, or the person’s efforts are not reciprocated with equitable rewards (Leiter et al; 2002). This problematic relationship is described as an imbalance, misalignment or misfit between the employee and the work environment. As a diagnostic tool, Leiter et al. (2002) proposed a measure of perceived incongruities within the six key domains of the workplace environment (the Areas of Worklife Scale), this measure was developed as part of Maslach and Leiter (1997) burnout model.

According to Leiter and Maslach (2005); “research has supported the hypothesized relationship between these six areas and the experience of burnout or engagement” (p.503). More importantly and in line with the objectives of the present study; research also shows that incongruities identified within the six areas of work-life are predictive of burnout, and, conversely, congruities are predictive of engagement (Leiter & Maslach, 2004). In current literature there is no theoretical evidence on which of the six areas of worklife serves as the strongest predictor of engagement and organisational commitment (Leiter & Maslach, 2004). The researcher will embark on this exploratory issue with the aim to narrow the existing gap in knowledge.

## **2.5 Job Resources and Job Demands**

Job resources and job demands are two crucial concepts that have to be dealt with in every organisation; they are also inherent characteristics of any job. The presence and absence of job resources and job demands have been demonstrated by research findings as antecedent of many positive as well as negative organisational outcomes. The present study will focus on the positive organisational outcomes, such as work engagement and organisational commitment. The literature shows a prominent relationship between job resources and job demands and these positive organisational outcomes (Baker et al. 2011), hence the reason for their inclusion in the present study. From the perspective of the Job Demands- Resources (JD-R) Model; which serves as part of the theoretical framework of the present study a discussion of job resources and job demands shall now be undertaken.

### **2.5.1 Job Resources.**

One of the construct under investigation in the present study is job resources. The present study aims to determine whether job resources serves as a predictor of organisational commitment and to what extent work engagement mediates the relationship between job resources and commitment. Job resources refers to the physical, social and organisational aspects of a job and serves three main purposes; firstly, job resources reduce job demands and the associated physiological and psychological costs that go with it. The second important function of job resources is the important role it plays in the achievement of work goals; and thirdly job resources are known to stimulate personal growth, learning and development (Bakker et al, 2011).

These dimensions are drawn from the *Job Demands-Resource Scale* presented by Rothmann (2005). The JDRS, one of the measures used in the present study. The JDRS is made up of 42-

items; questions are rated on a 4-point Likert scale ranging from 1 (never) to 4 (always). According to Rothmann (2005), dimensions of the JDRS include: job security, overload, support organisational support, growth opportunities and advancement. The JRDS has been used and found reliable within South African context, a primary reason for the selection of this tool for the present study.

The JD-R and Dual Process models, provides us with what is known as the *motivational process*, according to Schaufeli and Bakker (2004); within this process job resources have reported to be the strongest predictor of work engagement. Furthermore, in a study conducted by Hakanen Schaufeli and Ahloa (2008, as cited in Fields, 2011) results showed longitudinal support for the predictive value of job resources for engagement. Another study was done by Coetzer and Rothmann (2009), their study included a sample taken from employees working in a manufacturing company in South Africa. The results of the study demonstrated that job resources, such as organisational support and growth opportunities, were the greatest predictors of the vigour and dedication components of engagement (Coetzer and Rothmann, 2009; p.18).

Essential to the present study are the findings of the empirical research conducted by Hakanen et al. (2008). The results of this study supports the motivational process, as it provided evidence that job resources directly influenced work engagement, which in turn predicted organisational commitment. This is an important finding with regard to achieving the objectives of the present study as the findings of the study supports the proposition that work engagement serves as a mediator in the relationship between job resources and organisational commitment (Hakanen et al., 2008).

The above mentioned findings serve to answer some of the research questions guiding the present study which allows us to further embark on our investigation into these relationships. The findings from the literature therefore support the notion that there exists a positive relationship between job resources and engagement. Job resources, within the present study, include the following components; job security, overload, support organisational support, growth opportunities and advancement. The finding also support that job resources and its dimensions may serve as predictors of engagement. In terms of the motivational process, a great deal of research has showed that work engagement also plays a mediating role in the relationship between job resources and positive organisational outcomes such as organisational commitment.

### 2.5.2 Job Demands.

Bakker et al. (2011), defined job demands as; “the physical, psychological, social, or organisational aspects of a job that necessitate sustained physical and/or psychological effort, they are therefore associated with certain physiological and/or psychological costs” (p.16). According to Lee and Ashford (1996), job demands are seen to include role ambiguity, work pressure and workload. Hakanen et al. (2006), states that “job demands may become stressors in situations which require high effort to sustain an expected performance level, consequently eliciting negative responses, including burnout” (Hakanen et al., 2006, p. 497). According to Leiter (1993), the relationship between job demands and job resources are based on the fact that an overly demanding work environment is typically accompanied by insufficient resources.

In term of the *energetic process* of the JD-R Model, Bakker et al. (2011) states that job demands are positively related to burnout. Rothmann (2007); states that “the motivational and energetic processes do not function in isolation, there exists interconnections between the two” (p. 52). Furthermore, current research on the topic suggests that job resources serves as a buffer in the relationship between job demands and burnout (Bakker et al., 2005, Verbruggen, 2009 as cited in Fields, 2011). To summarise the above-mentioned, research has found support for the JD-R/Dual Processes Model and it therefore serves as an appropriate and useful theoretical framework for the present study.

## 2.6 Theoretical Framework

The *Dual Process Model* of Schaufeli and Bakker (2004), is an extension of the *Job Demands Resources Model* (JD-R) presented by Demerouti, Schaufeli, Nachreiner et al. (2001) provides the theoretical framework for this study. The above mentioned models are appropriate as the theoretical framework underlying the research, the reason being that these models permit the inclusion for the integration of all of the constructs under investigation in the present study.

### 2.6.1 The Dual Process Model

Demerouti, Schaufeli, Nachreiner et al. (2001); defines the JD-R Model as “a heuristic model that indicates an employee’s wellbeing may be shaped by two specific sets of working conditions, namely: job demands and job resources”. These two components of the JD-R model are important to the present study as it has shown that they have a direct impact on the health

and commitment of employees, in other words, these conditions influence the levels of burnout and engagement of individual employees. As mentioned above, Job resources refer to those physical, psychological, social, or organisational aspects of the job that (a) are functional in achieving work goals, (b) reduce job demands and the associated physiological and psychological costs, or (c) stimulate personal growth and development (Bakker et al., 2011, p. 18). According to Demerouti (2001), a lack of job resources directly results in the disengagement and mental withdrawal of employees.

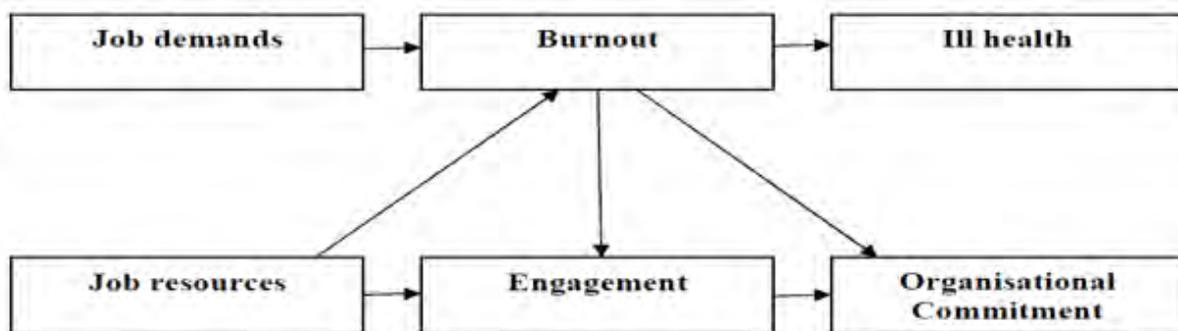
In contrast to job resources is job demands, which refers to those physical, social or organisational aspects of the job that require sustained physical or mental effort and are therefore associated with certain psychological costs (Bakker et al., 2005, p. 170). According to Hakanen et al. (2008), if demands are experienced as too high for a long period of time, this may result in a loss of functioning, stress which could lead to burnout, or illness.

### **2.6.2 An Extension of the JD-R Model**

As can be posited from the above, the conceptualisation of the JD-R model focuses primarily on negative psychological states and organisational outcomes. It is evident that the attention of recent literature is primarily on the outcomes of burnout as a result of high job demands and disengagement as a result of low job resources. Therefore, as can be seen in the research presented by Demerouti, Schaufeli, Nachreiner et al. (2001), The JD-R model was initially developed as a burnout model. A primary reason why the Dual Process model, as an extension of the JD-R model, is included in the theoretical framework of the present study is because the model has taken a shift away from only focussing on negative organisational outcomes and included positive outcomes, namely; work engagement and organisational commitment.

The Dual Process Model, suggests that in the context of job resources and job demands, two parallel processes take place. The present study will briefly discuss these processes which hold importance in determining whether there exist a positive relationship between job resources and job demands and work engagement. The first process of the Dual process model is referred to as the *energetic process*. This process links job demands with burnout resulting in negative organisational outcomes such as ill health (Fields, 2011). The second process of the Dual process model is known as the *motivational process*. The motivational process shows the relationship between job resources and work engagement, this relationship leads to positive

organisational outcomes such as organisational commitment. According to Hakanen et al., (2006); “a cross-link between the two processes exists whereby job resources relate negatively to burnout due to the fact that if job resources are high they can act as a buffer in the relationship between job demands and burnout” (p. 598). This is illustrated in figure 1 below.



**Figure 1.** Proposed directions according to the JD-R Model/Dual Processes Model. (Hakanen, Bakker & Schaufeli, 2006, p. 497)

The JD-R Model has been tested in various countries such as the Netherlands (Bakker et al., 2004), Finland (Hakanen et al., 2008; Mauno et al., 2007), and South Africa (Coetzer & Rothmann, 2009; Jackson & Rothmann, 2005a). Its robustness among various samples (Schaufeli & Bakker, 2004). The final reason is that, recent literature greatly supports the proposed existence of the two processes within the JD-R/Dual Processes Model (Coetzer & Rothmann, 2009; Jackson & Rothmann, 2005a; Schaufeli & Bakker, 2004).

## 2.7 The Present Study

The objective of the present study is three-fold. The First objective is aimed at determining the relationship between organisational commitment, work engagement, six areas of worklife, job demands and job resources of employees working in the mining industry. Secondly, the present study attempts to determine the predictive value that the measures hold for organisational commitment. The third and final objective is to determine the mediating role of work engagement in the relationship between various areas of worklife, job demands and job resources, and organisational commitment of employees working in the mining industry. In other words, the present study will determine whether engagement as key mediating variable, explains how contextual variables such as six areas of worklife, job demands and job resources influence important organisational outcome variables, such organisational commitment. Findings from the study will prove invaluable especially in the South African

context, as it will provide insights into employees in the mining industry's psychological wellbeing. The findings will also facilitate interventions and change management programs.

In summary, within the present study and drawing from current literature, it is expected that there exists a positive relationship between the six areas of worklife, job resources, job demands, work engagement and organisational commitment and that some of these variables are predictive of work engagement and organisational commitment. Further, it is expected that work engagement mediates the relationship between job resources, job demands and the six areas of worklife and organisational commitment.

## **2.8 Conclusion**

The literature review provided an in-depth discussion of the constructs under investigation in the present study. The constructs include; climate for engagement (representing the six areas of worklife), work engagement, organisational commitment, job demands and job resources. Throughout the chapter, each of these constructs as well as their relationship with one another were defined and conceptualised. The *Dual Process Model* of Schaufeli and Bakker (2004) is an extension of the *Job Demands Resources Model* (JD-R) of Demerouti, Schaufeli, Nachreiner et al. (2001), serve as the theoretical framework for the present study. In light of the present study, the above are suitable as the theoretical framework underlying the research due to the fact that these models allow for the incorporation of all of the constructs of the present study. The primary objectives of the present study were highlighted throughout the literature review in order determine gaps in the existing body of knowledge and to clarify how the present research proposes to narrow such gaps with the hope of making a valuable contribution to current literature.

## **CHAPTER 3**

### **Research Methodology**

#### **3.1 Introduction**

The present chapter will examine the research methodology that was used within the present study. The research design and sampling method will first be discussed. Following this is a comprehensive description of the five measurements used and construction of the scales. Next, is an explanation of the processes that were used in collecting the data and the procedures that were followed. Lastly, the chapter will discuss the relevant methods used to analyse the statistical data.

#### **3.2 Research Design and Sampling Method**

Within the present study a quantitative research design will be used in accordance to the aims and objectives mentioned above. A booklet consisting of a biographical data sheet and four psychological scales were used for the purpose of data collection. A cross sectional survey using a randomized representative sample was used to collect the data, in which a sample was drawn from the population at any one point in time (Huysamen, 1994; Shaughnessy & Zechmeister, 1997). The present study attempts to determine the interrelationships among the variables under investigation from the sample, thus according to Shaughnessy and Zechmeister (1997, as cited in Leiter & Maslach, 2009) “a cross-sectional design is appropriate for this study due to the fact that this type of design is ideally suited to descriptive and predictive functions” (p.334).

The research participants of the present study consisted of a sample of employees working in the mining industry. The sample (n=96) was selected using a cross sectional survey. The researcher and management of the mining company involved with this study had planned for a 90% (180/200) response rate; however due to organisational restructuring of the mining organisation at the time of data collection this sample size could not be achieved. The small sample size was a major limitation of the present study, the implications of the sample size on the results of the study will be discussed in chapter 6.

Convenience sampling is a non-probability sampling technique, participants are selected to partake in the study because of their convenient accessibility to the researcher. This sampling technique has many benefits which serve as a rationale for its use within the present study; convenience sampling is fast, inexpensive, easy and the subjects are readily available, it is also much less disruptive in the workplace than random sampling. According to Leiter and Maslach

(2009); “A convenience sample is either a collection of subjects that are accessible or a self-selection of individuals willing to participate” (p.335). One of the primary reasons this specific sampling technique was selected for the present study is because it permits the collection of basic data and trends regarding the study without the complications of using a probability sample, it is also useful for detecting relationships among different constructs (Fields; 2011).

### **3.3 Measuring Instruments**

In the meeting with HR, the researcher enquired about the literacy levels of the sample. All participants were fully capable of completing the surveys in English. A self-administered research instrument was used consisting of the following measures:

A self-constructed Biographical questionnaire, the Job Engagement Scale (JSE) (Rich et al., 2010), the Organisational Commitment Questionnaire (OCQ) (Allen & Meyer, 1990), The Areas of Worklife Scale (AWS) (Leiter & Maslach, 2000) and finally the Job Demands-Resources Scale (JDERS) (Jackson & Rothmann, 2005a).

#### **3.3.1 Demographic Questionnaire**

A demographic questionnaire was developed by the researcher in order to collect demographic information about the participants of the present study. Information collected included the following: gender, age group, years working within the organisation (tenure), highest qualification attained, job role, department and division. Demographic factors of the research participants will be discussed in more detail in chapter 4.

#### **3.3.2 Job Engagement Scale**

Developed by Rich et al. (2010), the job engagement scale is founded on Kahn’s (1990) definition of employee engagement. Rich et al (2010) focuses on physical, emotional and cognitive dimensions of engagement using a much shorter scale – it has been argued that their work is in the right direction to better conceptualization of work engagement as previous instruments seemed to overlap with other instruments measuring other constructions. There work relate to engagement as psychological presence in a role (Saks, 2006) and not attitude.

Each of these three dimension are represented by six questions. Participants are asked to rate their levels of employee engagement on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). Example items include: “I work with intensity on my job” (physical), “I am enthusiastic about my job” (emotional), and “At work, my mind focuses on my job”

(cognitive). Studies conducted by Rich et al. (2010) showed high intercorrelations among the sub-scales ( $r = .63$  to  $.74$ ) supporting the concept of an overall job engagement score.

### **3.3.3 The Organisational Commitment Questionnaire (OCQ).**

The Organisational Commitment Questionnaire (OCQ) was developed by Allen and Myer (1990). The OCQ measures organisational commitment along three subscales (dimensions), namely; affective, continuance and normative organisational commitment (Allen & Meyer, 1990). Participants were asked to rate their degree of commitment on a five-point Likert-scale ranging from 1 (strongly disagree) to 5 (strongly agree).

The three dimensions of organisational commitment can be distinguished, namely affective commitment (6 items; for example “I do not feel emotionally ‘attached’ to this organisation”), continuance commitment (6 items; for example “One of the few negative consequences of leaving this organisation would be the scarcity of available resources”), and normative commitment (6 items; for example “I would not leave my organisation right now because I have a sense of obligation to the people in it”) (Allen & Meyer, 1990).

The OCQ has reported to be a valid and reliable measure, according to Suliman and Iles (2000); the internal consistency for the OCQ has been confirmed at the 0.80 level (Suliman & Iles, 2000). Furthermore, the intercorrelations among populations have been found to be consistently above 0.90 (Allen & Meyer, 1996). Previous empirical studies using the OCQ, in particular within the South African Context, showed the alpha coefficient of 0.87 (Kwela, 2001 & Rugg, 2001). In addition to this, Stander and Rothmann (2010), conducted a study utilising a two-factor model of organisational commitment, their study found an alpha coefficient of 0.88 for attitudinal commitment (consisting of affective and normative components) and 0.54 for continuance commitment (Stander & Rothmann, 2010).

### **3.3.4 Areas of Worklife Scale**

Leiter and Maslach (1999) developed the Areas of Worklife scale, it comprises of 28 items that produce distinct scores for each of the six areas of worklife: workload (6), control (3), reward (4), community (5), fairness (6), and values (5) (Leiter & Maslach, 1999; p. 473). The Areas of Worklife Scale (AWS) items were developed based on staff surveys which were carried out by the “Centre for Organisational Research and Development” (Leiter & Harvie, 1998; Maslach & Leiter, 1997). Participants are asked to rate their degree of agreement with

these statements on a 5-point Likert-type scale ranging from 1 (*strongly disagree*), through 3 (*hard to decide*), to 5 (*strongly agree*) (Leiter & Maslach; 1999).

According to Leiter and Maslach (1999); the items are worded as statements of perceived congruence or incongruence between oneself and the job. Therefore, each subscale of the AWS contains positively phrased items of congruence, for example; “I have enough time to do what’s important in my job” (workload), and negatively worded items of incongruence, for example, “Working here forces me to compromise my values” (values). In contrast to the positively phrased items, scoring of the negatively phrased items is reversed. Leiter and Maslach (1999) state that; for each of the six subscales, the AWS measure defines congruence as a high score (greater than 3.00), indicating a higher degree of perceived alignment between the workplace and the respondent’s preferences. Conversely, it defines incongruence as a low score (less than 3.00), indicating more perceived misalignment or misfit between the worker and the workplace (Leiter & Maslach, 1999).

Motivation for the inclusion of this measure within the present study is based on the findings proving sufficient internal consistency and high levels of reliability. According to Leiter and Maslach (1999); “The scale has yielded a consistent factor structure across samples with acceptable alpha levels: workload (.70), control (.70), reward (.82), community (.82), fairness (.82), and values (.74)”. Furthermore, an indication of the subscales’ construct validity is that when respondents were given an opportunity to comment on any issue in their work lives, the topics on which they wrote complaints corresponded with the areas of worklife that they evaluated negatively (Leiter & Maslach, 2004).

### **3.3.5 The Job Demands-Resources Scale (JDERS)**

The Job Demands-Resources Scale (JDERS) was selected as a measure for job demands and resources within the present study. The primary reason behind this is because the JDERS was developed within the South African context and have been widely validated among South African samples (Jackson, 2006; Rothmann, Mostert & Strydom, 2006). The JDERS, was developed by Rothmann (2005) and is made up of 42-items; questions are rated on a 4-point Likert scale ranging from 1 (never) to 4 (always). According to Rothmann (2005); dimensions of the JDERS include: job insecurity, overload, support organisational support, growth opportunities and advancement”. The JDERS has been used and found reliable within South

African context, a primary reason for the selection of this tool for the present study. The JDRS reported reliable alpha coefficients varying from 0.63 to 0.94 (Coetzer & Rothmann, 2009) and between 0.76 and 0.92 (Rothmann, Mostert & Strydom, 2006).

A psychometric evaluation of the JDRS conducted by Rothmann et al. (2006), found that the dimensions of the JDRS consisted of five reliable factors, namely: *overload* (8 items; for example “Do you work under time pressure?”), *growth opportunities* (7 items; for example “does your work give you the feeling that you can achieve something?”), *organisational support* (18 items; for example “can you discuss work problems with your direct supervisor?”), *job insecurity* (3 items; for example “do you need to be more secure that you will keep your current job in the next year?”), and *advancement* (6 items; for example “does your organisation give you opportunities to follow training courses?”).

Motivation for the inclusion of this measure within the present study is based on the findings proving sufficient internal consistency and high levels of reliability. In a South African study conducted by Rothmann, Mostert and Strydom (2006), reliable cronbach’s alpha coefficients for the JDRS were found, they ranged between 0.76 and 0.92. In addition, they also found; highly reliable alpha coefficients for the five factors that were extracted from the JDRS: growth opportunities, 0.86; organisational support, 0.92; advancement, 0.83; overload, 0.76; and job insecurity, 0.89” (Rothmann, Mostert & Strydom, 2006).

### **3.4 Data Collection & Procedure**

The mining company was sent a letter explaining the research objectives of the present study. Following this, the researcher requested a meeting in order to explain the objectives, procedures as well as the benefits of the study to the organisation in detail. Once the researcher was permitted access to the organisation, a member of the staff, namely the Manager of Organisational Development and Talent, was made a direct contact for the researcher. The establishment of this relationship was done to facilitate the process of distributing and collecting the questionnaires from the respondents and to ensure that the data collection process was done both effectively and efficiently. Within the questionnaire booklet was a letter explaining the primary objectives and importance of the study (Appendix 2). The letter also assured respondents of the confidentiality of the information they provided. The letter emphasised the fact that participation in the study was completely voluntary, all respondents were allowed to withdraw from the study whenever they wished and for any given reason.

After the participant decided that they want to partake in the study, they were required to sign a letter of informed consent (Appendix 2). Those who chose to participate were asked to complete a series of self-administered questionnaires consisting of a biographical data sheet, the JSE, OCQ, AWS and JDRS. Although the researcher initially granted three weeks for the completion of the questionnaire, the data collection process took over six months as the organisation was undergoing major restructuring, it was therefore difficult to achieve the ideal sample size. Completed questionnaires were returned to the Manager of Organisational Development and Talent who then sent it back to the researcher via a courier service where the results were scored and statistically analysed. The process applied throughout the present study was strictly according to the prescribed procedure.

### **3.5 Statistical Analysis**

The present study made use of quantitative research data which seeks explanatory laws (Fields, 2011). Terre Blanche (1999) on the topic of quantitative data stated that; “It makes inferences about the characteristics of the sample while measuring what it assumes to be a static reality in hopes of developing universal laws”. In order to statistically analyse the data obtained for the present study, The Statistical Package for the Social Sciences program (SPSS, version 22) was employed. The motivation behind the selection of this specific program is due to its reported effectiveness in analysing quantitative data within the Social Sciences. An initial reason for its selection, was when the researcher took into account the ideal sample size. The ideal sample size  $n=200$  could not be realised due to unforeseen circumstances, this in turn resulted in a major limitation of the present study and effected the strength of robustness of statistical findings.

Prior to analysis of the data, the researcher screened the data set for errors. This was done by eliminating the outliers which are those values that fall outside the range of possible values for each variable in the present study. Following this, calculations were made to determine the frequencies for all items and presented as descriptive statistics. The significant findings of the data was then explored using descriptive statistics. According to Tabachnick and Fidell (2001); “Descriptive statistics consist of means, medians, standard deviations, skewness and kurtosis” (Tabachnick & Fidell, 2001). In this study, the mean was used to measure the central tendency of the results. The standard deviation presents the average distance of the individual scores from the mean.

## **Development of Measures**

No factor analysis was performed due to the small sample size. Cronbach's coefficient alpha was calculated to assess the internal consistency and reliability of the measuring instruments that have different scoring and response scales (Kerlinger & Lee, 2000), items were removed in order to improve the coefficient. Following this, the reliant items for each measure were summed. The function of explore in SPSS was used to assess the normality of the distribution of the scales. Outliers were removed where necessary. Please note that the job insecurity scale was coded so that low scores indicated high levels of insecurity and high scores indicates higher security.

## **Independent Sample t-test**

Mean differences between Roles and Divisions of employees in the mining company were assessed in relation to the measures used. An independent-samples t-test was employed by the present study to determine the mean score. Each of the variables was subjected to recoding of their original scores to ensure their suitability for this analysis. For the independent-samples t-test the researcher used Roles and Division. For *Roles* - Superintendents and Specialists as one group versus the Supervisors and others as another group. For *Division* - Mining and processing in one group versus Corporate (all others) as the other group. One can also argue for these groups and could assist to make useful recommendations for the organisation. The T-test was done on the overall job engagement, organisational commitment and, the six areas of worklife, job demands and job resources.

## **Pearson Product-Momentum**

In order to determine the relationship between the variables under investigation in the present study, Pearson product-momentum correlation coefficients were employed. A positive or negative correlation exists between two variables if they vary together. If a relationship exists between the variables it can be classified as a positive relationship. According to (Faguson, 1981); "A negative relationship occurs when a decrease in the measurement of one variable leads to an increase in the other variable" (Faguson, 1981). Within the present study, these variables include: Organisational commitment, work engagement, the six areas of worklife (workload, control, reward, community, fairness, and values), job demands and Job resources (organisational support, growth opportunities, job insecurity and advancement). The product-moment coefficient of correlation was used to calculate the relationship between sets of ordered pairs in order to obtain more precise approximations of the direction and degree of

relationship. In terms of statistical significance, it was decided to set the value at a 95% confidence interval level ( $p = 0.05$ ).

### **Hierarchical Multiple Regression**

Hierarchical multiple regression models were fitted to determine the best predictors of organisational commitment. According to Pallant (2013); Hierarchical regression is used to evaluate the relationship between a set of independent variables (predictors) and the dependent variable, controlling for or taking into account the impact of a different set of independent variables (control variables) on the dependent variable. In the present study; organisational support, growth opportunities, job insecurity and advancement was entered in the first block. Value, community, fairness and control was entered in the second block and Job engagement was entered in the third block. Hierarchical multiple regression, therefore evaluated the ability of the model (which includes areas of work life and job engagement) to predict organisational commitment, after controlling for a number of additional variables (Job resources – organisational support, growth opportunities, job insecurity and advancement). The researcher aimed to answer the following question:

If we control for the possible effect of Job resources (organisational support, growth opportunities, job insecurity and advancement) , is our set of variables, including Areas of worklife – Community, fairness, value and control and Job engagement still able to predict a significant amount of the variance in organisational commitment?

#### **3.5.6 Moderation and Mediation Models**

The final step in the data analysis was a series of multiple regression analyses, this was done in order to determine the meditational relationships of the present study. The specific procedure that must be followed when testing meditational relationships was developed by Baron and Kenny (1986). These others stated that; “Beta coefficients ( $\beta$ ) of different regression equations must be compared in order to test for a mediation effect” (Baron & Kenny, 1986). Baron and Kenny (1986) proposed a three step procedure: first, the mediator should be regressed on the independent variable; second, the dependent variable should be regressed on the independent variable; and third, the dependent variable should be regressed on both the independent variable and the mediator. Separate coefficients for each of the above equations are then estimated and tested (Baron & Kenny, 1986). These three regression equations then

provide tests for the linkages of the meditational model. In the present study, Alpha's provided guidance in the selection of outcomes.

### **3.7 Conclusion**

Within the present chapter the research methodology guiding the present research study was highlighted. The chapter discussed the research design and sampling method used, development of the instruments used, data collection and procedure and finally the outline of statistical analyses that were conducted. Ethical considerations were also discussed within the present chapter. Chapter 4 provides a comprehensive report of the findings of the empirical study

## CHAPTER 4

### Results

#### 4.1 Introduction

The present chapter deals with the results obtained from statistical analyses undertaken in the study. The findings are offered in accordance with the aims and the objectives of this study and were guided by the research questions guiding the investigation. In all instances, correlations between variables were tested two-tailed, and unless otherwise stated, statistical level of significance at  $p \leq 0.05$  was used.

#### 4.2 Demographic Characteristics of the Sample

Table 1 and figure 2 shows the demographics of the study sample in terms of age, gender, level of education, years with organisation, role within organisation and division.

The majority of the sample comprised of males (81%) in relation to the number of females (19%), this is acceptable due to the fact that there are more males employed within the mining industry in South Africa. Most of the participants in the study (40.6%) belonged to the age category of 25-35 years old. Further 34% of the participants were aged between 36-45 years. 14.2% of the participants were 46-55 years of age; whereas 10.4% of participants were 56 years and older; and, 0.9% of participants was 24 years and younger. It can be inferred from Table 1 that the majority of the sample used in the present study between the ages of 25-45 years, with a cumulative percentage of 74.6%.

Pertaining to the highest qualifications attained by the participants, the majority (37.8%) had attained a matric certificate as their highest qualification to date. Further, 35.7% of the participants had attained a diploma as their highest level of qualification, 13.3% attained a degree and lastly, 13.3% of participants reported to have obtained a post graduate degree as their highest qualification.

Most of the participants in this study had been with the organisation for 6-10 year (35.2%); whereas 27.6% had been at their organisation for 11-20 years; 24.8% at the organisation for less than 5 years and finally 12.4% for more than 20 years. The fact that the majority of participants had worked at their organisation for 6-10 years could be explained by the fact that

the majority of the participants too, were young (25-35 years) and thus it could be deduced that they had not been working at the organisation for a vast amount of time.

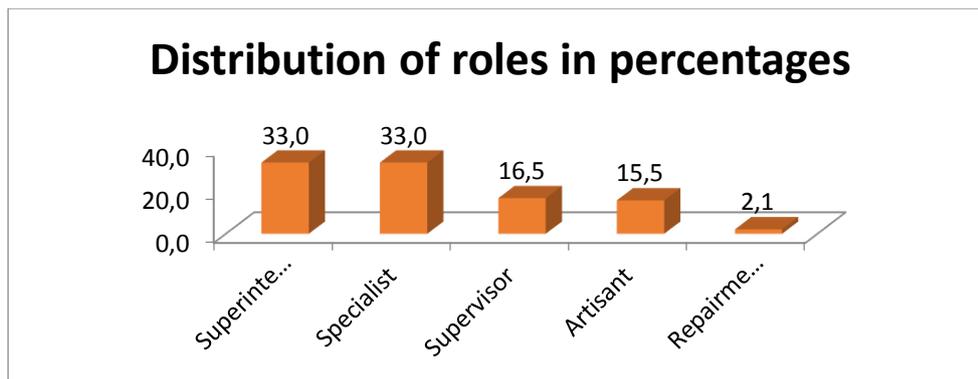
The next demographic characteristic examined is divisions within the organisation. Looking at table 1, majority of the sample fell in the division of mining (35.6%) this can be explained by the fact that mining is the biggest of all the divisions and will therefore have most people. The second highest division is assets management (19.8%), followed by processing (13.9%), finance (12.9%), Human resources (9.9%), Growth (4%), Corporate affairs (2%) and marketing (2%). For more simplified analysis, the researcher will here forth group together Mining and Processing in one group and the rest will be grouped together as Corporate.

Table 1

*Age, Gender, Level of education, Tenure and division of Respondents (N= 107)*

		N	%
Age (years)*	24 and younger	1	0.9
	25 -35 years	43	40.6
	36 - 45 years	36	34.0
	46 and older	26	24.6
Gender	Male	86	81
	Female	20	19
Level of education	Matric Certificate	37	37.8
	Diplomas/Occupational Cert.	35	35.7
	Degree	13	13.3
	Postgraduate Degree	13	13.3
Tenure	0-6 months	5	5.0
	7-12 months	7	6.9
	up to 2years	8	7.9
	up to 3years	7	6.9
	over 3years	74	73.3
Division	Asset management	20	19.8
	Corporate affairs	2	2.0
	Finance	13	12.9
	Growth	4	4.0
	Human resources	10	9.9
	marketing-sales and logistics	2	2.0
	Mining	36	35.0
	Processing	14	13.9

The final demographic characteristic examined is employee roles within the organisation, which is displayed in Figure 2. Results indicate that majority of the respondents held the job role of superintendents and specialist both with a percentage of 33. The second highest was the supervisor role (16.5%), followed by Artisan (15.5%) and repairmen (2.1%). To improve response categories for analysis the researcher will here forth group together Superintendents and specialists in one group and the rest will be grouped together as Supervisor and other.



**Figure 2: Number of Respondents in Different Roles**

### 4.3 Mean Differences between Roles and Divisions in Relation to the Measures Used

An independent-samples t-test was used to compare the differences in mean scores between roles and divisions in relation to the measures used.

#### 3.4.1 Employee Roles

An independent-samples t-test was conducted to compare the mean differences between roles in relation to the different measures used. The mean table provides an indication of which group had a higher mean score on the different measures. The T-test was done on the overall job engagement, organisational commitment, six areas of worklife, job demands and job resources measures. For the independent-samples t-test the researcher grouped Superintendents and Specialists as one group versus the Supervisors and others as another group. The researcher will only report on the results where a significant difference in scores among the two groups were found. The results of independent samples t-test conducted shows the following:

- **Workload and Job role:** There was a significant difference in the mean score on the dependent variable for supervisors and others ( $M = 7.42$ ,  $SD = 2.05$ ) and

superintendents and specialists ( $M = 8.63$ ,  $SD = 2.7$ ;  $t(95) = -2.216$   $p = .029$ , two-tailed). When examining workload as a component of the six areas of worklife, superintendents and specialists scored higher than the Supervisors and others group.

- **Community and Job role:** There was a significant difference in the mean score on the dependent variable for supervisors and others ( $M = 15.09$ ,  $SD = 2.89$ ) and Superintendents and specialists ( $M = 13.60$ ,  $SD = 3.03$ ;  $t(93) = 2.32$   $p = .022$ , two-tailed). When examining community as a component of the six areas of worklife, the supervisors and others group scored higher than the superintendents and specialists group.
- **Value and Job role:** There was a significant difference in the mean score on the dependent variable for supervisors and others ( $M = 11.63$ ,  $SD = 1.68$ ) and superintendents and specialists ( $M = 10.57$ ,  $SD = 2.47$ ;  $t(93) = 2.17$   $p = .033$ , two-tailed). When examining value as one of the components of the 6 areas of worklife, the supervisors and others group scored higher on value than the Superintendents and specialists group.

In Summary, the Results of the t-tests indicate that there was a significant difference on the mean score for only three of the measures under investigation; Workload, Community and Value. The supervisor's and others group had a higher mean score on Community and value, whereas superintendents and specialists had a higher mean score on workload. It is important to note that the t-tests indicate that there was no significant difference on the mean score for job engagement and organisational commitment. In the next section, division differences on the measures used will be discussed.

### 3.4.2 Division Differences on measures used.

An independent-samples t-test was conducted to compare the job engagement, organisational commitment, the six areas of worklife, job demands and job resources scores for mining and processing in one group versus corporate (all others) in another group on the overall job engagement, organisational commitment and, the six areas of worklife, job demands and job resources. The researcher will only report on the results where a significant difference

in scores among the two groups were found. The results of independent samples t-test conducted shows the following:

- **Workload and Division:** There was a significant difference in the mean score on the dependent variable for Corporate ( $M = 8.76$ ,  $SD = 3.17$ ) and Mining and processing ( $M = 7.58$ ,  $SD = 1.85$ ;  $t(80.85) = 2.297$ ,  $p = .024$ , two-tailed). When examining workload as a component of the six areas of worklife, the corporate group scored higher on workload than the Mining and processing group.
- **Growth opportunity and Division:** There was a significant difference in the mean score on the dependent variable for Corporate ( $M = 53.14$ ,  $SD = 11.01$ ) and Mining and processing groups ( $M = 58.13$ ,  $SD = 8.68$ ;  $t(88) = -2.396$ ,  $p = .019$ , two-tailed). When examining growth opportunity as a component of job resources, the Mining and processing group scored higher.
- **Job security and Division:** There was a significant difference in the mean score on the dependent variable for Corporate ( $M = 8.10$ ,  $SD = 2.7$ ) and Mining and processing ( $M = 9.7$ ,  $SD = 2.27$ ;  $t(93) = -3.117$ ,  $p = .002$ , two-tailed). When examining Job security as a component of job resources, the Mining and processing group scored higher on Job security.

In summary, for the independent-samples t-tests the researcher used the demographic variable division which included – Corporate as one group versus Mining and processing as another group. Results indicate that there was a significant difference on the mean score for only 3 of the measures under investigation; Workload, Growth opportunity and Job security. The Mining and processing group had a higher mean score on Growth opportunity and Job security, whereas the corporate group had a higher mean score on workload. It is important to note that the t-tests indicated that there was no significant difference on the mean score for job engagement and organisational commitment.

#### **4.4 Inter-correlations between Measures**

The relationship between the measures was investigated using Pearson product-moment correlation coefficient. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity and homoscedasticity. The product-moment coefficient of correlation was used to calculate the relationship between sets of ordered pairs in order to

obtain more precise approximations of the direction and degree of relationship. In terms of statistical significance, it was decided to set the value at a 95% confidence interval level at  $p = .05$ . The product-moment coefficient of correlation was used to calculate the relationship between the following variables: Job Engagement, Organisational Commitment, Workload, Control, Reward, Community, Fairness, Value, Job demands, Organisational Support, Growth Opportunity, Job security and Advancement. Looking at Table 2, the researcher will only report on those finding which are most relevant to the study's research questions and correlations which show a medium to strong relationship. Results indicate the following significant relationships:

**Job engagement shows positive relationship with organisational commitment and values.**

There was a medium, positive correlation between job engagement and organisational commitment, ( $r = .426$ ),  $p < .0005$ ), indicating that respondents who showed high levels of job engagement were committed to their organisation. The table also shows a medium, positive correlation between job engagement and values ( $r = .328$ ),  $p < .000.5$ , with high levels of job engagement associated with high levels of values, in other words the more in line the values of the organisation are to those of the respondent the more engaged the individual will be.

**Organisational Commitment shows positive relationship with Job Engagement, Values, Growth opportunity, Job security and Advancement.**

As mentioned above, there was a medium, positive correlation between job engagement and organisational commitment, ( $r = .426$ ),  $p < .0005$ , with high levels of job engagement associated with high levels of organisational commitment. The table also shows a medium, positive correlation between organisational commitment and values ( $r = .455$ ),  $p < .000.5$ ., with high levels of values associated with high levels of organisational commitment, in other words the more in line the values of the organisation are to those of the respondent the more committed the individual will be to the organisation. Results also indicate that there is a positive significant relationship between organisational commitment and three of the components of job resources (Growth opportunity, Job security and advancement). There was a medium, positive correlation between organisational commitment and job resources, namely; growth opportunity ( $r = .315$ ,  $p < .0005$ ), Job security ( $r = .333$ ,  $p < .0005$ ) and advancement ( $r = .427$ ,  $p < .0005$ ). Results therefore indicate that high levels of Growth opportunity, Job security and

advancement is associated with higher levels organisational commitment. Advancement showed the strongest relationship of the three components, therefore the higher the chance of a responded advancing within the organisation the higher the level of commitment to the organisation.

### **Inter-correlation between the six areas of work life and job resources.**

There was a medium, positive correlation between control and job resources namely; organisational support ( $r = .486, p < .0005$ ), Growth opportunity ( $r = .399, p > .0005$ ) and advancement ( $r = .378, p < .0005$ ). Advancement showed the strongest relationship of the three components. A strong positive relationships was found between fairness and advancement ( $r = .509, p < .0005$ ), with high fairness associated with high levels of advancement, in other words advancement is strongly associate with how fair the responded perceives the organisation to be. There was a medium, positive relationship between fairness and growth opportunity ( $r = .414, p < .0005$ ). Significant, medium positive correlations were found between values and job resources, namely; Organisational support ( $r = .305, p < .0005$ ), Growth opportunity ( $r = .358, p < .0005$ ) and Job security ( $r = .317, p < .0005$ ).

The findings of the Pearson product-momentum correlation coefficients that have been reported above thus support some of the research questions and objectives of the present study. Job resources (indicated by growth opportunity, job security and advancement) positively relate to organisational commitment. The six areas of worklife (indicated by values) positively related to work engagement and organisational commitment and finally job engagement is positively related to organisational commitment. The results are shown in 4.

Table 2

*Intercorrelations between Measures*

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Job Engagement	1	.426**	.241*	.071	-.130	.167	.087	.328**	.143	.126	.295**	.240*	.127
2. Organisational Commitment	.426**	1	.035	.178	-.101	.271**	.296**	.455**	-.091	.198	.315**	.333**	.427**
3. Workload	.241*	.035	1	-.276**	.232*	-.353**	-.140	.056	.449**	-.109	-.215*	-.053	-.148
4. Control	.071	.178	-.276**	1	-.436**	.498**	.283**	.387**	-.111	.486**	.399**	.063	.378**
5. Reward	-.130	-.101	.232*	-.436**	1	-.322**	-.088	-.372**	.061	-.165	-.239*	-.056	-.077
6. Community	.167	.271**	-.353**	.498**	-.322**	1	.408**	.412**	-.166	.344**	.483**	.266**	.319**
7. Fairness	.087	.296**	-.140	.283**	-.088	.408**	1	.292**	-.206*	.239*	.414**	.166	.509**
8. Value	.328**	.455**	.056	.387**	-.372**	.412**	.292**	1	.116	.305**	.358**	.317**	.241*
9. Job demands	.143	-.091	.449**	-.111	.061	-.166	-.206*	.116	1	.022	-.112	-.010	-.122
10. Organisational support	.126	.198	-.109	.486**	-.165	.344**	.239*	.305**	.022	1	.645**	.272**	.491**
11. Growth Opportunity	.295**	.315**	-.215*	.399**	-.239*	.483**	.414**	.358**	-.112	.645**	1	.485**	.490**
12. Job Insecurity	.240*	.333**	-.053	.063	-.056	.266**	.166	.317**	-.010	.272**	.485**	1	.336**
13. Advancement	.127	.427**	-.148	.378**	-.077	.319**	.509**	.241*	-.122	.491**	.490**	.336**	1

\*\* Correlation is significant at the 0.01 level (2-tailed).

\*Correlation is significant at the 0.05 level (2-tailed).

#### 4.5 Predictors of Organisational Commitment

Hierarchical multiple regression (sequential regression) models were fitted to determine the best predictors of organisational commitment. In the Model Summary box there are three models listed. Model 1, refers to the first block of variables that were entered (Advancement, Job security, Organisational Support, Growth Opportunity), Model 2 includes Advancement, Job security, Organisational Support, Growth Opportunity, Value, Community, Fairness, Control, whilst Model 3 includes; Advancement Job security, Organisational Support, Growth Opportunity, Value, Community, Fairness, Control and Job Engagement.

Firstly, the researcher evaluated the model by checking the R Square values in the first Model summary box. After the variables in Block 1 were entered, the overall model explained 25.7 per cent of the variance. After Block 2 variables (Value, Community, Fairness, and Control) were included, the model explained 39.6 per cent of the variance. Finally, after block 3 variable (Job engagement) was entered into the model and explained 43 per cent of the variance. Next, in order to find out how much of this overall variance is explained by the variables of interest (Value, Community, Fairness, Control and Job Engagement) after the effects of job resources (Advancement, Job security, Organisational Support, Growth Opportunity) are removed, the R Square change value was examined.

In the output presented in the tables below, results indicate that the R square change value is .139. This means that Value, Community, Fairness and Control explain an additional 13.9 per cent of the variance in organisational commitment, even when the effects of job resources (Advancement, Job security, Organisational Support, and Growth Opportunity) are statistically controlled for. This is a statistically significant contribution, as indicated by the Sig. F change value (.003). Model 3 indicates the R square change value of .034. This means that job engagement explain an additional 3.4 per cent of the variance in organisational commitment, even when the effects of Advancement, Job security, Organisational Support, Growth Opportunity, Value, Community, Fairness, and Control are statistically controlled for. This is a statistically significant contribution, as indicated by the Sig. F change value (.037). Table 5 indicates that the model as a whole (which includes all three blocks of variables) is significant ( $F(9, 79) = 6.360, p < .0005$ ).

In order to find out how well each of the variables contributed to the final equation, the next step was to evaluate each of the independent variables. Table 6, summarises the results, with all the variables entered into the equation. Scanning the Sig. column, there was only three variables that made a unique statistically significant contribution (less than .05). In order of importance (according to their beta values), they are: Value (beta = .344), Advancement (beta = .291) and Job Engagement (beta = .195). None of the other job resource or areas of worklife measures made a unique contribution in predicting organisational commitment. Results are shown in tables 3 and 4 below.

Table 3

*Model Summary*

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate	Change Statistics					
					R Change	Square F Change	df1	df2	Sig. F Change	
1	.507 <sup>a</sup>	.257	.221	7.753	.257	7.017	4	81	.000	
2	.629 <sup>b</sup>	.396	.333	7.172	.139	4.415	4	77	.003	
3	.655 <sup>c</sup>	.430	.362	7.015	.034	4.490	1	76	.037	

a. Predictors: (Constant), Advancement, JobInsecurity, OrgSupport, GrowthOppor

b. Predictors: (Constant), Advancement, JobInsecurity, OrgSupport, GrowthOppor, Value, Community, Fairness, Control

c. Predictors: (Constant), Advancement, JobInsecurity, OrgSupport, GrowthOppor, Value, Community, Fairness, Control, JobEngagement

d. Dependent Variable: OrganisationalCommitment

Table 4

*Coefficients – Predictors of organisational commitment*

Model	Standardized Coefficients Beta	T	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
				Lower Bound	Upper Bound	Zero-order	Partial	Part	Toleran	VIF
(Constant)		2.877	.005	6.002	33.019					
OrgSupport	-.119	-.950	.345	-.795	.281	.233	-.108	-.082	.478	2.093
GrowthOppor	.045	.330	.742	-.193	.270	.369	.038	.029	.398	2.511
JobInsecurity	.129	1.212	.229	-.274	1.127	.378	.138	.105	.661	1.513
Advancement	.291	2.486	.015	.123	1.116	.427	.274	.215	.549	1.820
Community	.077	.688	.494	-.423	.869	.340	.079	.060	.591	1.691
Fairness	.036	.327	.745	-.467	.650	.327	.037	.028	.621	1.609
Value	.344	3.264	.002	.520	2.148	.507	.351	.283	.678	1.476
Control	-.059	-.515	.608	-.919	.541	.212	-.059	-.045	.565	1.770
JobEngagement	.195	2.119	.037	.009	.305	.348	.236	.184	.889	1.125

#### 4.6 The Moderating Role of Work Engagement

The final step in the data analysis was a series of multiple regression analyses, this was done in order to determine to what extent work engagement mediates the relationship between job resources, the six areas of worklife and organisational commitment. The results are provided below.

##### Moderation tests:

##### Model = 1

Y = Organisational Commitment

X = Workload

M = Job Engagement

Sample size: 84

Table 5

*Model Summary for Moderation Test- Outcome 1: Organisational Commitment*

	R	R-sq	F	df1	df2	p
	.4678	.2189	7.3703	3.0000	80.0000	.0002
	coeff	se	t	p	LLCI	ULCI
Constant	57.6403	.8496	67.8454	.0000	55.9496	59.3310
JobEngag	.3954	.0867	4.5605	.0000	.2228	.5679
Workload	-.1938	.2760	-.7021	.4847	-.7431	.3555
int_1	-.0484	.0209	-2.3192	.0229	-.0900	-.0069

Interactions: int\_1 Workload X Job Engagement

Outcome 1 indicates a significant effect ( $p=.0229$ ) of the interaction (Workload X Job Engagement). Meaning that Job engagement significantly moderates the effect Workload on Organisational commitment

Table 6

*Model Summary for Moderation Test- Outcome 2: Conditional effect of X on Y at values of the moderator(s)*

Job Eng	Effect	se	t	p	LLCI	LCI
-9.3978	.2615	.3335	.7841	.4353	.4022	.9252
.0000	-.1938	.2760	-.7021	.4847	-.7431	.3555
9.3978	-.6491	.3439	-1.8876	.0627	-1.3334	.0352

According to outcome 2, the effect of Workload on Organisational commitment is positive (.2615) and not significant ( $p = .4353$ ) at a low level of job engagement (-9.3978). At an average level (.0000) of Job engagement, the effect of Workload on Organisational commitment become negative (-.1938) though still not significant ( $p = .4847$ ). At a high level (9.3978) of Job engagement, the effect of Workload on Organisational commitment is more negative (-.6491) with an improved level of significance ( $p = .0627$ ). In conclusion, Job engagement moderates the effect of workload on Organisational commitment; the more Job engagement increases the more negative is the effect of Workload on Organisational commitment.

### Model = 2

Y = Organisational Commitment

X = Value

M = Job Engagement

Sample size: 83

### Outcome 3: Organisational commitment

Table 7

*Model Summary for Moderation Test- Outcome 3: Organisational Commitment*

	R	R-sq	F	df1	df2	p
	.5453	.2973	11.9826	3.0000	79.0000	.0000
	coeff	se	t	p	LLCI	ULCI
Constant	57.0749	.8784	64.9771	.0000	55.3265	58.8233
JobEngag	.2730	.0977	2.7954	.0065	.0786	.4674
Value	1.3838	.3813	3.6287	.0005	.6247	2.1428
int_1	.0199	.0321	.6206	.5366	-.0440	.0839

Interactions: int\_1 Value X JobEngag

Outcome 3 indicates that there is no significant effect ( $p=.5366$ ) of the interaction (Value X Job Engagement). Meaning, Job engagement does not moderate the effect Value on Organisational commitment.

#### 4.7 The Mediating Role of Work Engagement

Next we will examine the third and final objective of the present study is to determine the mediating role of work engagement in the relationship between various areas of worklife, job demands and job resources, and organisational commitment of employees working in the mining industry. In other words, the present study will determine whether engagement mediates the relationship between contextual variables such as six areas of worklife, job demands and job resources and organisational commitment.

#### Mediation tests:

##### Model = 1

Y = Organisational Commitment

X = Workload

M = Job Engagement

Sample size: 84

Table 8

*Model Summary for Mediation Test - Outcome 1: Job Engagement*

	R	R-sq	F	df1	df2	p
	.2747	.0755	6.6926	1.0000	82.0000	.0114

	coeff	se	t	p	LLCI	ULCI
Constant	67.8919	3.1342	21.6616	.0000	61.6570	74.1269
Workload	.9309	.3599	2.5870	.0114	.2151	1.6468

Table 9

*Model Summary for Mediation Test - Outcome 2: Organisational commitment*

	R	R-sq	F	df1	df2	p
	.4335	.1880	9.3739	2.0000	81.0000	.0002

	coeff	se	t	p	LLCI	ULCI
Constant	28.3865	7.0172	4.0453	.0001	14.4244	42.3486
JobEngag	.4113	.0954	4.3127	.0000	.2215	.6010
Workload	-.2631	.3232	-.8140	.4180	-.9061	.3800



### Outcome 3: Organisational commitment

Table 10

Model Summary for Mediation Test - Outcome 3: Organisational commitment

	R	R-sq	F	df1	df2	p
		.0386	.0015	.1223	1.0000	82.0000
						.7274
	coeff	se	t	p	LLCI	ULCI
Constant	56.3080	2.9828	18.8774	.0000	50.3741	62.2418
Workload	.1198	.3425	.3498	.7274	-.5615	.8011

Although outcome 1 indicates that Workload significantly predicts Job engagement ( $p=.01114$ ), outcome 3 indicates that Workload does not predict Organisational commitment ( $p=.7274$ ). Both conditions must be fulfilled in order to proceed with the mediation analysis; having said that, Job engagement does not mediate the effect of Workload on Organisational commitment.

#### Model = 2

Y = Organisational Commitment

X = Value

M = Job Engagement

Sample size: 83

### Outcome 1: Job Engagement

Table 11

Model Summary for Mediation Test Model 2 - Outcome 1: Job Engagement

	R	R-sq	F	df1	df2	p
	.3313	.1097	9.9835	1.0000	81.0000	.0022
	coeff	se	t	p	LLCI	ULCI
constant	60.4855	4.8735	12.4111	.0000	50.7887	70.1822
Value	1.3606	.4306	3.1597	.0022	.5038	2.2173

### Outcome 2: Organisational Commitment

Table 12

*Model Summary for Mediation Test Model 2 - Outcome 2: Organisational Commitment*

	R	R-sq	F	df1	df2	p
		.5432	.2951	16.7427	2.0000	80.0000
	coeff	se	t	p	LLCI	ULCI
constant	21.1617	6.7828	3.1199	.0025	7.6633	34.6600
JobEngag	.2808	.0908	3.0928	.0027	.1001	.4614
Value	1.3387	.3729	3.5902	.0006	.5966	2.0807

### Outcome 3: Organisational Commitment

Table 13

*Model Summary for Mediation Test Model 2 - Outcome 3: Organisational Commitment*

	R	R-sq	F	df1	df2	p
		.4591	.2108	21.6326	1.0000	81.0000
	coeff	se	t	p	LLCI	ULCI
constant	38.1442	4.1871	9.1099	.0000	29.8131	46.4753
Value	1.7207	.3700	4.6511	.0000	.9846	2.4568

Outcome 1 indicates that Value significantly predicts Job engagement ( $p=.0022$ ), and outcome 3 indicates that value predicts Organisational commitment ( $p=.0000$ ). Outcome 2 indicates that the effect of Value decreases (from 1.7207 to 1.3387) as well as the level of significance (from .0000 to .0006) when both predictors (Value and Job engagement) are introduced in the model. The conclusion is that Job engagement mediates the effect of Value on Organisational commitment.

#### 4.8 Conclusion

The present chapter reported on the findings of the statistical data analysis of the present study. Independent sample t-test, Pearson product-moment correlation coefficients, hierarchical multiple regression, and moderation and mediation tests were used to analyse the data.

Pearson product-moment correlation coefficient confirmed that Job resources (Growth opportunity, Job security and advancement) are positively related to organisational

commitment. It also showed that the six areas of worklife (Values) positively related to work engagement and organisational commitment. Hierarchical multiple regression indicated that, from all the measures under investigation; Value, Advancement, and Job Engagement serve as the most powerful predictors of organisational commitment. Finally moderation and mediation test revealed that Job engagement moderates the effect of workload on organisational commitment and job engagement mediates the effect of value on organisational commitment.

## CHAPTER FIVE

### Discussion

#### 5.1 Introduction

In Chapter 4, the results obtained through statistical analyses were reported. Following this, the present chapter will discuss and further explore these findings. The findings reported on in the previous chapter will be discussed and incorporated with the existing body of knowledge surrounding organisational commitment, work engagement, the six areas of worklife, job resources and job demands, as discussed in Chapter 2. The present chapter will further aim to integrate and compare the results obtained in the present study with scientific research findings presented in the literature as well as with the theoretical framework underpinning the study; the JD-R/Dual Processes Model.

The objective of the present study is three-fold. The first objective is aimed at determining the relationship between organisational commitment, work engagement, six areas of worklife, job demands and job resources of employees working in the mining industry. Secondly, the present study attempts to determine the predictive value that the measures hold for organisational commitment. The third and final objective is to determine the mediating and/or moderating role of work engagement in the relationship between various areas of worklife, job demands and job resources, and organisational commitment of employees working in the mining industry. In other words, the present study will determine whether engagement as key mediating variable, explains how contextual variables such as six areas of worklife, job demands and job resources influence important organisational outcome variables, such organisational commitment.

No organisation can compete or remain sustainable in today's rapidly-changing business world without an engaged and committed workforce. This is especially true in the South African context, and more so in the South African mining industry. It has become increasingly evident that employees working within the mining industry are faced with increased job demands in spite of having few job resources (Rathbone, 2006). The mining industry in South Africa has established itself as one of the world's foremost suppliers of high quality mineral products, as a result the mining industry plays an authoritative role in directing the movement of our

economy. The mining industry also serves as the largest employer in the country. As mentioned previously, Van Schalkwyk et al. (2010) stated that the South African mining industry is continuously faced with vast challenges, such as increased demand for productivity, labour unrest, skills shortages, loss of scarce technical skills due to emigration and high turnover rates. In keeping with the modern organisation's effort to enhance the various dimensions of employee well-being to thrive in a continuously changing environment, it has become fundamental that South African mining companies create and retain the services of an engaged workforce. With reviewing the literature it became apparent that previous scientific research addressing the relationships between organisational commitment, work engagement, job demands, job resources and the six areas of worklife specifically within the South African mining industry have been minimal. It is clear that mine worker dissatisfaction in South Africa is rapidly increasing and becoming more prominent. It is therefore that the underlying objective of the present study is to address the gap in knowledge on how these different constructs impact upon employees in the mining industry' levels of engagement to their work and commitment to their organisations.

## **5.2 Discussion of Results**

### **5.2.1 Demographics**

The researcher investigated the demographics of the research sample in terms of age, gender, level of education, years with organisation, role within organisation and division.

#### **1. Predominantly Males**

Findings from the biographical data sheet found that, the majority of the sample comprised of males (81%), this is acceptable due to the fact that there are more males than females employed within the mining industry in South Africa. The results show that the mining industry is male dominated despite efforts to improve the gender imbalances.

#### **2. Age**

Most of the participants in the study (40.6%) belonged to the age category of 25-35 years. This age group represents males in their physical prime, this can therefore be linked to the higher percentage of this age group working in an industry which requires challenging physical work.

### 3. Qualifications

Pertaining to the highest qualifications attained by the participants, the majority (37.8%) had attained a matric certificate as their highest qualification to date. Results indicate that over 60% of the organisation is skilled and has either a diploma, degree or post graduate degree.

### 4. Tenure

Most of the participants in this study had been with the organisation for 6-10 year (35.2%). The fact that the majority of participants had worked at the mining company for 6-10 years could be explained by the fact that the majority of the participants too, were young (25-35 years) and thus it could be deduced that they had not been working at the organisation for a vast amount of time.

### 5. Divisions

The next demographic characteristic examined is divisions within the organisation, majority of the sample fell in the division of mining (35.6) this can be explained by the fact that mining is the biggest of all the divisions and will therefore have most people.

### 6. Roles

The final demographic characteristic examined is employee roles within the organisation, results indicate that majority of the population held the job role of superintendents and specialist both with a percentage of 33.

## **5.2.2 Psychometric Characteristics of Scales**

After establishing the reliability of the Job Engagement Scale (JSE), the Organisational Commitment Questionnaire (OCQ), The Areas of Worklife Scale (AWS), and the Job Demands-Resources Scale (JDRS), an independent-samples t-test was conducted to investigate the relationship between employee roles and divisions in relation to the measures used.

### ***Group differences regarding JSE, OCQ, AWS and JDRS.***

1. The t-tests revealed significant relationships between various areas of worklife, job resources and roles and divisions within the organisation. However, no significant relationships were found between job engagement and roles and divisions. Results also indicate no significant relationship between organisational commitment and roles and division. Job demands also showed no significant relationship to either roles or

division. All levels of employees across the organisation showed similar levels of job engagement, commitment and job demands. Little research has been done to establish a relationship between employee roles and divisions in the mining industry and the measures under investigation.

2. When examining roles, the t-tests revealed significant relationships between three of the measures under investigation; namely; workload, community and value. The supervisor's and others group had a higher mean score on community and value, whereas Superintendents and Specialists scored higher on workload. Results show a significant relationship between specialists and superintendents and workload. Individuals in specialist and superintendent roles scored higher on workload than any other of the measures under investigation. Increased workload has a consistent positive relationship with burnout; conversely it has a consistent negative relationship with engagement (Leiter & Maslach, 1999). A frequently discussed source of burnout is work overload (Leiter & Maslach, 1999). As previously mentioned the six areas have a direct impact on how employees perceive job demands and job resources (Leiter & Maslach, 1999). The first of the six areas, overload occurs when job demands exceeds human limits otherwise known as our job resources. Therefore, an increase in workload, increases job demands, which in turn leads to a decrease in engagement (Maslach et al., 2001). According to Leiter and Maslach (1999); "Both qualitative and quantitative work overload contribute to exhaustion by depleting the capacity of people to meet the demands of the job" (p. 18). It is important to note that workload does not necessarily lead to burnout, the critical point, however transpires when employees are incapable of recovering from work demands. To elaborate on this, acute fatigue can result from a particular demanding event at work, for example meeting strict deadlines or trying to resolve a crisis at work. These strenuous job demands however do not have to lead to burnout; the effect of the overload on the employee is decreased when they are granted the opportunity to recuperate during restful periods at work or at home. Work overload does not always have a negative impact on employees, in contrast, a sustainable workload often provides employees with the opportunity to use and refine the skills they already possess, and it also aids them in becoming more effective in new areas. In other words, workload can have a positive relationship with job resources (Landsbergis, 1988), which in turn will have an impact on engagement.

3. The fact that supervisors scored high on community provided insight into how individuals in a supervisory role perceive the overall quality of social interaction at work. According to Leiter et al. (2002) this includes; issues of conflict, mutual support, closeness, and the capacity to work as a team. Research concerning the topic of burnout, has traditionally focused predominantly on social support received from supervisors, coworkers, and family members (Leiter & Maslach; 1999). “A sense of community has been found to buffer the impact of feelings of inequity at work” (Truchot & Deregard, 2001; as cited in Maslach et al., 2005). Social support, despite its form has been reported to be closely linked to a higher degree of engagement (Leiter & Maslach, 1999). According to Maslach and Leiter (2008); “Research on community orientation has provided a distinct but consistent perspective, demonstrating that burnout is less likely to occur within a positive and supportive workplace environment” (p.502). When an organisation provides an employee with a supportive climate that fosters the individual’s perception of the organisation being supportive, involving, and challenging their psychological needs are accommodated. This in turn results in the employee investing more time and energy in their work and by being psychologically involved and committed to their organisation.
  
4. Results also show a significant relationship between supervisors and value, they perceive value to be more important than their specialist and superintendent co-employees. This information gives us better insights into the importance that values holds for supervisors in the mining industry. According to Leiter and Maslach (2005); values refers to “the cognitive– emotional power of job goals and expectations”. They further state that; values are the ideals and motivations that originally attracted people to their jobs, and thus they are the motivating connection between the worker and the workplace, which goes beyond the utilitarian exchange of time for money or advancement (Leiter & Maslach; 2005).

Next the researcher examined divisions within the organisation and the relationship with the measures under investigation. Divisions was divided into two groups, including – corporate as one group versus Mining and processing as another group. The t-tests revealed significant relationships between division and three of the measures under investigation, namely; workload, growth opportunity and Job security. Individuals working in mining and processing

division scored higher on growth opportunities and job security than any of the other measures under investigation.

The Pearson product-moment correlation coefficient showed that there is a positive significant relationship between job engagement and organisational commitment and as well as job engagement and values. Organisational commitment also significantly correlates with values. Results also indicate that there is a positive significant relationship between organisational commitment and job resources, namely; growth opportunity, job security and advancement. Advancement showed the strongest relationship of the three components, therefore the higher the chance of a respondent progressing within the organisation the higher the level of commitment to the organisation.

Results therefore indicate that high levels of job resources, namely growth opportunity, job security and advancement is associated with high levels organisational commitment. These findings are supported by current scientific research findings. Salanova and Schaufeli (2008) conducted an international research study in which it was discovered that components of growth opportunity, namely, feedback and work variety are positively related to both the vigour and dedication components of organisational commitment (Salanova & Schaufeli, 2008). The findings of the Pearson product-momentum correlation coefficients that have been reported above thus support some of the research questions and objectives of the present study. Job resources (indicated by growth opportunity, job security and advancement) positively relate to organisational commitment. The six areas of worklife (indicated by values) positively related to work engagement and organisational commitment and finally job engagement is positively related to organisational commitment.

The results of the present study can be aligned and supported by the motivational process posited by the JD-R/Dual Processes Model which serves as the theoretical framework of the present study. The motivational process has found job resources to be the strongest predictor of work engagement, according to Schaufeli and Bakker (2004), job resources play either an intrinsic motivational role because they foster employee's growth, learning and development, or they may play an extrinsic motivational role because they are instrumental in achieving work goals. In either case, the outcome is positive and engagement- a fulfilling, positive work-related state of mind- is likely to occur (p. 298). Essential to the present study are the findings of the empirical research conducted by Hakenen et al. (2008). The results of this study supports the motivational process, as it provided evidence that job resources directly influenced work

engagement, which in turn, predicted organisational commitment. This is an important finding, with regard to achieving the objectives of the present study as the findings of the study supports the proposition that work engagement serves as a mediator in the relationship between job resources and organisational commitment (Hakanen et al., 2008). The JD-R/Dual Processes Model therefore seems to support the findings of the present study, as results suggest that employees who receive high levels of support from their organisation and are provided with more growth opportunities will result in employees experiencing the positive work-related state of engagement, which in turn will result in the employee being more engaged and committed to their organisation. Furthermore, Schaufeli and Bakker (2004) proposes that not only do job resources predict work engagement, work engagement also plays a mediating role in the relationship between job resources and positive organisational outcomes such as organisational commitment. Empirical findings from recent literature support the notion that there exists a positive relationship between job resources and engagement. Within the present study, job resources include the following components: job security, overload, support organisational support, growth opportunities and advancement. The finding also support that job resources and its dimensions may serve as predictors of engagement. In terms of the motivational process, a great deal of research has showed that work engagement also plays a mediating role in the relationship between job resources and positive organisational outcomes such as organisational commitment.

Results obtained from the hierarchical multiple regression indicate that there are only three variables that make a unique statistically significant contribution and serve as predictors of organisational commitment. In order of importance (according to their beta values), they are: values, advancement, and job engagement. None of the other job resource or areas of worklife variables made a unique contribution in predicting organisational commitment.

When examining the results obtained from the moderation tests, the following could be confirmed; Job engagement moderates the effect of workload on organisational commitment; the more job engagement increases the more negative is the effect of workload on organisational commitment. Results from the mediation test suggest that that job engagement mediates the effect of value on organisational commitment.

The findings presented in the present study coincide with the literature. Present research on the topic has shown that a conflict in values is related to all three dimensions of burnout (Leiter &

Harvie, 1997, as cited in Leiter & Maslach, 2005). According Leiter and Maslach (2005); “the structural model of burnout suggests that values may play a key role in predicting levels of burnout and engagement” (Leiter & Maslach, 2005). As with the other areas of worklife there is also a positive side to values, as stated by Leiter et al. (2007); “consistent organisational and personal values on knowledge sharing are associated with greater professional efficacy” (p. 305), in other words a congruency in values will lead desired job resources which will in turn lead to higher levels of work engagement and organisational commitment. Therefore value not only serves as a predictor of organisational commitment but the mediation test indicates that job engagement mediates the relationship between value and organisational commitment. Results show that advancement served as the second strongest predictor of organisational commitment. Advancement means moving forward within your work and includes remuneration, training and career opportunities. Therefore individual who feel that their organisation provides them with sufficient opportunities to move forward or to be promoted will be committed to their organisation.

Results from the present study found that job engagement not only serves as predictor of organisational commitment but that it also moderates the effect of workload on organisational commitment as well as mediates the relationship between value and organisational commitment. There is a great deal research literature and empirical studies that have explored the relationship between work engagement and organisational commitment. Current literature frequently incorporates the construct of organisational commitment as a facet of work engagement; one can therefore say that these two constructs are positively correlated (Chalofsky & Krishna, 2009; Rothmann & Jordaan, 2006, as cited in Fields, 2011). In other words, employees that are highly engaged in their work also tend to demonstrate higher levels of commitment to their organisation. Further and most importantly, Schaufeli et al. (2001) stated that modern literature proposes that not only is work engagement positively related to organisational commitment, but is also an antecedent of organisational commitment. These finding are essential to the present study.

### 5.3 Conclusion

The current chapter provided a discussion of the results that were reported in the previous chapter. The results of each analysis were discussed in terms of the research questions guiding the present study. Each of the findings of the present study was discussed in terms of previous research findings as well as the similarities and differences with these previous studies. Further, in discussing of each of the findings of the study, there relation to the theoretical framework guiding the present study, namely the JD-R/Dual Processes Model was highlighted.

First an independent-samples t-test was conducted to investigate the relationship between employee roles and divisions in relation to the measures used. The t-tests revealed significant relationships between various areas of worklife, job resources and roles and divisions within the organisation. However, no significant relationships were found between job engagement and roles and divisions. Results also indicate no significant relationship between organisational commitment and roles and division. Job demands also showed no significant relationship to either roles or division. Little research has been done to establish a relationship between employee roles and divisions in the mining industry and the measures under investigation. When examining roles, the t-tests revealed significant relationships between three of the measures under investigation; namely; workload, community and value. The supervisor's and others group had a higher mean score on community and value, whereas Superintendents and Specialists scored higher on workload. Next the researcher examined divisions within the organisation and the relationship with the measures under investigation. Divisions was divided into two groups, namely, corporate as one group versus Mining and processing as another group. The t-tests revealed significant relationships between division and three of the measures under investigation, namely; workload, growth opportunity and job security. Individuals working in mining and proccession divisions scored higher on growth opportunities and job security than any of the other measures under investigation.

The research questions, enquiring whether job resources are positively related to work engagement and organisational commitment has substantial support within existing literature and thus various studies have found the same relationship between similar job resources. Results indicate that there is a positive significant relationship between organisational commitment and job resources, namely; growth opportunity, job security and advancement. Advancement showed the strongest relationship of the three components, therefore the higher

the chance of a respondent progressing within the organisation the higher the level of commitment to the organisation. Results therefore indicate that high levels of growth opportunity, job security and advancement is associated with high levels organisational commitment.

Next the present study answered to what extent the six areas of worklife (indicated by values) positively relates to work engagement as well as organisational commitment. Results of the Pearson product-moment correlation coefficient confirm that that there is a positive significant relationship between job engagement and values. Organisational commitment also significantly correlates with values. In other words the more in line the values of the organisation are to those of the respondent the more committed the individual will be to the organisation.

Following this the present study attempted to answer which of the measures under investigation serve as the most powerful predictor of organisational commitment. Result obtained from the hierarchical multiple regression indicate that there are three variables that make a unique statistically significant contribution and serve as predictors of organisational commitment. In order of importance, they are: Value, Advancement, and Job Engagement. None of the other job resource or areas of worklife variables made a unique contribution in predicting organisational commitment.

The final two research questions that guided the present study aimed to determine to what extent work engagement mediate the relationship between job resources and organisational commitment and also to what extent work engagement mediate the relationship between the six areas of worklife and organisational commitment. When examining the results obtained from the moderation tests following could be confirmed; job engagement moderates the effect of the six areas of worklife (indicated by workload) on organisational commitment; the more the job engagement increases the more negative is the effect of workload on organisational commitment. Results from the mediation test suggest that that job engagement mediates the effect of six areas of worklife (indicated by value) on organisational commitment. Results from the present study therefore found that job engagement moderates the effect of workload on organisational commitment as well as mediates the relationship between value and organisational commitment.

## CHAPTER 6

### Conclusions, Limitations and Recommendations

#### 6.1 Introduction

The present chapter provides a comprehensive discussion of the conclusions drawn in respect of the research objectives and questions which served as a guide for the present study. Chapter 6, will therefore conclude on the literature findings, discussed in chapter two, as well as the empirical findings as discussed in chapter 4 and elaborated on in chapter 5. Following this, the present study explores the limitations of the study and possible recommendation for the organisation and future research are made.

#### 6.2 Conclusions

The current section will draw conclusions in terms of the specific literature objectives and empirical findings obtained within the present study.

##### 6.2.1 Conclusions In Terms of the Specific Literature Objectives of the Study

The current section will draw conclusions in terms of the literature finding with the aim of determining how the construct under investigation were conceptualised within the research literature. The constructs included in the present study are: the six areas of worklife, job resources, job demands, work engagement and organisational commitment.

##### *Work engagement.*

There is a great deal research literature and empirical studies that have explored the relationship between organisational commitment and job engagement. Modern literature commonly identifies the construct of organisational commitment as a facet of work engagement therefore the two concepts are viewed as being positively correlated (Baker, 2011). In other words, employees who demonstrate a high level of engagement also tend to demonstrate higher levels of commitment their organisation. According to Schaufeli et al. (as cited in Baker 2011), “work engagement is not only positively related to organisational commitment, but is also an antecedent of organisational commitment” (p.5).

Firstly, Kahn (1990, as cited in Saks 2008) established that employees showed higher levels of engagement in conditions which provided more “psychological meaningfulness and psychological safety and when they were more psychologically available” (Saks, 2008). May, Gilson, and Harter (2004 as cited in Saks, 2008) investigated Kahn’s three psychological conditions of engagement (i.e., cognitive, emotional, and physical) (Saks 2008). The study showed that meaningfulness, safety, and availability were significantly related to engagement (Saks, 2008).

Maslach, Schaufelli, and Leiter (2001, as cited in Saks, 2008) coined the notion of the six areas of worklife. They demonstrated that the six areas of worklife that lead to burnout will also result in engagement. The six areas of worklife include workload, control, rewards and recognition, community and social support, perceived fairness, and value (Saks 2008). Fundamental to the present study is their expectation that engagement mediates the link between these six work–life factors and various work outcomes such as organisational commitment (Saks, 2008).

Furthermore, according to the JD-R model, which served as the theoretical framework for the present study; work environment can be divided into demands and resources. Job demands require physical and/or psychological effort from an employee and are related to physiological and/or psychological costs (e.g., work overload, job security, role ambiguity, role conflict) (Saks, 2008). Job resources on the other hand, help achieve work goals, reduce job demands, and stimulate personal growth, learning, and development (job control, performance feedback, and social support). When demands are low and individuals have the necessary resources to perform their roles and cope with demands, they will be more engaged.

Through revision of recent literature surrounding work engagement, it is evident that there exists numerous theoretical models as well as a number of measures of engagement. The aim of the present study was to further develop, refine, and integrate these measures and perspectives.

### ***Organisational commitment.***

The fundamental basis common to all definitions of organisational commitment presented by the literature is the undeniable relationship between an individual employee and their

organisation. An individual will only show commitment towards their organisation if their goals and values are aligned to the organisation. Organisational commitment is defined by Porters, Steers, Mowday and Boulin (1974, as cited in Fields, 2011), as; “the willingness of employees to exert higher efforts on behalf of the organisation, a strong desire to stay in the organisation, and accept major goals and values of the organisation” (p.70).

### ***Six areas of worklife***

Patterson et al. (as cited in Bakker et al., 2011), emphasised the absence of supporting theory for research and practice on organisational climate that may lead to higher levels of employee engagement and commitment. Baker et al. (2011) contended the development of well-validated and theoretically grounded models and measures. The present study aimed to demonstrate the relationship between climate (representing the six areas of worklife), job resources, job demands, engagement and organisational commitment. The six areas of worklife has been identified as a core set of engagement-related climate dimensions analogous which will lead to organisational outcomes such as organisational commitment (Saks, 2008).

The researcher proposes that the six areas of worklife as presented by Leiter and Maslach (1999) potentially provides a functional way to conceptualise “climate for engagement”. The six areas which include workload, control, reward, community, fairness, and values. The literature shows that these dimensions are similar to dimensions of existing models and measures of organisational climate (Baker, 2010). According to Baker (2010) the six areas of worklife provide a cohesive set of dimensions that have been previously linked both theoretically and empirically to burnout and engagement. When the six areas of worklife are measured at the level of the organisation as climate constructs, they can be modelled in such a way as to influence employee perceptions of job demands and job resources (measured at the level of the individual). This in turn has previously shown to influence engagement (Bakker; Albrecht & Leiter, 2011), resulting in positive organisational outcomes such as organisational commitment (Schaufeli et al., 2001; as cited in Baker et al., 2011).

Drawing from the JD-R model (Bakker & Demerouti, 2007) and the Dual Process Model (Schaufeli & Bakker, 2004), the researcher argues that when an organisation provides an employee with a climate of engagement (represented by the six areas of work-life) that fosters the individual’s perception of the organisation being supportive, involving, and challenging their psychological needs are accommodated. This in turn results in the employee investing more time and energy in their work and by being psychologically involved and committed to

their organisation. In effect, the present study will investigate engagement as a key mediating variable. The researcher positions that engagement, as an explanatory mechanism demonstrates the manner in which contextual variables such as climate and job resources impact on significant organisational outcome variables such as engagement and organisational commitment.

### ***Job resources.***

The present study aimed to determine whether job resources serves as a predictor of organisational commitment and to what extent work engagement mediates the relationship between job resources and commitment. Job resources refers to the physical, social and organisational aspects of a job and serves three main purposes; firstly, job resources reduce job demands and the associated physiological and psychological costs that go with it. The second important function of job resources is the important role it plays in the achievement of work goals; and thirdly job resources are known to stimulates personal growth, learning and development (Bakker et al, 2011). Through carefully reviewing the literature surrounding job resources the researcher selected the following resources to form part of the present study, these include; job security, overload, organisational support, growth opportunities and advancement. These dimensions are drawn from the *Job Demands-Resource Scale* presented by Rothmann (2005). The JRDS has been used and found reliable within South African context, a primary reason for the selection of this tool for the present study.

The JD-R and Dual Process models, provides us with what is known as the *motivational process*, according to Schaufeli and Bakker (2004); within this process job resources have reported to be the strongest predictor of work engagement. Furthermore, recent empirical research finding demonstrate that; “job resources, such as organisational support and growth opportunities, were the greatest predictors of the vigour and dedication components of engagement” (Coetzer & Rothmann, 2009, p.18).

Furthermore, empirical research conducted by Hakanen et al. (2008) supports the motivational process, as it provided evidence that job resources directly influenced work engagement. These findings also support the proposition that work engagement serves as a mediator in the relationship between job resources and organisational commitment (Hakanen et al., 2008).

***Job demands.***

According to Leiter (1993), the relationship between job demands and job resources are based on the fact that an overly demanding work environment is typically accompanied by insufficient resources. In term of the *energetic process* of the JD-R Model/Dual process model, Bakker et al. (2011) states that job demands are positively related to burnout. Furthermore, current research on the topic suggests that job resources serves as a buffer in the relationship between job demands and burnout (Bakker et al., 2005; Verbruggen, 2009).

The section discussed above provided a conclusion on the specific research objective regarding the conceptualisations of climate for engagement, work engagement, organisational commitment, job resources and job demands; as well as the relationship between these constructs as found in the literature. Next the conclusions of the empirical findings in terms of the research questions which guided the present study will be discussed.

**6.2.2 Conclusions In Terms of the Specific Empirical Results of the Study.**

The current section will summarise the empirical findings in terms of the research questions which guided the present study.

***To what extent are job resources related to organisational commitment?***

Finding obtained by the present study indicated that there is a positive significant relationship between organisational commitment and job resources, namely; growth opportunity, job security and advancement. Advancement showed the strongest relationship of the three components, therefore the higher the chance of a respondent advancing within the organisation the higher the level of commitment to the organisation. Results therefore indicate that high levels of growth opportunity, job security and advancement is associated with high levels organisational commitment.

***To what extent are the six areas of worklife positively related to work engagement and organisational commitment?***

Results of the Pearson product-moment correlation coefficient confirm that there is a positive significant relationship between job engagement and the six areas of worklife (indicated by value). Organisational commitment also significantly correlates with the six areas of worklife (indicated by value). In other words the more in line the values of the organisation are to those of the respondent the more engaged and committed the individual will be to the organisation.

Findings also suggest a positive correlation between job engagement and organisational commitment, ( $r = .426$ ,  $p < .0005$ ), which was also supported by the literature. This indicates that respondents who showed high levels of job engagement were committed to their organisation.

***Which of the measures under investigation serve as the most powerful predictor of organisational commitment?***

Results obtained from the hierarchical multiple regression indicate that there are three variables that make a unique statistically significant contribution and serve as predictors of organisational commitment. In order of importance, they are: Value, Advancement, and Job Engagement. None of the other job resource or areas of worklife variables made a unique contribution in predicting organisational commitment.

***To what extent does work engagement mediate the relationship between the six areas of worklife and organisational commitment?***

When examining the results obtained from the moderation tests the following could be confirmed; Job engagement moderates the effect of the six areas of worklife (indicated by workload) on organisational commitment; the more the job engagement increases the more negative is the effect of workload on organisational commitment. Results from the mediation test suggest that that job engagement mediates the effect of six areas of worklife (indicated by value) on organisational commitment. Results from the present study therefore found that job engagement moderates the effect of workload on Organisational commitment as well as mediates the relationship between Value and Organisational commitment.

### 6.3 Limitations of the Present Study

As in the case of all research studies, the present study is not without limitations. The major limitations of the study are due to the small sample size and the fact that only one mining company was used, results can therefore not be generalised to other mining companies. The current section will provide a discussion on the limitations of the present study.

- The first limitation of the study is due to the fact that a cross-sectional research design was used in the methodology of the present study. Since this specific research design was used, findings obtained failed to determine causality among variables. In order to overcome this limitation, attention must be given to the lack of longitudinal data. According to Bakker (2004); longitudinal data is required to match the dynamic characteristics of each of the variables under study in order to be able to study their direct and moderated effects.
- Diversity was the next limitation of the present study. Due to the fact that data was only gathered from one mining company, the diversity of the participants was limited. Furthermore, a comparison of data obtained from mining companies in different regions of South Africa could not be possible. If more mining companies were included in the study, the findings certainly would have impacted differently.
- The biggest limitation of the present study was the small sample size. The aim of the researcher was to obtain a sample of  $n=200$ . Due to organisational restructuring of the mining organisation at the time of data collection the achievement of the ideal sample size was compromised. This severely impacted the quality and strength of the findings obtained from data analysis. Another factor that influences the sample size was the fear of participants that the information collected from the questionnaires would be used against them by management. This was despite the researcher's efforts to stress complete anonymity of all participants and that results are completely confidential and participant's name will at no stage be revealed
- The next limitation was as a result of the self-reported questionnaires. Data collection was done through asking participants to complete four self-administered questionnaires as well as a biographical questionnaire. The limitation of the data collected is a result of participants answering in a way that they perceive to be more socially favourable or acceptable, instead of answering in a genuine manner. In addition to this, is the

possibility that; the magnitude of relationships may have been inflated due to the variance common in self-reported questionnaire methods (Rathbone, 2011).

- The final limitation is the small sample size. As a result of the small sample size, a more sophisticated statistical analysis such as statistical equation modelling (SEM) could not be employed in order to test a whole model of work engagement, organisational commitment, the six areas of worklife, job resources and job demands.

#### **6.4 Recommendations for the Organisation**

In keeping with the modern organisation's effort to enhance the various dimensions of employee well-being and in an attempt to thrive in a continuously changing environment, it has become fundamental that South African mining companies create and retain the services of an engaged workforce. It is the aim of the researcher that the findings from the study will provide insights into employees working in the mining industry's psychological wellbeing and that this insight may lead to higher levels of work engagement and commitment within the organisation. The results of the present study shall benefit the organisation in terms of developing effective interventions and change management programs. In this section the researcher offers recommendations concerning the organisation used in the present study.

The most important and useful finding in the present study is that value, advancement, and job engagement serve as the most powerful predictors of organisational commitment. From this insight the researcher is able to make recommendations that will be useful to the organisation. Another important finding for the organisation is the significant relationship found between supervisors and value, providing insights into the importance that values holds for supervisors in the organisation. Supervisors within the organisation, perceive value to be the most important contributor to their commitment to the organisation. This is an important finding, specifically pertaining to the engagement and commitment levels of supervisors. If the organisation wishes to improve supervisor engagement or commitment it is essential that they ensure that there is no value conflict. Value served as the strongest predictor of organisational commitment, therefore it is important for the organisation to take cognisance of the fact that when a gap exists between the employee and the organisation's values, it may result in values conflict on the job. This results in the employee being forced to make a trade-off between the work they want to do and work they have to do. Another negative effect of value conflicts is turnover as employees leave the organisation in search of more fulfilling career opportunities.

One way to narrow the gap created by the value conflicts is to bring personal expectations in line with those of the organisation. This can be achieved through regular one-on-one meetings or feedback session between management and employees where open communication is encouraged. These meetings will result in consistent organisational and personal values on knowledge sharing which have been reported to be associated with greater professional efficacy. In other words, a congruency in values will lead to desired job resources which will in turn lead to higher levels of work engagement and organisational commitment. Findings suggested that another predictor of organisational commitment is advancement, which means moving forward within one's work and includes remuneration, training and career opportunities. It is therefore important that the organisation ensures that their staff perceives that they are provided with sufficient opportunities to move forward or to be promoted, this will ensure that they remain committed to their organisation. Results from the present study found that job engagement not only serves as predictor of organisational commitment but that it also moderates the effect of workload on organisational commitment.

In other words, the more job engagement increases the more negative is the effect of workload on organisational commitment. Furthermore, findings also suggest that job engagement moderates the relationship between value and organisational commitment. The researcher therefore recommends that the organisation invests in developing effective intervention strategies aimed at specifically improving employee engagement, aligning the values of the organisation with that of the employees and finally improving advancement strategies and programs.

The findings of this study strongly suggest that job resources (Growth opportunity, Job security and advancement) and the six areas of worklife (Values) are also positively related to work engagement and organisational commitment of employees working in the mining organisation. It is therefore evident that the organisation should take great care in analysing the impact that these variables have on their employees. By promoting and improving interventions relating to growth opportunity, job security and advancement and ensuring that the values of the employee are aligned with that of the organisation, work engagement and organisational commitment can be greatly improved. The researcher recommends interventions specifically aimed at creating greater awareness of these specific job resources and value alignment, and what impacts these have on levels of employee engagement and commitment. Furthermore, interventions to educate managers and staff on the effect of these job resources on their well-being are

recommended. In doing so, individual employees will be able to identify and draw upon these resources that they have available to them in the workplace.

The fact that supervisors scored high on community provided insight for the organisation into how employees in a supervisory role perceive the overall quality of social interaction at work. This is an important finding as it shows that supervisors who have a sense of community are able to buffer the impact of feelings of inequity at work. The researcher recommends that the organisation increases their efforts in improving social support within the organisation as well as with the community. Recent literature supports this finding as it shows that social support is closely linked to a higher degree of engagement. It is therefore important for the organisation to focus on interventions to increase social support. The reason for this is that when an organisation provides an employee with a supportive climate that fosters the individual's perception of the organisation being supportive, involving, and challenging their psychological needs are accommodated. This in turn results in the employee investing more time and energy in their work and by being psychologically involved and committed to their organisation.

The next recommendation to the organisation is made with regard to workload. An interesting finding presented by the present study is that employees in specialist and superintendent roles scored higher on workload than any other of the measures under investigation. The researcher would like to emphasise that increased workload has a consistent negative relationship with engagement because work overload occurs when job demands exceeds human limits otherwise known as our job resources. Management should grant employees, specifically those in specialist and superintendent roles the opportunity to recuperate during restful periods at work or at home. In addition, the researcher recommends that the organisation view workload as potentially beneficial, if effectively managed. If the organisation provides employees with a sustainable, manageable workload and offers effective support, it provides employees with the opportunity to use and refine the skills they already possess, in addition it also aids them in becoming more effective in new areas.

## **6.5 Recommendations for Future Research**

- Recommendations for future research would be to employ a longitudinal research design. As previously mentioned, the use of a cross-sectional research design resulted in limitations of the present study. In a longitudinal design study, respondents are asked

to complete the set of questionnaires, more than once, and over a period of time. By doing this the researcher is able to obtain richer data from the sample. In addition to the quality of data, the researcher will also be able to determine the direction and extent of change in individual participants.

- In addition to longitudinal designs, the researcher also recommends the use of experimental designs for future research. The benefit of an experimental design is that the effects of interventions aimed at improving work engagement and organisational commitment can be determined through using a pre-test-post-test method. In effect, such experiments could form the basis of a country-wide program aimed at decreasing job demands and increasing job resources within the mining industry in order to develop more engaged and committed mine workers in South Africa.
- The present study, or a similar study, should be applied to a variety of mining organisations in South Africa so that comparisons can be made with regards to work engagement, organisational commitment, the six areas of worklife, job resources and job demands of employee working in the mining industry. This is especially important within the South African context whereby the demands and resources of employees working in the mining industry differ significantly. This approach will facilitate in establishing which mining organisation is in most need of effective interventions.
- Another recommendation for future research, is that the variables under investigation in the present study be researched in terms of other positive organisational outcomes such as job satisfaction, happiness, and wellbeing. This research is suggested as it is greatly needed in a context within which mine workers' dissatisfaction has become ever more prominent and increasing. Through revision of the literature it becomes apparent that negative psychological states such as burnout have dominated the literature. The researcher is therefore aware that there is an increasing need for empirical research, specifically within the South African context, which focusses primarily on positive psychological states. The researcher therefore recommends that future research addresses this gap in knowledge by conducting research around other positive organisational behaviour constructs in addition to work engagement and organisational commitment.

## **6.6 Conclusion**

In the present chapter of this research study, conclusions were made based on both the theoretical, as well as the empirical findings of the study. The limitations of the study were discussed. Further, recommendations for the specific organisation and for future research were made.

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## APPENDIX 1: Ethical clearance


**UNIVERSITY OF  
KWAZULU-NATAL**  
 INYUVESI  
 YAKWAZULU-NATALI

30 January 2015

Ms Nicole Cross 21156306  
 School of Applied Human Sciences: Psychology  
 Howard College Campus

Protocol reference number: HSS/1019/013M  
 New project title: Predictors of Work Engagement and Organisation Commitment in the Mining Industry.

Dear Ms Cross

**Approval - Change of project title**

I wish to confirm that your application in connection with the above mentioned project has been approved.

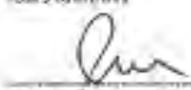
- New project title approved.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach/Methods must be reviewed and approved through an amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number. Please note: Research data should be securely stored to the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

Best wishes for the successful completion of your research protocol.

Yours faithfully

  
 Dr. Sharmila Singh (Chair)

/s/

cc: Supervisor: Ms Swaida (khye)  
 cc: Academic Leader Research: Professor D McCrecker  
 cc: School Administration: Ms Nadine (khye)

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Humanities & Social Sciences Research Ethics Committee  
 Dr Sharmila Singh (Acting Chair)  
 Westville Campus, Doreen Mkheli Building  
 Postal Address: Private Bag 944001, Durban 4000  
 Telephone: +27 (0)31 260 3567/6699/4557 Facsimile: +27 (0) 31 260 4899 Email: [ethics@ukzn.ac.za](mailto:ethics@ukzn.ac.za) / [research@ukzn.ac.za](mailto:research@ukzn.ac.za) / [msc@ukzn.ac.za](mailto:msc@ukzn.ac.za)  
 Website: [www.ukzn.ac.za](http://www.ukzn.ac.za)

## Appendix 2

### Informed Consent Letter and Form



#### Faculty of Humanities, Development and Social Sciences Department of Psychology

Dear Participant,

I am an Industrial Psychology Masters student at the University of KwaZulu-Natal and I am conducting this study for my final research dissertation. The purpose of the research is to study the relationship between climate for engagement, job demands, job resources, work engagement and organisational commitment. Insights gained from this study could lead to further understandings around the constituents of psychological wellbeing of supervisors as well as impact on, or increase employees' satisfaction with their work lives and occupational wellbeing.

This study will require you to answer four questionnaires; the Job Engagement Scale, the Organisational Commitment Questionnaire, Areas of Worklife Survey, as well as the Job Demands-Resources Scale. It also entails the completion of a biographical questionnaire. **Complete anonymity** of all participants will be ensured, results are completely confidential and participant's name will at no stage be revealed. The questionnaires will all be kept for five years in accordance with University regulations and thereafter will be disposed of. Participation is voluntary and you are completely free to withdraw from this study at any stage and for any reason.

Your participation will be greatly appreciated and will not take longer than 30-45 minutes to complete. Please feel free to contact either myself, or my supervisor for any further clarification regarding this study.

Yours sincerely,

Nicole Crous (Miss)

Contact Number: 082 929 4744  
E-Mail: [nixcrous@gmail.com](mailto:nixcrous@gmail.com)

**Supervisor:**  
Shaida Bobats  
E-mail: [bobats@ukzn.ac.za](mailto:bobats@ukzn.ac.za)

**INFORMED CONSENT FORM**  
**Declaration:**

I, \_\_\_\_\_ (*full name*) hereby  
confirm that

I understand the contents of this document and the nature of this research and I consent to participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire.

Signed at \_\_\_\_\_ on this \_\_\_\_\_ day of \_\_\_\_\_ 2013.

Signature \_\_\_\_\_

### Appendix 3

## Section 1: Biographical Questionnaire

**Instructions:** Please answer the following questions by marking the appropriate boxes.

#### 1. GENDER

Male

Female

#### 2. AGE GROUP

24 years and younger

25-35 years

36-45 years

46-55 years

56 years and older

#### 3. YEARS WORKING WITH THIS ORGANISATION

Less than 5 years

6-10 years

11-20 years

more than 20 years

#### 4. HIGHEST ATTAINED QUALIFICATION

Matric certificate

Diploma

Degree

Postgraduate degree

Area to Complete	Possible response	Place an x where appropriate
Division	Asset Management	
	Corporate Affairs	
	Finance	
	Growth	
	Human Recourses	
	Marketing Sales and Logistics	
	Mining	
	Processing	
Department		
Role	Superintendent	
	Specialist	
	Supervisor	
	Artisan/Leadhand	
	Coordinators/Administrators	
	Operators/ Servicemen	

