

**DEVELOPMENT AND EVALUATION OF AN ENGAGEMENT/BURNOUT
STRUCTURAL MODEL WITHIN THE MINING AND CONSTRUCTION EQUIPMENT
SUPPLIER INDUSTRY**

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DECLARATION

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ABSTRACT

The mining and construction industries in South Africa are currently facing great uncertainty and volatility due to the decline in commodity prices and an uncertain political climate, as well as increased global competition and continuous change. This has led to retrenchments and downsizing, impacting thousands of employees. The construction and mining equipment suppliers have consequently also been affected and reported a R1 billion loss in sales revenue annually due to these conditions.

Employee wellbeing (engagement and burnout) within the construction and mining equipment supplier industry will undoubtedly be affected by the shifting trends in and economic performance of the sector. Employees within this industry face increased pressure to shoulder greater workloads and increased threats of retrenchment. The job demands placed on employees and the job and personal resources they have available to meet these increased demands therefore will unquestionably affect their wellbeing and in turn have an influence on performance and overall organisational success.

This study examined the factors contributing to perceived job burnout and employee engagement within a South African organisation by utilising the Job Demands-Resources (JD-R) Model as a framework to consider the relationship between job demands, job resources, personal resources, job burnout and employee engagement. This study aimed to provide further theoretical and empirical evidence that job demands (work overload, job insecurity), job resources (learning organisation) and personal resources (emotional intelligence) affected the level of job burnout and employee engagement of individuals within an organisation in the mining and construction equipment supplier industry.

The research-initiating question asked why there is variance in engagement and burnout amongst employees within the mining and construction equipment supplier industry. In an attempt to answer the research-initiating question, the objective of this study was therefore to empirically test the existing theoretical JD-R Model, and the proposed relationships between the constructs, via structural equation modelling.

Substantive hypotheses were formulated in order to determine the validity of the arguments in the literature review. An *ex post facto* correlational research design was employed to test the various substantive hypotheses. Convenience sampling was used to obtain the sample, which consisted of 210 employees who worked for the South African operations of a mining and construction equipment supplier. The variables in the proposed structural model were measured by means of an electronic questionnaire that contained the various measurement instruments (UWES-15; MBI-

HSS; GENOS EI; JDRS; DLOQ) and was sent via email to the employees to be completed. Additional biographical information (age, gender, race, education) was also obtained via the questionnaire.

Sixteen proposed hypotheses were tested via item analysis and partial least squares analysis (PLS) and reported on. Of the 16 hypotheses formulated, only seven were found to be statistically significant, namely the relationship between employee engagement and job burnout; between job burnout and employee engagement; between employee engagement and emotional intelligence; between employee engagement and learning organisation; between emotional intelligence and learning organisation; between learning organisation and emotional intelligence; and between job burnout and work overload. Of the nine statistically non-significant paths, eight were moderating effects. The non-significant results may be attributed to various factors and are alluded to.

This study highlights various aspects of employee engagement and job burnout and their antecedents. Possible interventions are suggested based on the results obtained to assist human resource managers and industrial psychologist in reducing the levels of job burnout and in promoting employee engagement within the organisation. In addition, limitations and recommendations for future research are detailed.

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I would like to dedicate this dissertation to my son, Joshua: “Jy is die rede hoekom ek dit voltooi het en ek is oneindig lief vir jou. Mag jy weet jy is tot alles in staat deur Jesus wat jou krag gee. Mag dit ’n voorbeeld vir jou wees van hoop en geloof in dit wat Hy jou voor bestem het.”

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CHAPTER 1

BACKGROUND TO THE STUDY

1.1 INTRODUCTION

All organisations in today's volatile, uncertain, complex and ambiguous global environment face rapid and continuous change (Woodward, 2017). Continuous change in technological, political and economic trends and demands brings about globalisation, mergers, acquisitions, and restructuring and downsizing in organisations (Coetzee & Schreuder, 2013). Dries, Vantilborgh, and Pepermans (2012) assert that the importance of organisational agility moves to the forefront as this marketplace dynamism and complexity increase. Not only do organisations need to adapt and amend their strategic business focus to better deal with the volatile, uncertain, complex and ambiguous world, they also need to consider the impact such uncertainty and ambiguity will have on employees' wellbeing and overall business performance. According to Smith (2016), employees today experience more stress and stress-related illnesses than ever before. In the United States alone, it is estimated that workplace stress costs employers more than \$300 billion annually (Smith, 2016).

Baruch (2006) argues that the changes increasingly faced by organisations, as mentioned above, adversely affect employees' dedication, motivation, drive and feelings of job security. Bolino and Turnley (2005) contend that employers increasingly have higher expectations of employees relating to increased effort, longer working hours, and greater availability during non-working hours. These increased demands, along with the uncertainty brought by constant change, are believed to increase work-related stress (Bolino & Turnley, 2005). Hsieh and Wang (2012) further affirm that job stress is positively linked to job burnout.

Research over the past two decades has shown that burnout has negative consequences for both the individual as well as the organisation (Hsieh & Wang, 2012; Schaufeli & Enzmann, 1998; Schaufeli, Salanova, Gonzáles-Romá, & Bakker, 2002). Burnout fuels poor work performance, low job satisfaction, a sense of failure and a loss of motivation, and influences employees' health negatively, which in turn leads to absenteeism, presenteeism and other deviant work behaviours that ultimately affect turnover and productivity (Hsieh & Wang, 2012; Schaufeli & Enzmann, 1998; Smith, 2016).

According to Bizcommunity (2014), employee absenteeism (an outcome of job burnout) alone costs the South African economy between R12 billion and R16 billion annually. Crous (2016) likewise states that absenteeism can be attributed to workplace stress, employee ill health and burnout. According to Dr Renata Schoeman (www.usb.ac.za) over 40% of all work-related

illnesses in South Africa are due to major depression, anxiety disorders, work-related stress and burnout. Dr Schoeman further contends that work-related illness costs South Africa in excess of R232 billion annually. Schaufeli et al. (2002) state that work-related stress, specifically burnout, can be rephrased as an erosion of engagement with a job.

Schaufeli, Taris, and Van Rhenen (2008) stresses that organisations need engaged employees who are involved, responsible, proactive and motivated in order to thrive within such an uncertain, vulnerable, ambiguous and complex time. Employees are increasingly expected to collaborate with others more efficiently, to show creativity, to be proactive, to commit to increased excellence in performance benchmarks and to take ownership for their own professional growth within organisations. Consequently, organisations need employees who are dynamic, committed and absorbed by their work, as the strength of an organisation lies in its human resources.

According to Lockwood (2007), employee engagement can be a determining aspect of organisational success, wherein it has the ability to significantly influence employee loyalty, retention and productivity. In addition, it is fundamentally linked to company reputation, stakeholder satisfaction and, ultimately, overall stakeholder value. Welthagen and Els (2012) further emphasise that employee engagement is a critical driver of business success in order to attain a competitive advantage. Therefore, greater emphasis is being placed on the management of employee engagement as part of overall employee wellbeing within organisations.

The Global Workforce Study conducted by Willis Towers Watson (Willis Towers Watson, 2014) covers responses from more than 32 000 employees across 26 industries globally. The study details the attitudes and concerns of employers and employees alike, as well as the emerging trends and issues shaping the global workplace. It was found that only four in ten employees are highly engaged. The study defined sustainable engagement as *traditional engagement* (employees' preparedness to expend discretionary effort on their job); *enablement* (having access to resources, support and tools to perform the job); and *energy* (emotional, interpersonal and physical wellbeing actively supported within the workplace). The study further found that 24% of employees were disengaged. According to Lockwood (2007), most disengaged employees actively act out their unhappiness at work, thereby undermining the efforts of their engaged counterparts. It is thus alarming to note that 60% of the employees lacked the elements of being highly engaged, with 24% of the employees most likely to actively act out their unhappiness at work. Organisations need to foster greater employee wellbeing that can positively influence employee engagement, which in turn benefits both the organisation and the individual alike.

The mining and construction industries in South Africa are currently experiencing great uncertainty and vulnerability. The four years preceding 2018, more than 50 000 employees within the mining sector have been retrenched – this according to the Mining Industry Report (Mathews, 2017). In the 2018 alone, three of the major construction companies have filed for business rescue, two major construction companies face financial difficulties, and one major construction company is going through liquidation (Arnoldi, 2018; Cokayne, 2018; Talevi, 2018).

The decline in the global commodity price and an uncertain political climate are among the factors contributing to mines closing, construction companies facing liquidation and job losses in the sector increasing (Shabalala, 2016). According to Cokayne (2018), the construction industry in South Africa similarly faced a difficult year in 2018, with a low growth environment that resulted in low fixed domestic investment and, as such, lower-order books, lower revenue and ongoing pressure on margins. The challenges faced by both industries affect suppliers to the sector, such as original equipment manufacturers.

According to CONMESA (Construction and Mining Equipment Suppliers Association), there has been a steady decline in sales figures relating to equipment sales, especially within the mining industry. Dr Jim Rankin, CONMESA secretary, indicated that the estimated figure for yearly equipment sales specifically for mining decreased from R14 billion in 2010 to less than R13 billion in 2013 (Breytenbach, 2015). Although the industries face challenges, CONMESA holds a positive outlook for a potential surge in business in the mining and construction sectors, should union issues be resolved before strike action and the infrastructure development programme of government be fast-tracked (Breytenbach, 2015).

Employee wellbeing (engagement and burnout) within the construction and mining equipment supplier industry will undoubtedly be affected by the shifting trends in and economic performance of the sector. As pointed out earlier, employers increasingly expect greater availability of employees both in and outside working hours; increased effort; greater collaboration with others; commitment to higher quality performance standards; and for employees to show initiative, take responsibility for their development and remain proactive and motivated whilst realising these expectations. Thus, the job demands placed on employees, and the job and personal resources they have available to meet these increased demands, will undoubtedly affect employee wellbeing and, in turn, affect performance and overall organisational success. It is therefore essential to determine the factors that affect employee engagement and job burnout amongst employees in the equipment supplier industry to be proactive and better manage employee wellbeing within this sector. In doing so, innovation, creativity and a competitive advantage can be stimulated to bring about change and growth within this industry.

1.2 PROBLEM STATEMENT

According to Baptiste (2008), there is an increasing interest in employee wellbeing at work due to the increase in employee ill health resulting from personal, physical and psychological factors. It is argued that, in order for companies to remain efficient and profitable, it is essential that employees remain fit and healthy on all levels. Initially, focus was placed on how to address burnout in the workplace. Job burnout can be defined as a state of mental, emotional and physical fatigue that is characterised by feelings of hopelessness, powerlessness, physical dysfunction, and emotional drain, and by the development of a negative outlook towards work and the self. It is therefore a feeling of discontent, distress and disappointment in the pursuit of ideals and is the result of recurring, consistent emotional heaviness linked with continued association with people over an extended period of time (Malakh-Pines, Aronson, & Kafry, 1981).

Although the construct of burnout garnered much attention, an interest in employee engagement arose due to a shift brought about by Seligman and Csikszentmihalyi (2000). These authors suggested that psychology should rather be considered from a happiness, individual-strengths and optimum-functioning perspective, rather than the traditional approach, which considered weaknesses, malfunctioning and damage. Research by Schaufeli, Salanova, González-Romá and Bakker (2002) inspired research on employee engagement as a construct with its own merits, in addition to being the antipode of burnout (e.g. Hakanen, Schaufeli, & Ahola, 2008; Rothmann & Joubert, 2007; Rothmann & Pieterse, 2007; Schaufeli & Bakker, 2004).

Furthermore, organisations took an interest in engagement studies as the need arose to increase the inputs of employees within the organisation. This need has been driven by increased global demand, competitiveness and uncertainty. Companies increasingly expect employees to be emotionally and cognitively committed and available to the client, their work and the organisation at large. According to Sonnentag (2003), employee engagement affects the beliefs of employees and is associated with personal learning and creativity. In addition, it stimulates individuals' concern for quality and discretionary efforts. Various studies have found that employee engagement predicts positive organisational outcomes, such as job satisfaction, customer satisfaction, return on assets, profits and shareholder value, productivity, motivation, low turnover intention and commitment (Bakker, Demerouti, & Schaufeli, 2003a; Bakker, Schaufeli, Leiter, & Taris, 2008; Harter, Schmidt, & Hayes, 2002; Schaufeli & Bakker, 2004).

In the light of the above, industrial organisational psychologists (IOP) and HR managers play a vital role within an organisation in influencing employee wellbeing positively, which in turn affects employee performance and ultimately organisational success. Therefore, it is essential for IOP to

both proactively and reactively provide advice, diagnosis, structuring and interventions that affect overall employee wellbeing and in turn improve performance. It therefore is evident that burnout and engagement are essential research topics, and even more so how to manage these effectively within the workplace.

The purpose of this study was to consider why some employees experience engagement and job burnout within the construction and mining equipment industry, and others do not.

1.3 RESEARCH-INITIATING QUESTION

To build on the existing research on employee engagement and job burnout, the present study considered the aspects that may have an impact on the wellbeing of employees working in the mining and construction equipment supplier industry. As a result, it can be stated that some employees are engaged and others are not, and that some suffer job burnout and others do not. Furthermore, some employees are more engaged than others, and some employees suffer more burnout than others.

The following research-initiating question is thus the motivation behind the study:

- Why is there variance in engagement and burnout between employees within the mining and construction equipment supplier industry?

Given the research-initiating question, the predominant aim of this study was to develop a network of the most salient variables influencing the engagement and burnout of employees in the mining and construction equipment supplier industry. In this manner, a structural model will be presented for testing.

1.4 RESEARCH OBJECTIVE

The main objective of the study was to develop a network of latent variables that account for the variance in employee engagement and job burnout amongst employees in the mining and construction equipment supplier industry. If the hypothesised paths in the structural model are shown through statistical analysis to be significant, the insights gained will contribute to informing HR interventions to improve overall employee wellbeing within this industry. The following research objectives were addressed:

- develop a conceptual model that portrays the multifaceted dynamics of the variables proposed to explicate variance in the psychological processes underlying employee engagement and job burnout;

- test the structural model fit;
- evaluate the significance of the hypothesised paths in the model; and
- underline the results and managerial implications of the study findings and, from this, recommend practical interventions that can be applied to this industry to assist in increasing employee engagement and lowering burnout levels amongst employees.

1.5 DELIMITATION

The study intended to determine the antecedents of employee engagement and job burnout based on a literature study. Data was gathered from eight different branches of one organisation in South Africa. The Job Demands-Resources (JD-R) Model was applied as a framework to consider the effect of job demands, job resources and personal resources on employee engagement and job burnout. The proposed model and formulated hypotheses were tested. Job crafting, self-undermining and job performance, which are variables that form part of the updated JD-R model (Bakker & Demerouti, 2018) are not included in this study.

Attention furthermore, was not paid to the sub-dimensions of the variables studied, or to the hypotheses related to the sub-dimensions of this study. For example, learning organisations consist of seven dimensions (continuous learning, inquiry and dialogue, team learning, embedded systems, empowerment, systems connections, leadership), but the relationship between these sub-dimensions and burnout, for example, were not considered in this study and no individual hypotheses were formulated in this regard. The focus of the study was not on testing hypotheses related to the sub-dimensions of the latent variables, but rather on considering the JD-R model and the relationships of the variables with each other on the whole. Lastly, no additional effort was made to improve the psychometric properties of the measurements used in the study, such as item deletion or manipulating the dataset using factor analysis or attendant strategies.

1.6 OUTLINE OF THE RESEARCH STUDY

Chapter 1 provides the contextual information on the research topic and outlines the research-initiating question, as well as the main objectives of the study.

Chapter 2 comprises a detailed literature study to address the theoretical objective of the study. Each latent variable of significance is defined, explained and discussed in terms of the current academic literature. The relationships among the latent variables are investigated and, from this, a theoretical model is developed.

Chapter 3 outlines the research methodology and design applied in the study to empirically test the structural model and path coefficients hypothesised in the literature study.

Chapter 4 reports on the results obtained from the statistical analysis performed.

Finally, Chapter 5 concludes with the study findings, limitations of the study, recommendations for future study and, lastly, the practical managerial implications based on the research findings.

CHAPTER 2

LITERATURE STUDY

2.1 INTRODUCTION

The purpose of this section is to provide a systematic, structured and reasoned argument on the basis of a review of the relevant literature. Firstly, an overview of the early job stress and motivation theories is considered. From this, a critique of the earlier models is outlined and Job Demands-Resources theory is discussed as the theoretical framework for this study. Thereafter, an outline of the JD-R model and the various constructs relevant to the present study, as underpinned by this theoretical framework, is discussed. Various relationships among the relevant constructs are considered, and hypotheses are determined and presented in a conceptual model.

2.2 OVERVIEW OF THE EARLY JOB STRESS AND MOTIVATION MODELS AND THEORIES

Numerous models in the occupational health literature state that the job strain (fatigue, dissatisfaction and health complaints) experienced in the working environment is due to an interruption in the equilibrium between the resources employees have at their disposal and the demands placed on them to perform their jobs. Assumptions made by these occupational health stress and motivation models, which evaluate the impact of job stressors and job characteristics on employee health and wellbeing, informed the Job Demands-Resources (JD-R) model (Bakker & Demerouti, 2007, 2016), which has been widely studied over the past decade (Bakker & Demerouti, 2007, 2018; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). According to Bakker and Demerouti (2014), the following occupational health stress and motivation models influenced/informed the Job Demands-Resources (JD-R) model: Two-Factor Theory (Herzberg, 1966), the Job Characteristics Model (Hackman & Oldman, 1980), the Demand-Control Model (Karasek, 1979), the Effort-Reward Imbalance Model (Siegrist, 1996), and Conservation of Resources Theory (Hobfoll, 2001). These are discussed briefly.

2.2.1 Two-Factor Theory

Herzberg's (1966) Two-Factor Theory suggest that two mutually exclusive groups of needs drive employee motivation and satisfaction. These needs are classified as motivator factors (satisfiers/higher-level needs) and hygiene factors (dissatisfiers/lower-level needs). It is postulated that motivator factors make employees feel positive about their jobs. However, it is contended that a lack of hygiene factors makes employees unsatisfied at work.

According to Two-Factor Theory, employees will exceed the minimum requirements of their job by increasing their effort when motivator factors such as achievement, recognition, responsibility, advancement and nature of work are present. However, without motivators, employees will only do their jobs as prescribed.

Hertzberg (1966) further found that the various hygiene factors, namely company policies, salary, management, interpersonal relations, status, job security and working conditions, need to be present in order to prevent dissatisfaction; yet, if present, do not necessarily increase satisfaction. Thus, a lack of one or more hygiene factors will promote dissatisfaction and affect performance, but an increase in these factors will not necessarily promote satisfaction or employee motivation.

Herzberg (1966) furthermore proposed a two-dimensional model as opposed to a one-dimensional model, with satisfaction and dissatisfaction as polar opposites. Figure 2.1 illustrates the two continuums: not dissatisfied to dissatisfied with the environment (hygiene factors), and not satisfied to satisfied with the job itself (motivator factors). According to Herzberg's theory, issues related to stress and motivation can therefore be addressed by ensuring employees have a balanced exposure to and combination of motivator and hygiene factors.

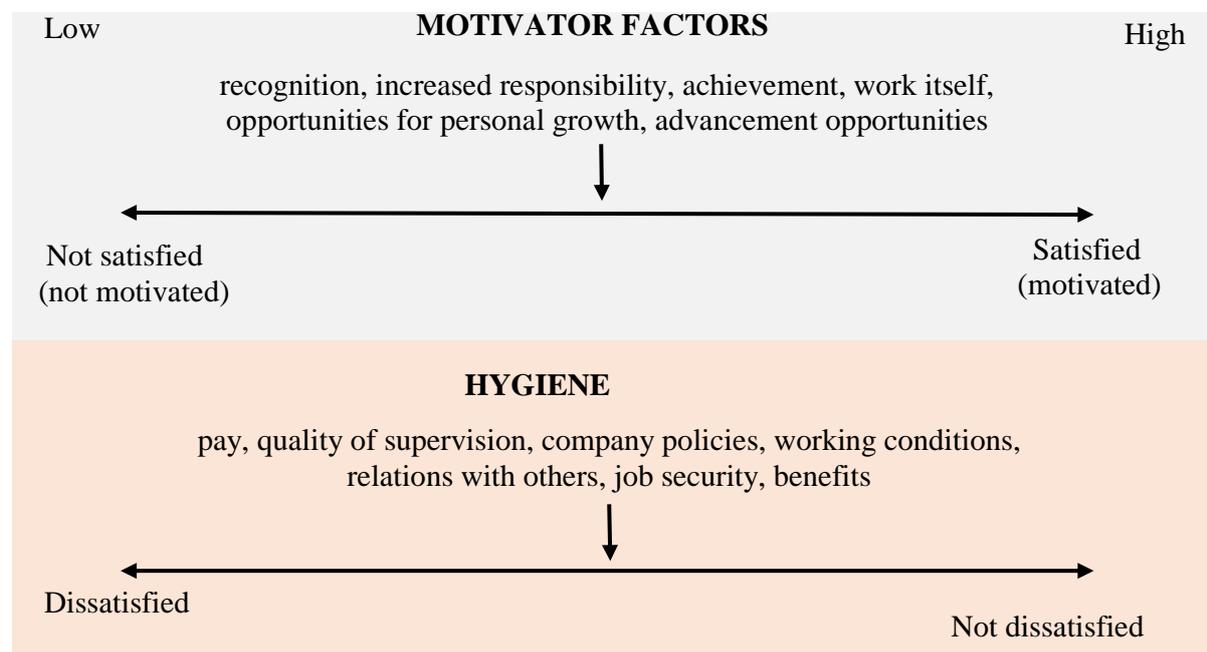


Figure 2.1 Two-factor theory model

Source: Lussier & Achua (2015); adapted from Herzberg (1964, 1967)

According to Grant, Fried and Juillerat (2009), Herzberg's work contributed significantly to increasing awareness among researchers and practitioners of the potential of job enrichment and how this can be utilised to increase motivation and job satisfaction within the workplace. They argue, however, that the two-factor model lacks validity in predicting job satisfaction.

2.2.2 The Job Characteristics Model

The Job Characteristics Model (Hackman & Oldman, 1976, 1980) examines the relationship among job characteristics and individual responses to work (job satisfaction, absenteeism, sickness, personnel turnover). According to Hackman and Oldman (1976) there are five core job characteristics: skill variety (the degree to which a job necessitates the use of a variety of skills and talents of an individual); task identity (the degree to which a job requires the completion of a whole portion of work); task significance (the degree to which the job affects the life of others); autonomy (the degree to which the job provides independence, significant freedom and discretion in determining goal-directed behaviour at work); and job feedback (the degree to which information about employee effectiveness in performance is communicated).

The five characteristics combined form a single index that reflects the overall motivating potential of a job. According to Hackman and Oldman (1976), specific job characteristics (skill variety, task identity and task significance) affect the individual's experienced meaningfulness of work; autonomy affects the individual's experienced responsibility for outcomes; and feedback on the job leads to knowledge of the results of work activities. These are also known as the three psychological states. The following formula depicts the motivating potential score (MPS):

$$\text{MPS} = (\text{skill variety} + \text{task identity} + \text{task significance}) / 3 \times \text{autonomy} \times \text{feedback}.$$

Hackman and Oldman (1976, 1980) further argue that the core job characteristics are expected to influence work motivation and job satisfaction through these three essential psychological states. For an individual to experience work as meaningful is to feel that the work is valuable and worthwhile. When an individual experiences personal responsibility, there is a feeling of accountability for the work delivered. Finally, an individual who possesses knowledge of the result of the work delivered holds an understanding of the effectiveness and contribution to performance of the job. If any of the three psychological states are not present, motivation and satisfaction will be affected significantly.

In addition, Hackman and Oldman (1976, 1980) state that knowledge and skill to perform the work, growth need strength and work context (pay, job security, managers and co-workers) moderate the relationships among job characteristics–psychological states, as well as the relationships among psychological states-outcomes (motivation and satisfaction). It is therefore argued that, when job characteristics are good and moderator variables are high (e.g. growth need strength), it is more likely that psychological states will be experienced and better outcomes can be expected in turn, as depicted in Figure 2.2.

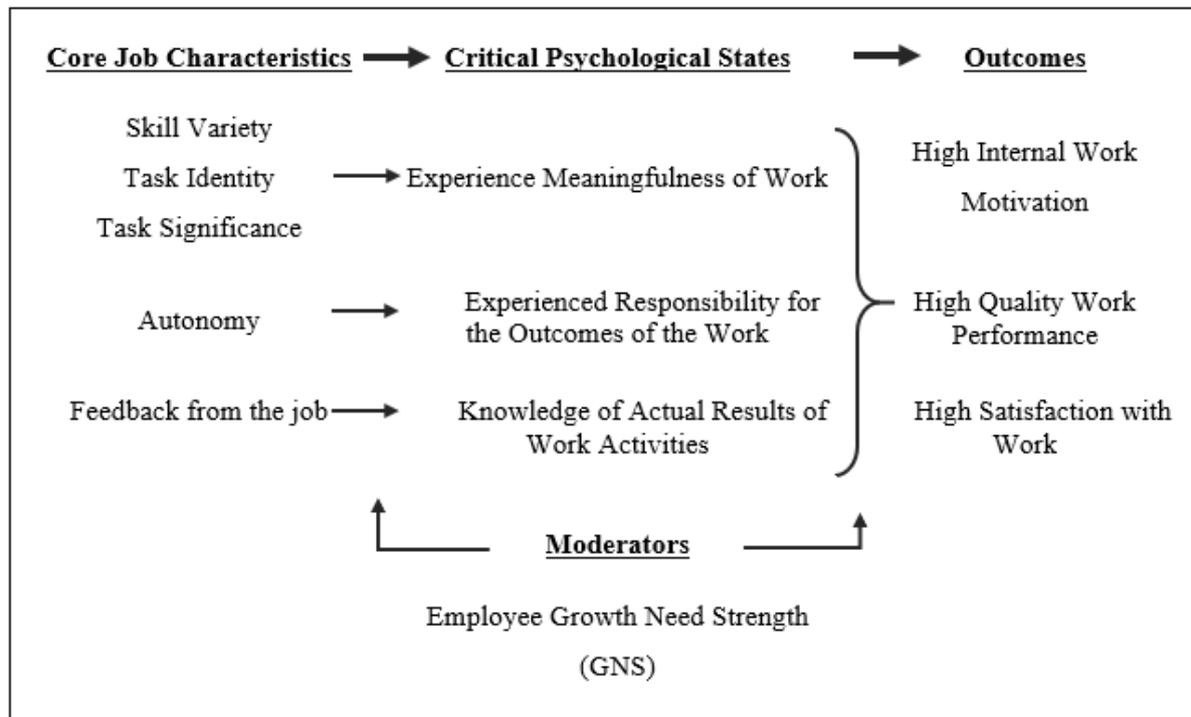


Figure 2.2 The job characteristics model

(Hackman & Oldman, 1980)

2.2.3 The Demand-Control Model

Research on job stress and health utilising the Demand-Control Model (DCM; Karasek, 1979) has been proliferate over the past 20 years (Bakker & Demerouti, 2007). The main hypothesis of Karasek's (1979) Demand-Control Model is that high job demands (work overload and time pressure) and low job control (control during the workday and control over tasks) cause job strain. The DCM argues that employees experience job strain (health complaints, job-related anxiety, dissatisfaction and exhaustion) when there is limited control over decision making in meeting job demands. Therefore, it is suggested that an important predictor of job strain and illness is a combination of high job demands and low job control (Karasek, 1979). Bakker and Demerouti (2007) argue that there is substantial corroboration for the strain hypothesis, but less consistent support for the buffer hypothesis, which states that the negative effects of high demands on employee wellbeing can be moderated by job control. Bakker and Demerouti (2007) thus suggest that job control only partly buffers the effect of high job demands on employee wellbeing.

The active learning hypothesis in the DCM, in contrast, posits that employees in jobs characterised by high job demands and high job control will experience higher levels of task enjoyment, learning and personal growth. Therefore, employees who have control in decision making within such demanding jobs are believed to utilise all the available skills, which in turn enables a "conversion

of aroused energy into action through effective problem solving” (Bakker & Demerouti, 2014, p. 4). The job strain model is outlined in Figure 2.3.

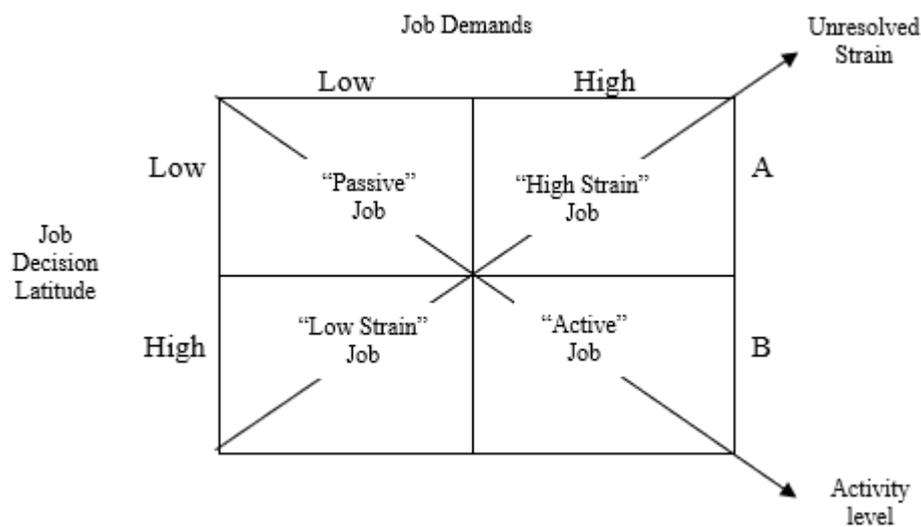


Figure 2.3 The job strain model

(Adapted from: Karasek, 1997)

There are two predictions contained in the model. Firstly, Diagonal A suggest that strain will increase as job demands increase, comparative to a decline in job decision latitude. Secondly, when the challenges of a situation are matched by an individual’s capacity to deal with or control a situation, it is predicted that an incremental increase in competence will occur. When both job decision latitude and job demands are high, the job is defined as ‘active’, and it is then suggested that this will lead to the creation of new behaviour patterns within and outside the job. This is suggested by Diagonal B. Furthermore, the model suggests that jobs at the opposite extreme (‘passive’) will bring about a decrease in total activity and a decline in overall problem-solving activity.

2.2.4 The Effort–Reward Imbalance Model

The Effort-Reward Imbalance Model (ERI; Siegrist, 1996) emphasises reward structures at work, rather than control structures. The ERI assumes an imbalance between the high effort spent and low reward received at work, which results in job strain. This imbalance is believed to violate core expectations about adequate exchange and reciprocity within an individuals’ social life, of which effort at work is viewed as part of a communally arranged exchange activity.

According to the ERI (Siegrist, 1996), a high effort at work has an intrinsic source, namely the motivation of an employee in challenging conditions to meet job demands, and an extrinsic source,

namely the demands of the job. Job rewards, in turn, are transmitted in money (salary), esteem (approval) and status control (career opportunities, i.e. advancement, probabilities, job security, position reliability) (Bakker & Demerouti, 2014; Siegrist, 1996). The basic premise therefore is that a lack of exchange between effort and reward (i.e. high effort/low reward) will result in increased excitement and stress, which in turn affects employee health and other strain responses (sickness absence and poor subjective health) (Bakker & Demerouti, 2007; De Jonge, Bosma, Peter & Siegrist, 2000). Figure 2.4 represents the effort-reward imbalance model at work.

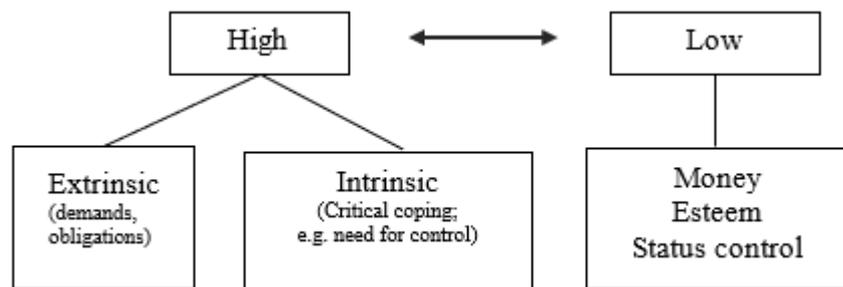


Figure 2.4 The effort-reward imbalance model at work

(Adapted from: Siegrist 1996)

2.2.5 The Conservation of Resources Model

Conservation of Resources (COR) theory (Hobfoll, 1989) is considered an integrated stress theory that considers both internal and environmental processes equally. Its central tenets are that individuals endeavour to obtain, preserve, protect and nurture those things that are of value to them (Hobfoll, 2001). These valued entities, termed resources, can be outlined as objects, personal characteristics, conditions and energy resources. According to the COR, psychological stress will occur in the following instances: a) when individuals' resources are threatened with loss; b) when there is actual individual resource loss; or c) when there is a lack of sufficient resource gain after significant resource investment (Hobfoll, 1989, 2001).

According to Hobfoll (2001), burnout most often follows from a lack of sufficient resource gain (at times exposure to small, continuous losses) after a significant resource investment of energy, time. COR theory predicts that the principal ingredient in the stress process is a loss of resources (Hobfoll, 2001). Thus, in the context of loss, resource gain is depicted as essential. In order to deal with threatening conditions and to prevent negative outcomes, COR theory asserts that individuals need to invest resources. Furthermore, individuals not only strive to accumulate resources, but also to protect them. According to Hobfoll (2002) resources have the ability to generate other resources, which in turn create a resource caravan that may result in positive outcomes such as wellbeing and improved coping. These tenets are outlined in Figure 2.5.

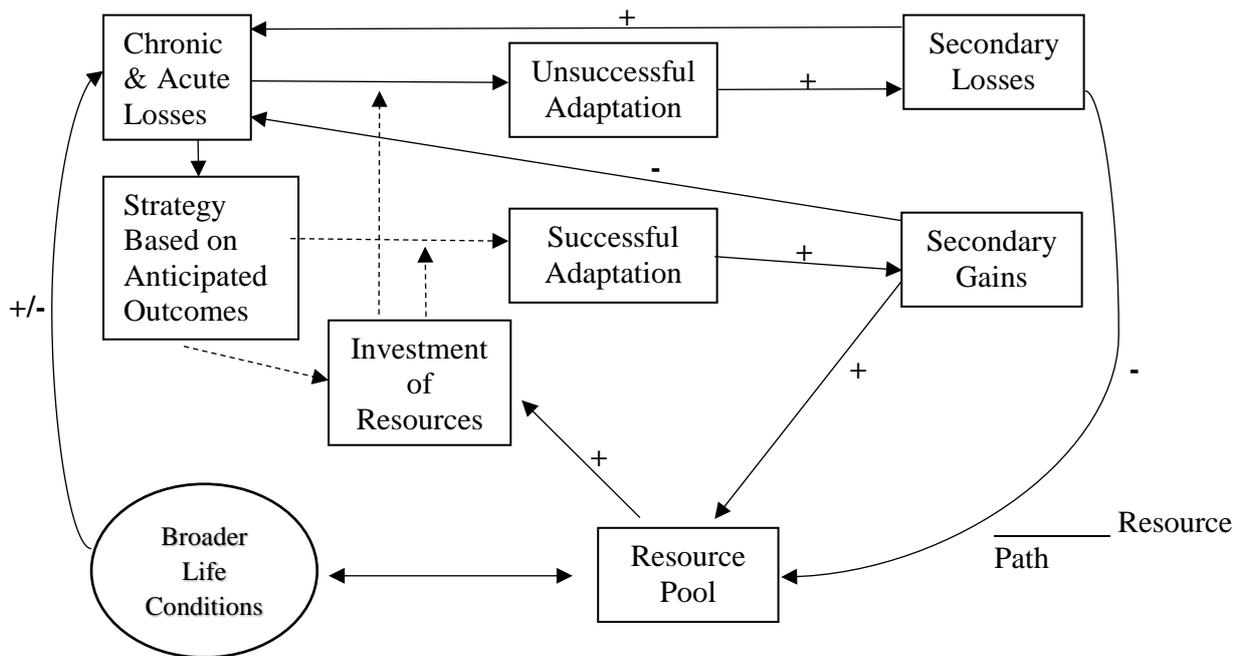


Figure 2.5 The conservation of resources model

Adapted from Hobfoll (2001)

The JD-R model shares two basic assumptions with COR theory. Firstly, resources moderate the relationship between job demands/threats and negative outcomes. Secondly, resource availability leads to an accumulation of further resources and, in turn, to more positive outcomes within the motivational process of the JD-R model (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007).

2.2.6 Critique of the early models

Bakker and Demerouti (2014) argue that there are four overarching challenges posed by the earlier models of work motivation and job strain, as outlined above. Firstly, the models focus singularly on either work motivation or job stress, thus not considering the impact of the interactions between these variables. Secondly, Bakker and Demerouti (2007, 2014) contend that the earlier models are relatively simple in their approach, and that “the complex reality of working organisations is reduced only to a handful of variables” (Bakker & Demerouti, 2014, p. 6). Thirdly, Bakker and Demerouti (2007, 2014) critique the stagnant nature of the earlier models. They question why autonomy is the most important resource for employees in the DCM, while it is remuneration, esteem reward and status control in the ERI. Furthermore, they question why work pressure or effort is the most important job demand, with other aspects seemingly having been neglected. Lastly, they argue that the earlier models of job strain and work motivation do not consider the volatility of the rapidly changing nature of jobs.

Bakker and Demerouti (2007) assert that the earlier models of work motivation and job stress have provided valuable insight into factors that influence employee wellbeing. The restricted and

oversimplified nature of the models, however, has limited their practical usefulness and theoretical progress, furthermore limiting their applied practicality to various work contexts and jobs. These limitations have provided a platform for the development of the Job Demands-Resources (JD-R) model, which incorporates a variety of working conditions by focusing on positive and negative antecedents of employee wellbeing.

2.2.7 The Job Demands-Resources model

Research utilising the JD-R model has increased exponentially over the past decade (e.g. Bakker & Demerouti, 2007, 2014, 2018; Demerouti & Bakker, 2011; Demerouti, Bakker & Fried, 2012; Demerouti, Bakker, Janssen & Schaufeli., 2001; Schaufeli & Taris, 2014). As stated previously, the JD-R model was created in an effort to surmount the limitations presented by previous models of occupational stress and motivation. The JD-R model considers various assumptions made by these occupational health stress and motivation models, which considered the impact job stressors and job characteristics have on employee health and wellbeing. In essence, the JD-R model suggests that, through a motivational process, job resources promote engagement, and that job demands contribute to burnout through an energy-depletion process.

Demerouti et al. (2001) initially proposed that burnout could be experienced outside the human service sector, as postulated by Maslach and Schaufeli (1993). It is proposed by the JD-R model that burnout could be developed under any working conditions in which job demands are high and limited job resources are available, as these working conditions could have a negative impact on employees' motivation and lead to energy depletion (Demerouti et al., 2001). The initial JD-R model included four basic components: job demands, job resources, exhaustion and disengagement. Following this, Schaufeli and Bakker (2004a) introduced work engagement as the "antipode of burnout" within the JD-R model (Bakker et al., 2008, p. 188). The JD-R model has since been utilised to predict job burnout (Demerouti et al., 2001), work engagement (Schaufeli et al., 2002), connectedness and organisational commitment, and the consequences of these, such as job performance and sickness absenteeism. According to Bakker and Demerouti (2014), because of the great number of studies conducted, new propositions uncovered and meta-analyses performed, the JD-R model has matured into a theory. Bakker and Demerouti (2014) state that employee wellbeing (e.g. work engagement, motivation, burnout, stress) can be understood, explained and predicted by the JD-R theory.

At the core of JD-R theory lies the first proposition, namely that the characteristics of working environments can be ordered into two general categories – job demands and job resources. This model can be applied to various occupational settings, no matter the demands or resources involved (Bakker, Demerouti, De Boer, & Schaufeli, 2003b). These two categories of work characteristics

evoke two independent yet related psychological processes, namely a health-impairment process and a motivational process, which form the second proposition of JD-R theory.

Firstly, the health-impairment process entails employees becoming exhausted due to the sustained effort required because of high job demands, which leads to health problems and energy depletion and, in turn, may lead to increased sickness and absenteeism (Bakker et al., 2003b). Job demands are important predictors of outcomes like repetitive strain injury, psychosomatic health complaints and exhaustion (Bakker & Demerouti, 2014). These outcomes could be associated with the tendency of job demands to consume energy resources and fundamentally cost much effort.

Secondly, the motivational process is when the accessibility of job resources leads to work engagement and organisational commitment (Schaufeli & Bakker, 2004; Xanthopoulou et al., 2007). Job resources are important predictors of work engagement, motivation and work enjoyment (Bakker et al., 2007), as they are believed to fulfil basic psychological needs such as the need for relating, competence and autonomy (Bakker & Demerouti, 2014).

The third proposition of the JD-R theory is that job resources and job demands interact in order to predict employee wellbeing (Bakker & Demerouti, 2018). Job resources and job demands may have a combined effect on employee wellbeing in two ways. The first interaction, as put forth by Bakker & Demerouti (2018), is when the impact of job demands on strain is buffered by job resources. Research has shown that the impact of job demands (work pressure, emotional demands, work overload, etc.) is lessened by job resources, such as opportunities for development, autonomy and performance feedback. Thus, employees who have a variety of job resources available are shown to cope better with numerous job demands.

The second interaction is when the impact of job resources on engagement/motivation is strengthened by job demands (Bakker & Demerouti, 2018). Studies have shown that job resources can have a positive impact on employee engagement when there are high job demands. Job resources therefore become more valuable to an employee confronted by high/challenging job demands and, in turn, dedication to the job tasks can be fostered.

JD-R theory also includes personal resources, which is an expansion of the original model (Bakker & Demerouti, 2018; Demerouti et al., 2001). According to Hobfoll, Johnson, Ennis and Jackson (2003), personal resources refer to an individual's sense of ability to affect and control their environment successfully, especially during challenging circumstances. It furthermore is an aspect of the self that generally is linked to resilience.

Bakker and Demerouti (2016) considered JD-R theory and proposed a loss cycle and a gain cycle. According to Bakker and Demerouti (2016), the previous occupational health and wellbeing models assumed that employees do not take an active part in influencing their job environment. It is argued that employees are not passive and do not simply react to their environment, but rather have the ability to influence their own working conditions in one of two ways. Firstly, employees can influence their environment in a negative way by initiating a loss cycle of job demands and strain brought on by stress, called self-undermining. Secondly, employees can have a positive impact on their working conditions by initiating a gain cycle of job resources and work engagement through being engaged, and this is achieved by job crafting.

Considering the evidence in support of the JD-R model and its related theory, the latest model presented by Bakker and Demerouti (2018), as shown in Figure 2.6, could reflect the experience of employees in an organisation in relation to employee wellbeing.

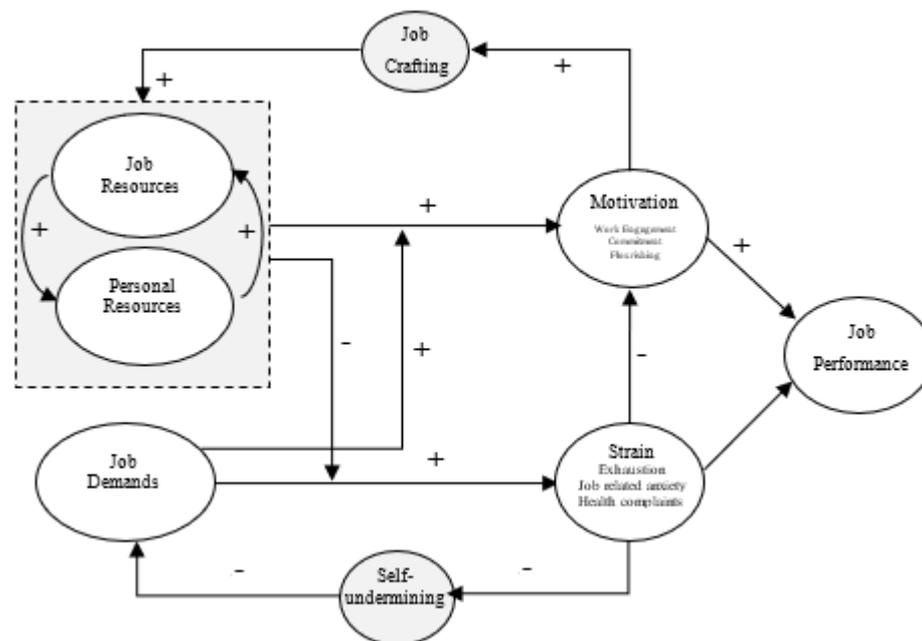


Figure 2.6 Job demands-resources (JD-R) model

(Bakker & Demerouti, 2018)

The JD-R theory is utilised as the guiding theoretical framework of the present study to examine how job resources, personal resources and job demands affect employee wellbeing (engagement and burnout). The relevant variables found in the JD-R model, as well as possible interactions and the dual processes, are elaborated on below.

2.3 APPLICABLE LATENT VARIABLES

2.3.1 Employee engagement

Research on employee engagement has increased considerably in the last decade (Bakker, Demerouti & Sanz-Vergel, 2014; Bakker, Hakanen, Demerouti & Xanthopoulou, 2007; Hakanen, Bakker & Demerouti, 2005; Schaufeli & Bakker, 2003, 2010). Positive psychology can be attributed to the shift in focus from negative psychological states to positive psychological states (Myers, 2000). The purpose of Positive Psychology, according to Seligman and Csikszentmihalyi (2000), is to bring about a shift in focus from a fixation on only mending the negative matters in life to considering positive constructivism also. Positive Organisational Psychology, in addition, is “the scientific study of positive subjective experiences and traits in the workplace and positive organisations, and its application to improve the effectiveness and quality of life in organisations” (Donaldson & Ko, 2010, p. 178). According to Bakker and Demerouti (2008), work engagement is a positive psychological construct.

Macey and Schneider (2008) propose three conceptualisations of employee engagement, which can be distinguished by trait, state and behavioural engagement. State engagement (relevant for this study) concerns positive affectivity associated with the work role and settings, suggesting feelings of persistence, vigour, absorption, enthusiasm, alertness, energy, dedication and pride (Macey & Schneider, 2008). State engagement entails components of organisational commitment, positive affectivity, job satisfaction and job involvement. Two main perspectives of state engagement are engagement as an extension of the self to a role (Kahn, 1990), and employees’ job functions as a reference for engagement (Schaufeli et al., 2001).

Kahn (1990) was the first researcher to conceptualise engagement as the “harnessing of organisation members’ selves to their work roles: in engagement, people employ and express themselves physically, cognitively, emotionally and mentally during role performances” (p. 694). Engaged employees are thus believed to identify with their work and therefore to put more effort into it. Inspired by the work of Kahn (1990), Rothbard (2001) defines engagement as a bi-dimensional concept that comprises attention (intellectual availability and the extent of time spent contemplating a role) and absorption (the extent of concentration focused on a role). Where Kahn’s (1990) key focus area regarding engagement is the work role, the key area of focus for other researchers, who view engagement as the positive antithesis of burnout, is the employee’s work activity, or the work itself (Bakker et al., 2008).

According to Maslach, Schaufeli and Leiter (2001), engagement offers a thorough and more multifaceted viewpoint of an individual’s relationship with work. Schaufeli et al. (2001) define

engagement as a three-dimensional construct – a “positive, fulfilling, work related state of mind that is characterised by vigour, dedication and absorption” (p. 74). *Vigour* is characterised by a preparedness to devote effort to a job role, to persevere through difficulties, and to display high levels of energy and intellectual resilience while working. *Dedication* is characterised by a sense of enthusiasm, pride, challenge, inspiration, and significance. According to Schaufeli et al. (2001), the term dedication is used instead of identification, as dedication refers to a greater engrossment that goes a step further than the normal level of identification.

Finally, *absorption* is characterised by being fully immersed and engrossed in the job task so that there is difficulty detaching from the task and time passes quickly. This is likened to a state called ‘flow’, coined by Csikszentmihalyi (1990), which is a state of optimum experience characterised by a clear mind, effortless concentration, focused attention, complete control, loss of self-consciousness, intrinsic enjoyment, distortion of time, and unison of mind and body. However, flow refers to a particular short term or peak experience, whereas engagement, as mentioned, is a more pervasive and persistent state of mind. Bakker (2011) supports this by stating that employee engagement differs from work flow in that it refers to a longer episode of performance, where flow typically is a peak experience that last an hour or less.

According to Rothmann and Rothmann (2010) it can be concluded from the work of Kahn (1990) and Schaufeli et al. (2001) that employee engagement comprises three dimensions, namely a physical component (showing vigour and a positive affective state and being physically involved in a job task), an emotional component (showing dedication and commitment and being connected to the job role/others while working), and an intellectual component (experiencing immersion and absorption and being attentive at work).

In addition, as mentioned earlier, employee engagement coincides with concepts such as job commitment, job satisfaction, and job involvement. According to Bakker (2011), employee engagement differs from job satisfaction as it combines high activation (vigour, absorption) with work pleasure (dedication); job satisfaction is generally a more passive form of employee wellbeing. Employee engagement also differs from motivation, as it refers to affect (vigour) and cognition (absorption) in addition to motivation (dedication). Bakker (2011) asserts that employee engagement is therefore a better predictor of employee performance than the previously mentioned constructs.

Engagement can furthermore be described as a directed energy that is focused on organisational goals (Macey, Schneider, Barbera, & Young, 2009). Engaged employees have a higher probability of working harder than those who are disengaged, through increased levels of discretionary effort.

Bakker (2011) argues that there are four reasons engaged employees perform better than their non-engaged/disengaged counterparts, as discussed below.

Firstly, it is argued that employees who are engaged experience more positive emotions, such as enthusiasm, gratitude and joy. According to Fredrickson and Kurtz (2011), people enjoy feeling these states of enthusiasm, gratitude and joy and therefore seek out opportunities to feel good in these ways. According to Fredrickson's Broaden and Build theory of positive emotions (Fredrickson, 1998, 2001, 2009), positive emotions briefly broaden people's attention and thinking, and this, in turn, enables individuals to draw on wider than usual ranges of precepts or ideas and higher levels of connection. In turn, people are able to discover and build 'survival-promoting' personal resources through their flexible and broadened outlook. Fredrickson (2009) asserts that these resources can be psychological, physical, cognitive and social. It is reasoned that people with such resources are more capable to meet life challenges and seize opportunities. Thus, employees who experience such positive emotions are more likely to overcome challenges in the workplace and are more sensitive to opportunities that present themselves, in addition to constantly working on their personal resources.

Secondly, Bakker (2011) argues that employee engagement is positively associated with good health. Thus, employees who are engaged experience better health and therefore can focus on and dedicate all their resources and energy to the task at hand. According to Schaufeli et al. (2002), engaged employees recount fewer psychosomatic ailments than disengaged or non-engaged employees. Bakker and Demerouti (2008) further found that vigour is positively related to mental and physical health.

Thirdly, engaged employees are more productive due to their aptitude to generate their own personal and job resources. As discussed previously, the Broaden and Build theory elucidates that personal and psychological resources are built by experiencing momentary positive emotions that in turn can promote upward spirals towards emotional wellbeing. Bakker (2011) confirms this, stating that job and personal resources have a positive impact on engagement, which in turn has a positive impact on job performance. Thus, those employees who are engaged and perform well in turn create their own resources that foster engagement, creating a positive-gain spiral (Hakanen, Perhoniemi, & Toppinen-Tanner, 2008).

Lastly, Bakker (2011) asserts that engaged employees have the ability to transfer their engagement to others within their environment. Due to the collaborative nature of teamwork in organisations, employees who experience engagement are more likely to transfer engagement (vigour, dedication, absorption) to others, which indirectly can improve team performance. This may also be due to the

mediating role of employee engagement in the motivation process. Employee engagement is believed to play a mediating role between positive work behaviours and attitudes, and job resources (Bakker & Demerouti, 2008).

It therefore can be argued that employees who are engaged perform better/outperform their disengaged counterparts, as they experience more positive emotions, are more proactive and take the initiative to maintain their state of engagement. Employees who are engaged are internally motivated, set higher goals, have greater feelings of competence and display more pro-social behaviour (Bakker & Demerouti, 2008). Engaged employees are also believed to have better health, which in turn affects workplace absenteeism and performance ratings. According to Bledlow, Schmitt, Frese and Kuhnel (2011), organisations reported higher financial returns on days employees described themselves as experiencing higher levels of engagement at work. Bakker (2011), however, stresses that employees need moments of absence and opportunity for recovery and therefore cannot always be engaged.

2.3.2 Job burnout

An abundant amount of research has sought to comprehend the nature of job burnout (Bakker, Demerouti, & Schaufeli, 2002; Demerouti et al., 2001; Lee & Ashforth, 1996; Leiter & Schaufeli, 1996; Maslach et al., 2001). The use of the term burnout within scholarly circles appeared in the 1970s in the United States, specifically among those individuals working within the human services sector (Maslach et al., 2001).

According to Schaufeli, Leiter and Maslach (2009), the initial success of the burnout metaphor was in its use within general discourse. People within the illicit drug scene would refer to the devastating effect of chronic drug use as burnout. Freudenberg (1974) borrowed the term from his time as a consulting psychiatrist at a clinic in New York's East Village. He describes the observed decreased commitment among volunteers over time, the loss of motivation and the gradual emotional depletion they experienced as burnout.

Concurrently, Maslach and her colleagues in California interviewed a variety of human services workers and similarly were introduced to the term (Maslach, 1976). According to Maslach (1976), it was found from the interviews that where conducted that the workers developed negative feelings and perceptions about their patients/clients, they felt emotionally exhausted and, because of the emotional turmoil they were experiencing, they questioned their professional competence. Malakh-Pines et al. (1981) also conducted studies within the human services and argue that those employees who were the most enthusiastic and optimistic regarding their new role/profession were the most

susceptible to experiencing burnout. They point to the metaphor that “in order to burn out a person needs to have been on fire at one time” (Malakh-Pines et al., 1981, p. 4).

According to Malakh-Pines et al. (1981), burnout is defined as a state of mental, emotional, and physical exhaustion that is characterised by feelings of hopelessness, helplessness, physical dysfunction, and emotional drain, and by the development of negative attitudes towards work and the self. It is therefore a sense of discontent, distress and failure in the pursuit of ideals and is the result of repeated, consistent emotional pressure linked with intense association with people over an extended period of time.

Brill (1984, p. 15), in turn, asserts that burnout can be defined as

an exceptionally mediated, job related, dysphoric and dysfunctional state in an individual without major psychopathology who has (1) functioned for a time at adequate performance and affective levels in the same job situation and who (2) will not recover to previous levels without outside help or environmental rearrangement.

Cherniss (1980, 1995) was among the first researchers to propose burnout as a process. According to Cherniss (1980, 1995), burnout refers to a process in which the individual’s behaviours and attitudes change in a negative manner in response to job strain experienced. Thus, Cherniss views excessive job demands as the root cause of burnout amongst professionals and it is fostered by defensive coping strategies and characterised by withdrawal and avoidance.

Burnout was initially identified within the human services and assumed to occur in individuals who worked with people. Due to changing economic times, however, burnout has become widespread and an issue increasingly faced in many occupations (Maslach & Leiter, 1997; Schaufeli et al., 2009). Maslach and Leiter (1997) allude to the fact that most burnout studies/perceptions of the time consider burnout to be a personal phenomenon that should be dealt with on an individual basis. These studies did not consider the situational factors that affect individuals and how these contribute to the burnout experienced.

In relation to the various conceptualisations of burnout, Maslach et al. (2001) assert that burnout can be conceptualised as a psychological syndrome in reaction to enduring interpersonal stressors on the job. The most extensively used and accepted definition of burnout is Maslach’s (1982) definition, which characterises burnout “as a syndrome of emotional exhaustion, depersonalisation, and reduced personal accomplishment that can occur among people who do people work of some kind” (p. 3). Maslach, Jackson and Leiter (1996) define burnout in broader terms to include those not in the human services. They define burnout as “a state of exhaustion in which one is cynical

about the value of ones' occupation and doubtful of ones' capacity to perform" (p. 20). The three core dimensions of burnout are thus overpowering exhaustion, feelings of cynicism and detachment from the job, and a sense of a lack of accomplishment and of ineffectiveness. Depending on the nature of the job concerned, these burnout dimensions are conceptualised differently (Maslach et al., 1996). Within the helping profession, the dimensions are emotional exhaustion, depersonalisation, and low personal accomplishment, whereas in jobs outside this profession these are is labelled as exhaustion, cynicism and low personal efficacy (Maslach et al., 1996; Rothmann, 2003).

According to Maslach et al. (2001), *emotional exhaustion* is the most obvious manifestation of burnout and can be described as feelings of being drained by one's work. These authors argue that it is the central quality of burnout and the most widely reported and thoroughly analysed of the dimensions. According to Bakker and Demerouti (2007), *exhaustion* can be defined as a result of intense cognitive, physical and emotional strain, i.e. a consequence of continued exposure to specific job demands. Therefore, to cope with the overload (job demands) experienced, exhaustion prompts an individual to distance him/herself cognitively and emotionally from the job (Maslach et al., 2001). Emotional exhaustion (exhaustion) is characterised by feelings of extreme tiredness, emotional exhaustion, a lack of energy and a feeling of being drained of emotional resources to cope with continuing job demands.

Depersonalisation is an individual's attempt to distance him/herself from service recipients by becoming impersonal, callous and hardening towards others (Demerouti & Bakker, 2007; Maslach et al., 2001). Through considering people as impersonal objects of work, the demands faced becomes more manageable. In addition, individuals develop indifference and cynicism (depersonalisation) when discouraged and exhausted (Maslach et al., 2001). Thus, in most burnout research there is a strong link between exhaustion and cynicism (depersonalisation). According to Hakanen, Bakker and Schaufeli (2006), *cynicism* refers to a distant or indifferent attitude towards colleagues and towards work in general, where there is a loss in interest in work and a sense that work has no meaning.

Lastly, *reduced personal accomplishment* or *personal efficacy* refers to reduced feelings of accomplishment, successful achievement and competence in a job and the organisation (Hakanen et al., 2006). Maslach et al. (2001) state that an individual's sense of effectiveness erodes when high job demands contribute to exhaustion and cynicism. Thus, a lack of efficacy emerges from a lack of resources, whereas exhaustion and cynicism develop due to work overload and social conflict. Bakker and Demerouti (2007) argue that *professional efficacy* should not be considered as a core dimension of burnout. They contend that it may be interpreted as a consequence of burnout

(Bakker, Demerouti & Verbeke, 2004) and suggested it to reflect a personality characteristic similar to self-efficacy (Shirom, 1989, as cited in Demerouti & Bakker, 2007). In addition, Lee and Ashforth (1996) found relatively low correlations of personal efficacy with exhaustion and mental distancing (depersonalisation), and Leiter (1993) found that mental distancing (depersonalisation) develops in response to exhaustion, where personal efficacy develops independently. Therefore, this study omits personal efficacy as a dimension of job burnout and only considers emotional exhaustion and cynicism (depersonalisation).

Schaufeli et al. (2002) assert that burnout could also be rephrased as an erosion of engagement within a job. They attribute this to the evolving trend of positive psychology and the increased emphasis on individual strengths and optimum functioning as opposed to a focus only on limitations and malfunctioning.

Burnout has detrimental psychological effects and is linked to absenteeism, low employee morale, tardiness and high job turnover (Malakh-Pines et al., 1981). In addition to developing negative job attitudes, employees who experience burnout affect organisations financially through lost performance and lost employee talent. They furthermore influence morale and, when disengaged, can act out in defiant manners, causing financial loss to the company (Schaufeli & Enzmann, 1998).

2.3.3 Work overload and job insecurity

Job demands are those aspects of the job that require continuous effort, which is concomitant with psychological and physiological costs (Schaufeli & Bakker, 2004). According to Demerouti et al. (2001), job demands are defined as those psychological, social, physical or organisational aspects of the job that need sustained psychological (emotional and cognitive) and/or physical effort and thus are linked with various psychological and/or physical costs (Bakker & Demerouti, 2014; Bakker et al., 2003a). The JD-R model assumes that additional effort needs to be made to meet work goals when job demands are high, and this comes at a psychological/physical cost (fatigue, irritability) (Schaufeli & Taris, 2014). Employees will attempt to counter the impact of mobilising the extra energy by utilising resources to recover, yet when recovery is not sufficient, a resultant state of sustained activation gradually leads to emotional, mental and physical exhaustion (Knardahl & Ursin, as cited in Schaufeli & Taris, 2014).

According to the Conservation of Resources theory of stress, burnout occurs when resources are lost, are not sufficient to meet work demands, and do not yield the anticipated results (Hobfoll, 1989). Lee and Ashworth (1996) assert that the major demands faced by employees at work include role conflict, stressful events, role ambiguity, heavy workload, work pressure, role stress and

physical comfort. Schaufeli and Taris (2014) further identified various job demands in a critical overview of the JD-R model, as listed in Table 2.1 below.

Table 2.1

Job Demands

- Centralisation	- Pupils misbehaviour
- Cognitive demands	- Qualitative workload
- Complexity	- Reorganisation
- Computer problems	- Remuneration
- Demanding contacts with patients	- Responsibility
- Downsizing	- Risks and hazards
- Emotional demands	- Role ambiguity
- Emotional dissonance	- Role conflict
- Impersonal conflict	- Sexual harassment
- Job insecurity	- Time pressure
- Negative spill-over from family to work	- Unfavourable shift work pressure
- Harassment by patients	- Unfavourable working conditions
- Performance demands	- Work pressure
- Physical demands	- Work home conflict
- Problem planning	- Work overload

According to Schaufeli and Taris (2014), the nature of job demands can affect work engagement either negatively or positively. Crawford, LePine, and Rich (2010) draw upon the transactional theory of stress, in terms of which job demands are appraised by individuals in terms of their significance to be either potentially challenging or threatening. According to Crawford et al. (2010), *challenges* are those demands that are considered stressful yet have the ability to promote personal growth, mastery and future gains. Example of these are high workload, high levels of job responsibility and time pressure. Such demands are viewed as opportunities to learn, achieve results and demonstrate ability that, in turn, is rewarded. That is, the individuals experience eustress, which is a positive type of stress in which the individual's "cognitive appraisal of the situation is seen to either benefit or enhance the individual's well-being" (Rothman, Steyn, & Mostert, 2005, p. 56). This type of stress promotes employee engagement (Nelson & Simmons, 2003).

Hindrances, on the other hand, are job demands that are considered stressful which have the potential to impede goal attainment, learning and personal growth. For example, organisational politics, red tape, aggravations, role ambiguity and role conflict. Such demands are viewed as constraints or barriers that unnecessarily hinder individual progress to goal attainment and rewards. Thus, individuals experience distress defined as a 'negative psychological response' to a stressor that is signalled by the 'presence of negative psychological states' (Coetzee & Schreuder, 2013, p. 283). According to Hsieh and Wang (2012), job stress is positively associated with burnout, fuels

poor work performance and low job satisfaction, and thus influences employees' health negatively. Crawford et al. (2010) support the notion that certain types of job demands are more likely appraised as challenges and other types as hindrances, despite individual differences and experiences, as a result of people's unique beliefs regarding the level of job demands.

Job demands furthermore can be divided into three distinct scenarios. Firstly, job demands can meet job resources when adequate resources (job and personal resources) within a job role are available to meet the demands of the job. According to Bakker (2011), job resources become relevant and have the potential to motivate employees to utilise these resources to meet demands (challenges) in the presence of high job demands. Thus, if the individual is not confronted by high demands, the available resources would not become evident and therefore would not be utilised. Furthermore, the motivating power of utilising resources encourages employee growth, development and learning as alternative methods of dealing with high demands (Bakker & Demerouti, 2007). Thus, when faced with certain job demands, employees can readily utilise their resources to meet those demands.

Secondly, job demands can surpass job resources (including personal resources). This transpires when employees are faced with high job demands and are unable to utilise the resources available to meet those demands, or do not have sufficient resources available to meet those demands (hindrances). According to Demerouti and Bakker (2011), the environment in which the employee is may not provide adequate resources to deal with the demands faced.

Lastly, job resources can exceed the demands of the job. According to Bakker (2011), an employee can potentially experience work as unchallenging, boring and dull if there are not sufficient job demands within his/her role. An employee may have an abundance of resources but may not be able to utilise these, as minimal demands are present to do so. Over time, this can have a negative effect on employee engagement and, in turn, on employee performance.

It is therefore essential that employees have sufficient job demands that challenge them in order to keep them engaged, yet these should not become a hindrance to their performance if they are unable to meet the demands. Goleman (1995) argues that flow emerges when an individual engages in an activity that challenges all his/her capabilities. As the individual's skills increase, greater challenges are required to enter into flow. On the other hand, if a task is too simple it becomes boring, and if it is too challenging it can result in anxiety rather than flow.

Considering the current economic climate and the challenges faced by the mining and construction industry (i.e. retrenchments, downsizing, etc.), two job demands increasingly faced by employees are an increase in workload and job insecurity. These are elaborated on below.

2.3.3.1 Work overload

According to Ganster and Schaubroeck (1991), individuals who experience work overload are more likely to disengage from their work and withdraw in order to replenish diminishing energy levels. Leiter and Maslach (2005) assert that work overload drives exhaustion which is the root cause of burnout. Gryna (2004) argues that work overload ensues when high job demands surpasses the time and resources accessible to meet those demands. Thus, work overload can lead to stress and in turn burnout where the requirements of the job do not meet the capabilities, resources or needs of the employee (Gryna, 2004). In a study conducted by Pines et al. (1981), among human service workers, it was found that 50 percent of the stresses mentioned pertained to overload.

Rothman, Mostert and Strydom (2006) refer to overload as the amount of emotional load, mental load and work an individual experience. French and Caplan (as cited in Pines et al., 1981) further distinguished between subjective and objective, as well as, qualitative and quantitative work overload. Objective overload is the definite amount of information employees are expected to process within a certain amount of time. Subjective overload refers to an employee's perception of the amount of work and its difficulty and their ability to deliver. Quantitative overload implies that an employee has more work tasks to do than what is attainable within a given period of time. Lastly, qualitative overload implies that the job role requires knowledge and skills surpassing that of the employee within the role.

According to Pines et al. (1981) qualitative and quantitative overload are correlated with physiological and psychological indices of stress. People who have experienced work overload have shown increased smoking habits, increased heart rate and serum cholesterol levels, increased job dissatisfaction and tension as well as lower self-esteem. (Pine et al., 1981).

2.3.3.2 Job insecurity

Job insecurity relates to people within the workplace who fear they may become unemployed due to the loss of their job (De Witte, 1997). According to Greenhalgh and Rosenblatt (1984, p. 438), job insecurity refers to the "powerlessness to maintain desired continuity in a threatened job situation". De Witte (1999) defines job insecurity as the threat of job uncertainty or job loss, and asserts that job insecurity is one of the greatest disquieting aspects within a work situation. This is affirmed by Rothmann et al. (2006), who assert that job insecurity refers to feeling insecure within a current position and level in relation to the future thereof. Job insecurity is related to lower levels of job involvement, increased intention to leave, and decreased trust and engagement, and is also related to mental health complaints (De Cuyper & De Witte, 2005). Greenhalgh and Rosenblatt (1984) further state that the experienced threat of job insecurity is intensified by employees' sense of powerlessness regarding the situation.

De Cuyper, Bernhard-Oettel, Berntson, Witte, and Alarco (2008) found that job insecurity was a statistically significant factor that is negatively related to employee engagement. They further found that job insecurity may lead to feelings of unpredictability and uncontrollability. Thus, employees' level of engagement and burnout is affected by how secure they feel in their work roles.

Work overload and job insecurity can be regarded as job demands increasingly faced by employees who work for heavy earthmoving equipment suppliers due to the challenges faced by the mining and construction industry. In conclusion, this study will incorporate work overload and job insecurity as job demands in order to assess the impact these demands have on employee engagement and job burnout.

2.3.4 Learning organisation

According to Conservation of Resources Theory (Hobfoll, 1989, 2002), individuals seek to attain, retain and keep that which is of value to them (e.g. social, material, personal and energetic resources). The JD-R model affirms this assertion and defines *job resources* as those psychological, social, physical or organisational aspects of the job that are either/or: a) functional in achieving work goals; b) reduce job demands and the accompanying psychological and physical costs; and c) stimulate development, learning and personal growth (Bakker & Demerouti, 2014; Bakker et al., 2003a; Bakker & Demerouti, 2014).

Job resources are found at various levels, namely the organisational level (e.g. remuneration, promotions, job security); the interpersonal level (e.g. management and colleague support, team climate); the organisation of work level (e.g. job control, role clarity, involvement in decision making); and at the task level (e.g. autonomy, skill variety, task identity, performance feedback) (Bakker et al., 2003b; Demerouti et al., 2001). According to Hackman and Oldman (1980), resources at the level of the task induce so-called critical psychological states (e.g. meaningfulness) that drive individuals' behaviours and attitudes.

Bakker and Demerouti (2008) emphasise that job resources can either perform an intrinsic or extrinsic motivational role within the organisation. Job resources can play an intrinsic motivational role as they foster employees' learning, development and growth. In this regard, basic human needs are fulfilled by job resources such as the need for autonomy, competence and relatedness. For example, the need for autonomy and the need to belong are satisfied by decision latitude and social support, whereas job competence is increased by proper feedback that fosters learning (Bakker & Demerouti, 2008; Bakker et al., 2008; Schaufeli & Bakker, 2004).

In addition, job resources play an extrinsic motivational role in that an individual's willingness to dedicate effort and abilities to the work task is fostered by an environment that offers many

resources. Thus, in such an environment, the likelihood of task completion and goal attainment is increased. The likelihood of success in achieving work goals, for example, is increased by supportive colleagues and performance feedback. Engagement is expected to occur whether the outcome is obtained through the gratification of rudimentary needs or by the accomplishment of work goals (Bakker et al., 2008; Schaufeli & Bakker, 2004).

Moreover, Hobfoll and Shirom (2001) assert that, a) in order to avert the loss of resources, individuals need to bring in resources; b) susceptibility to resource loss is decreased with an increased accessibility of a greater pool of resources; c) the likelihood of resource loss (loss spiral) is increased among those individuals who do not have access to strong resources; and d) those individuals with strong resource pools are more likely to risk resources for increased resource gain (gain spiral). Thus, organisations that provide employees with sufficient job resources are more likely to increase resources as opposed to organisations that do not provide adequate resources.

Bakker et al. (2008) regard job and personal resources as essential factors related to employee engagement. According to Bakker (2011), engaged employees are more likely to increase their job resources through mobilising their social networks and asking for feedback from supervisors.

The various job resources identified by Schaufeli and Taris (2014) in a critical overview of the JD-R model are outlined in Table 2.2.

Table 2.2

Job Resources

- Advancement	- Safety climate
- Appreciation	- Safety routine violations
- Autonomy	- Social support from colleagues
- Craftsmanship	- Social support from supervisors
- Financial rewards	- Skills utilisation
- Goal clarity	- Strategic planning
- Information	- Supervisory coaching
- Innovative climate	- Task variety
- Job challenge	- Team cohesion
- Knowledge	- Team harmony
- Leadership	- Trust in management
- Opportunities for professional development	
- Participation in decision making	
- Performance feedback	
- Positive spill-over from family to work	
- Professional pride	
- Procedural fairness	
- Positive patient contacts	
- Quality of the relationship with the supervisor	

For the heavy earth moving and construction equipment suppliers to remain relevant and economically viable in such a volatile and changing industry, it is imperative to innovate and be creative in all aspects of the organisation. Therefore, fostering a climate in which there is continuous learning and adaptation to the changing environment becomes an essential resource not only to remain relevant, but to excel within such a competitive industry.

Senge (2007) asserts that traditional management hierarchies are weakened as organisations become more networked. This opens up new capacity for continuous learning, adaptation and innovation to take place. At its core, the traditional management system is dedicated to mediocrity that forces employees to continuously work harder to compensate for the company's failure to tap the collective intelligence and spirit of employees, which is characteristic of collaboration (Senge, 2007). Senge (2007) argues that an agile, flexible and motivated workforce is required for the survival of organisations in a continuously changing environment. In this regard, a learning organisation can be considered as a job resource, as it holds both intrinsic and extrinsic motivational value (as discussed previously) that empowers employees to meet the various job demands faced within the mining and construction industry.

The term "learning organisation" was popularised by Peter Senge. Senge (2007) defines a learning organisation as an organisation in which people "continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free and where people are continually learning how to learn together" (p. 3). In addition, Bennet and O'Brien (1994) define a learning organisation as an organisation in which learning is accelerated for all employees and is supported by the values, practices, policies, systems and structures of the organisation, and where the organisation has an enhanced and continuous capacity to learn, adapt and change its culture. Learning, furthermore, results in continuous enhancements in various areas (teamwork, effective management practices, products, services, work processes, structures, job functionality), which in turn results in the overall success of the business. This is supported by Garvin (1993), who defines a learning organisation as one that is skilled in creating, acquiring and transferring knowledge and in turn modifying behaviour to reflect the new knowledge and insight acquired.

According to Pearn, Roderick and Mulrooney (1997), a priceless asset for both individuals and organisations is the capacity to learn. A learning organisation provides a competitive advantage. At its core, the ability to learn permits the organisation to be flexible and adaptable to an ever-changing environment (Fourie, 2014). A learning organisation furthermore promotes learning to improve

work practices and to enhance services, which in turn has an impact on financial returns. Thus, learning and working are synonymous.

Watkins and Marsick (1993) define a learning organisation as an organisation that transforms itself through continuous learning. According to Watkins and Marsick (1993), a learning organisation consists of two factors; the first is the individuals who comprise the organisation, and the second is the structures and culture shaped by the social institution of the organisation. It is also suggested that the design of a learning organisation originally requires six action imperatives: creating continuous learning opportunities, promoting inquiry and dialogue, encouraging collaboration and team learning, establishing systems to capture and share learning, empowering people toward a collective vision, and connecting the organisation to the environment. Leadership was initially omitted from the model, but was later added, as the critical role of a leader in the learning organisation was emphasised and is believed to be at the centre of the framework. Watkins and Marsick's (1993) model of learning organisation action imperatives (Figure 2.7) specifies that the seven action imperatives have to occur at four levels of a learning organisation for it to have the capacity for change and continuous learning: the individual (continuous learning and dialogue and inquiry), team (team learning and collaboration), organisation (empowerment and systems), and societal levels (connection to the environment).

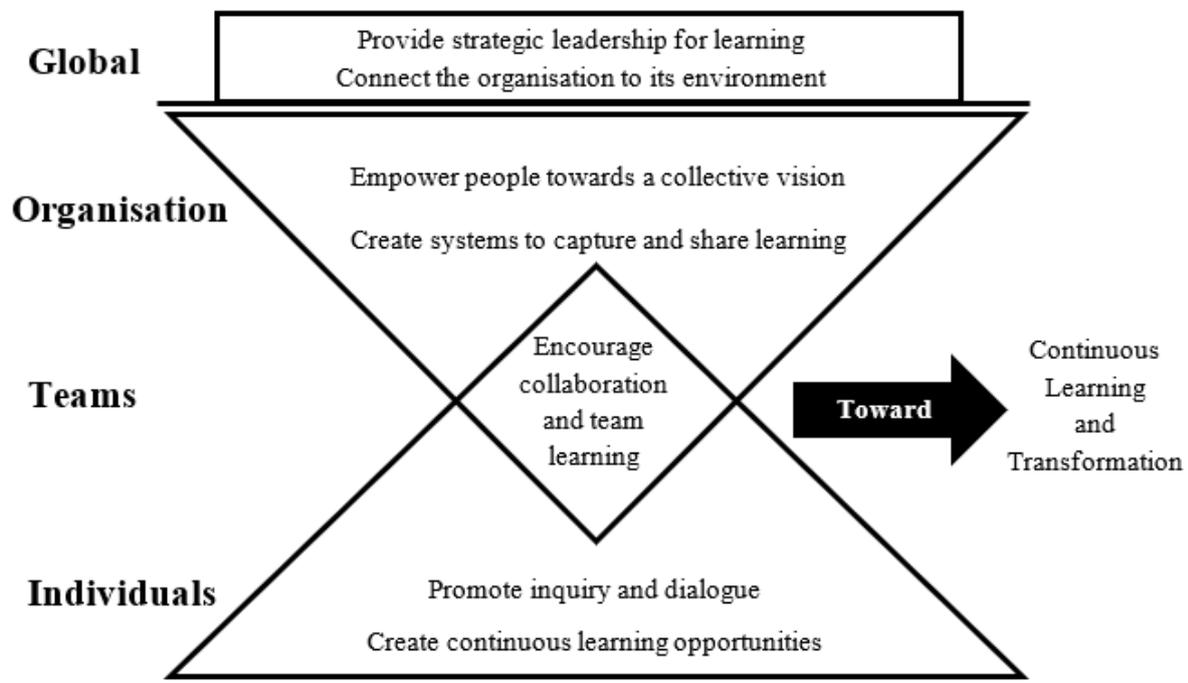


Figure 2.7 Learning organisation action imperative

(Watkins & Marsick, 1993)

In addition to the seven action imperatives (discussed below) there are seven characteristics (7 C's) – continuous, collaborative, connected, collective, creative, captured and codified, and capacity building – of a learning organisation within the four levels, which have an enhanced ability to change when the seven action imperatives achieve results (Figure 2.7). According to Kim, Egan and Tolson (2015), these seven action imperatives, from a systems perspective, are inputs to evolve into a learning organisation, whilst the seven characteristics result from the inputs as outputs, as shown in Table 2.3.

Table 2.3***The Framework for the Learning Organisation***

Four levels of learning	Nature of learning	Six action imperatives	Learning outcomes (7 Cs)
Individual	Change behaviour, knowledge, motivation, capacity to learn	Continuous learning opportunities Inquiry and dialogue	Continuous learning for continuous improvement
Team	Change in a group's capacity for collaborative and synergistic work	Collaboration and team learning	Collaborative, connected, collective, creative
Organisation	Change in organisational capacity for innovation and new knowledge	Systems to capture and share learning Empowering people	Connected, captured, and codified, capacity building
Society	Change in overall capacity of community and society	Connection to the environment Leadership for learning	Connected by enhanced community's capacity building

Source: Adapted from Watkins and Marsick (1993, p. 263)

The framework for the learning organisation model is also presented in Table 2.3, as endorsed by Watkins and Marsick (1993). According to the framework there are several suggested core drivers of the learning organisation. These are: strategy for learning, leadership for learning, people practices, processes and practices for learning and culture. The action imperatives are defined as the categories of practices that need to change, and the drivers are those things that people work with to enable the change. The seven action imperatives (dimensions) are elaborated on below:

a) Continuous Learning

Forming constant learning opportunities within the workplace relates to learning that is planned into work. Opportunities to learn on the job is thus essential to encourage continuous learning and growth.

b) Dialogue and Inquiry

In order to promote inquiry and dialogue, a change in culture is required that promotes questioning, feedback and experimentation. Through dialogue and inquiry, employees gain creative reasoning skills to share their views with others enabling such a culture change.

c) Team Learning

In order to access various methods of thinking, groups are required to learn and work collectively. Collaboration and team learning are encouraged. Organisational learning takes place in a culture in which collaboration is valued and rewarded.

d) Imbedded Systems to Capture and Share Learning

A learning organisation is one in which both low- and high-technology systems are designed and unified with work to share learning. All employees have access to these systems, and the systems are well maintained. An example is an online learning management system (LMS) that hosts e-learning courses that all employees in the company have access to.

e) Empowering People toward a Collective Vision

A learning organisation empowers employees toward a shared vision to which end establishing, owning and executing a joint vision is encouraged. Accountability for owning this shared vision is furthermore fortified through collaboration and team work.

f) Systems to Connect the Organisation to its Environment

People are assisted to understand the outcome of their work for the entire organisation, including the organisation's environment. Information obtained from assessing the organisation's internal and external environment is then utilised to regulate the work practices of the organisation, linking it to its communities.

g) Strategic Leadership for Learning

Learning is exhibited, advocated and encouraged by leaders, where leadership utilises learning strategically for business results. This dimension is positioned at the centre of the framework, as

leaders play a pivotal role as they shape the emerging product by empowering individuals with a vision and engaging in dialogue. Thus, leaders should champion learning at all levels.

According to Pearn et al. (1997), the capacity of an organisation to think for itself, to continuously question and challenge its assumptions and beliefs, and to work out its own solutions is the closest that it can come to having all the answers. Ideally, this happens through a shared understanding of complex issues and the commitment and creativity that come from the collaboration of employees who share a vested interest in the success and longevity of the organisation of which they are part.

In considering this, a learning organisation therefore will be considered as a job resource within the mining and construction equipment supplier industry.

2.3.5 Emotional intelligence

In addition to job resources, the JD-R model also includes personal resources, which form an extension of the original model (Bakker & Demerouti, 2014; Demerouti et al., 2001). This stems from Conservation of Resources theory (Hobfoll, 1989, 2002), which posits that individuals seek to attain, retain and keep that which is of value to them (e.g. social, material, personal and energetic resources). Stress (distress) occurs when individuals fail to gain resources after resource investment, or when their resources are threatened (both job and personal resources). Personal resources refer to those intrinsic resources of the employee that are utilised in the working environment. According to Hobfoll et al. (2003), *personal resources* refer to an individual's perceived ability to have an effect on and control the environment successfully, especially during challenging circumstances. It furthermore is an aspect of the self that generally is linked to resilience. According to Xanthopoulou, Bakker, Demerouti and Schaufeli (2009), personal resources a) are functional in achieving goals; b) protect from pressures and the associated psychological and physiological costs; and c) stimulate development and personal growth.

According to Schaufeli and Taris (2014), personal resources are integrated into the JD-R model in five ways: 1) personal resources influence the perception of job characteristics; 2) personal resources have a direct effect on wellbeing; 3) personal resources moderate the relationship between wellbeing and job characteristics; 4) personal resources mediate the relationship between job characteristics and wellbeing; and 5) personal resources act as a "third variable". Bakker et al. (2008) further assert that the presence of certain personal resources has been linked to positive results, such as motivation, establishing goals, adaptability, performance and other positive results because of the related self-evaluations they produce. In addition, the combination of personal resources and job resources fosters personal learning, development and growth, and enables an

individual's ability to more effectively activate additional resources required to meet job demands (Bakker, 2011).

Schaufeli and Taris (2014) identified numerous personal resources in a critical overview of the JD-R model, as in the table below (Table 2.4). However, there is a need to further validate and expand the research on personal resources within the JD-R model to empower practitioners to create and implement appropriate interventions aimed at promoting employee engagement and, in doing so, employee wellbeing.

Table 2.4

Personal Resources

<ul style="list-style-type: none"> - Emotional and mental competencies - Extraversion - Hope - Intrinsic motivation - Low neuroticism - Optimism - Resilience 	<ul style="list-style-type: none"> - Need satisfaction (autonomy, belongingness, competence) - Organisation-based self-esteem - Regulatory focus (prevention and promotion focus) - Self-efficacy - Value orientation (intrinsic/extrinsic values)
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As pointed out earlier, heavy earthmoving and construction equipment suppliers face an ever-changing and volatile environment and therefore it is imperative to innovate and be creative in all aspects of the organisation. For the organisation to become more oriented towards fostering a climate that continuously learns and adapts to new conditions and challenges, there is an increasing need for individuals who excel in novel situations (Lim, Yoo, Kim & Brickell, 2017). Moreover, Jordan (2004) argues that little consideration is given to the emotional impact of such rapid and abrupt change on employees. He proposes that such change produces a range of emotions and feelings within an individual that need to be managed at an individual level in order for an organisation's learning to be successful. Thus, emotional intelligence becomes a valuable personal resource in managing change and the demands that accompanies it.

Emotional intelligence is believed to play an important role in learning at both the individual and organisational level. Ghosh (2015) asserts that emotional intelligence becomes a critical enabler for a company to form, implement and internalise a learning organisation culture and philosophy and therefore is a catalyst in developing a learning organisation. It is also argued that emotional intelligence plays a vital part in enabling employees and managers to manage dynamic change, and therefore it is an essential personal resource to meet the changing demands employees face daily.

In considering this, emotional intelligence can be regarded as a valuable personal resource, especially in a highly competitive and volatile market, as mentioned. Emotional intelligence therefore is incorporated in this study as a personal resource.

According to Averill (1999), certain work-related tasks can be enhanced by emotions, while Baumeister & Heatherton (1996) point out that an individual's ability to meet some workplace demands can be impinged by emotions. The power of emotional competence has been popularised by Dan Goleman in his book *Emotional Intelligence*. According to Goleman (1995), emotional intelligence is the ability to regulate one's mood and to keep distress from overwhelming the ability to think; an individual's ability to motivate him/herself and to persevere when faced with frustration; to delay gratification and control impulse; to hope and to empathise.

An eminent psychologist, E. L. Thorndike, who popularised the notion of IQ in 1920, suggests that social intelligence (an aspect of emotional intelligence) is itself an aspect of an individual's intelligence. In the 1960s, Robert Sternberg drew from Thorndike's research and concluded that social intelligence is a key part of an individual's success in his/her personal life, distinct from academic performance (Goleman, 1995). Gardner (1983) furthermore proposes that there is a wide spectrum of intelligences (seven key varieties), and not just one monolithic intelligence that is essential for success in life. Gardner (1983) proposes the concept of personal intelligence, with two subtypes – referred to as intrapersonal intelligence (examination of one's own feelings) and interpersonal intelligence (the ability to read the moods, desires and intentions of others and to act on them).

Emotional intelligence (EI) stems partly from Gardner's (1983) concept of personal intelligence and has its origins in social intelligence (Goldman, 1997; Taylor & Bagby, 2000). Goleman's (1995) definition of EI, mentioned earlier, is argued by Zeidner, Matthews, and Roberts (2004) to lack scientific rigour and seems to reflect personology (the study of personality traits), while it furthermore refers to Judeo-Christian ethical values, which Zeidner et al. assert is a 'pandora's box' better left unopened. According to Salovey and Mayer (1990), who published the first peer-reviewed scientific article on EI, emotional intelligence can be defined as "the ability to monitor one's own and others' feelings and emotions to discriminate among them and to use this information to guide ones thinking and actions" (p. 189). Lynn (2005) defines EI as the ability to manage oneself and relationships with others in order to be able to live out personal intentions. Zeidner et al. (2004) furthermore assert that EI refers to the competence to understand, identify, express and assimilate emotions in thought and the ability to regulate emotions (positive and negative) in oneself and another.

Mayer, Salovey and Caruso (2000) argue that mental abilities, skills and capabilities compose EI. Thus, EI can be summarised as the capacity to process emotional information efficiently and accurately in relation to information essential for the recognition, creation and regulation of emotions in the self and other (Mayer & Salovey, 1995). From this, the framework proposes that individuals differ in these abilities to regulate, create and recognise emotions, and these differences are important a) as they underpin skills that could potentially be learnt or taught; and b) emotional abilities may explain the difference in important life criteria such as the quality of personal relationships, life satisfaction and psychological wellbeing (Palmer, Gignac, Ekermans & Stough, 2008; Salovey & Mayer, 1990). In addition, individuals who are emotionally intelligent are able to regulate their emotions through a rationally consistent model of emotional functioning (Mayer & Salovey, 1995).

According to Caruso (2004, as cited in Palmer et al., 2008), the models of EI can be classified into three main theoretical approaches. The first are ability models, in which EI is defined as a theoretically correlated group of intellectual aptitudes that consider emotions and the processing of emotional information (e.g. Mayer & Salovey, 1995). Secondly are the trait models, in which EI is defined as a range of social emotional traits such as aggressiveness (e.g. Bar-On, 1997). Lastly are competency models, in which EI is defined as comprising a set of competencies. Palmer et al. (2008) argue that these models are more complimentary than contradictory, and conducted a comparative analysis of the models in order to establish the common dimensions underlying EI. Palmer et al. (2007) conclude that EI can be conceptualised as a unifactorial construct with five facets: Emotional Self-Awareness; Emotional Awareness of Others; Emotional Reasoning; Emotional Self-Management; and Emotional Management of Others.

Gignac (2010) furthermore considers the five common ability-based EI dimensions as unique across all the prevailing inventories also identified by Palmer et al. (2008), and from these found that the factor structure was better represented by seven common intercorrelated dimensions of EI (two dimensions can be represented by two separate factors each). The seven dimensions are: Emotional Self-Awareness, Emotional Expression, Emotional Awareness of Others, Emotional Reasoning, Emotional Self-Management, Emotional Management of Others and Emotional Self Control.

a) Emotional Self-Awareness (ESA)

According to Gignac (2010), emotional self-awareness is the skill with which individuals consciously identify, perceive and understand their emotions at work. Thus, it is an individual's frequency/level of awareness of how his/her emotions may affect personal behaviour and thoughts

at work. Neither positive nor negative emotions are emphasised, as a balance of both positive and negative affect states are incorporated. When an individual is high on ESA, it is indicative that the individual frequently is aware of his/her emotions, their causes, and the impact these have on their thoughts, decisions and behaviour within the workplace (Gignac, 2010).

b) Emotional Expression (EE)

Emotional expression can be defined as an individual's capacity to express emotions effectively (Gignac, 2010; Palmer et al., 2008). EE is thus an individual's ability to appropriately express emotions at work (at the right time, in the right manner and to the right people). A balance between positive and negative emotions like positive feedback or anger is incorporated. Furthermore, a clear distinction is not made regarding the method of emotional expression, as emotions can be expressed both verbally and non-verbally or in a combination thereof. Individuals who are high in EE frequently express appropriate emotions (happiness, frustration, positive feedback) within the workplace (Gignac, 2010).

c) Emotional Awareness of Others (EAO)

According to Palmer et al. (2008), emotional awareness of others considers an individual's skill to perceive and understand the emotions of other. It is thus the frequency at which individuals are able to identify both verbal and non-verbal expressions of emotions by others and understand the impact of these emotions in motivating and affecting the behaviours of others within the workplace. Individuals who are high on EAO therefore frequently identify the emotions and causes thereof in others within the workplace accurately (Gignac, 2010).

d) Emotional Reasoning (ER)

Emotional reasoning is the ability of individuals to reason with emotional information in thought (Palmer et al., 2008). According to Gignac (2010), ER is the frequency with which individuals incorporate emotionally relevant information in the course of problem solving or decision making. Salovey and Mayer (1990) propose that the use of emotions in thought can lead to successful problem-solving, creativity and flexible planning, and can direct cognition adaptively. Therefore, ER is not an anti-rationality disposition, but rather considers an individual's balanced approach in taking both their own and others' emotions into consideration in decision-making within the workplace. Furthermore, ER emphasises the utilisation of emotions for the successful engagement of others at work. Individuals scoring high on ER therefore frequently consider both their own and others' emotions in decision-making at work and can point out that such a consideration has taken place (Gignac, 2010).

e) Emotional Self-Management (ESM)

Emotional self-management is the frequency with which individuals are able to successfully regulate and manage their own emotions at work (Gignac, 2010; Palmer et al., 2008). Although there are considerations of engagement in events that uphold a positive emotional state within the workplace, importance is placed on the ability to manage negative emotional states at work and the successful adjustment thereto. ESM is therefore the ability not to stay in a perpetual state of ruminating or dwelling on a situation, but rather the ability to process and move on from an emotional setback. Individuals high on ESM frequently engage in activities that contribute to the positive growth of emotions whilst not frequently anticipating negative emotions (Gignac, 2010).

f) Emotional Management of Others (EMO)

Emotional management of others concerns the skill with which individuals frequently can effectively regulate and manage others' emotions at work (Gignac, 2010; Palmer et al., 2008). Thus, individuals may modify the emotions of others (e.g. acting to motivate colleagues or subordinates) for their own betterment at work. EMO therefore involves the creation of a more positive working environment for others. Furthermore, where others face issues causing distress, an individual with this skill is able to help in the resolution thereof. Employees high on EMO frequently have the ability to create a positive working environments for others, to regulate and manage the emotions of others, and can assist in the resolution of issues causing distress (Gignac, 2010).

g) Emotional Self-control (ESC)

Emotional self-control is similar to emotional self-management but incorporates an additional focus in terms of which there is a behavioural demonstration of the control of intense reactive emotions at work, like jubilation or anger. ESC is defined as the frequency with which individuals are able to control their strong emotions appropriately at work (Gignac, 2010). A demonstrable maintenance of focus/concentration on the job task whilst facing emotional adversity is a key focus of ESC. It is therefore more reactive compared to ESM, which is more proactive. Individuals high on ESC frequently show the capacity to remain focused when facing emotional adversity, such as disappointment, anxiety or high levels of anger, remaining in control of their emotions and not losing their temper (Gignac, 2010).

The present study utilises the Genos EI scale, which comprises the seven dimensions as defined above. EI, according to Gignac (2010), is represented by the total EI score, which represents the "frequency with which an individual engages in a diverse variety of emotionally intelligent

behaviours relevant to the identification or emotions (of the self and others), the reasoning with emotions, and the general management of emotions (self, others, and emotional control)” (p. 15).

According to Ashkanasy, Ashton-James, and Jordan (2008), EI functions to mediate individual perceptions of emotional cues within the workplace, individual responses to such cues and the manner in which emotions are coped with or reduced. According to Elias, Zins, Weissberg, Frey, Greenberg, Haynes & Shiver. (1997), EI is positively related to emotional health and adjustment, academic achievement and occupational success and satisfaction.

In considering Bakker and Demerouti's (2008) definition of personal resources as a positive self-evaluation that is connected to resilience and refers to an individual's sense of ability to control and impact their environment efficaciously, emotional intelligence can be considered as a crucial personal resource that affects an individual's psychological wellbeing and success in life.

2.4 THE RELATIONSHIPS AMONG LATENT VARIABLES

In conclusion to the literature review presented above, the relationships among the outlined variables are considered below. Hypotheses for the study were established from this.

2.4.1 Employee Engagement (EE) and Job Burnout (JB)

Bakker et al. (2008) assert that burnout has stimulated most of the contemporary research on work engagement. It is argued that engaged employees have an awareness of an effective and energetic association with their job role and look upon their work as stimulating, in contrast to it being stressful and arduous, as it is viewed by those who suffer from burnout. Maslach and Leiter (1997) rearticulate burnout as an erosion of engagement with the job and view engagement characteristics according to the three opposite dimensions of burnout, namely energy, efficacy and involvement. Thus, in the case of burnout, it is maintained that energy turns into exhaustion, efficacy into ineffectiveness and involvement into cynicism. According to this, it is unlikely that highly engaged employees would suffer from severe burnout, or that employees who are suffering from burnout would show high levels of engagement. This finding suggests that burnout and employee engagement are related.

Where Maslach et al. (2001) view engagement on the same continuum as burnout, it is important to note that Schaufeli et al. (2001) view engagement as the opposite – a mutually exclusive construct to burnout characterised by three dimensions, namely vigour, dedication and absorption. It can therefore be argued that the absence of burnout does not in turn imply that engagement is present (Storm & Rothmann, 2003), but rather that job burnout is a mutually exclusive construct distinct from employee engagement. Employees may be disengaged from their work role yet not

experience burnout (characterised by mental impairment and symptoms such as absentmindedness, effort to resolve complex tasks and an inability to concentrate). Although these two schools of thought are still widely debated within the scholarly field, and no concrete conclusion has been drawn whether or not these two constructs are independent of each other, the point of departure for this study is that employee engagement is a mutually exclusive construct to burnout. Consequently, the following hypotheses were tested:

Hypothesis 1: Employee Engagement has a significant negative impact on Job Burnout

Hypothesis 2: Job Burnout has a significant negative impact on Employee Engagement

2.4.2 Learning Organisation (LO) and Employee Engagement (EE)

Research on engagement has utilised the JD-R model to study factors associated with engagement experienced in work activity (Bakker & Demerouti, 2007, 2014; Schaufeli et al., 2001). Bakker et al. (2008) consider job resources as significant aspects related to employee engagement. Employees engaging in work to complete work-related tasks depend on specific emotional, physical and cognitive resources (Rothmann & Rothmann, 2010). It is argued that the presence of these resources (emotional, physical and cognitive) will lead to greater engagement. According to Kahn (1990) and Saks (2006), employees who receive resources (emotional, physical and cognitive) from the organisation feel indebted (or obligated) to repay the organisation in increased levels of engagement. Research has found that job resources, such as the intrinsic nature of the job (e.g. skill variety, autonomy, feedback and learning opportunities) and social support from supervisors and co-workers, are positively associated with employee engagement (Bakker et al., 2008; Rothmann & Rothmann, 2010; Schaufeli & Bakker, 2004).

In a longitudinal study conducted by Mauno, Kinnunen and Ruokolainen (2007) it was found that job resources predicted employee engagement better than job demands, and that job control and organisation-based self-esteem were the best lagged predictors of the three components of employee engagement. Sarti (2014) found in a longitudinal study among caregivers that employee engagement was significantly affected by the availability of job resources. The study showed in particular that greater learning opportunities had a direct effect on increasing employee engagement. In addition, co-worker and supervisor support had a significant positive impact on work engagement.

Rothmann and Pieterse (2007) examined the relationship between job resources and employee engagement and found that growth opportunities in the job (i.e. autonomy, learning opportunities and variety) predicted employee engagement the best. Furthermore, in a study conducted in the

mining industry, Rothmann and Joubert (2007) found that growth opportunities in the job and organisational support strongly predicted employee engagement.

According to Rothmann and Rothmann (2010), the need of businesses to maximise employees' inputs has contributed greatly to the increased interest in engagement. They assert that intense global competition drives business needs, which increase the need for employees to be increasingly committed, both cognitively and emotionally, to the organisation, its customers and the job role. Various studies have shown that employee engagement predicts positive organisational outcomes such as motivation, commitment, low turnover intention, return on assets, productivity, job satisfaction, profits and shareholder value (Bakker & Demerouti, 2014; Bakker et al., 2008). Sonnentag (2003) furthermore asserts that employee engagement affects the mindset of employees and relates to learning and personal initiatives.

Hakanen et al. (2008) refer to this as a positive-gain spiral between employee engagement and job resources. Thus, the job resources available to employees and utilised by them lead to engagement in their work. In turn, being engaged in their work leads to personal inventiveness, which has a positive impact on innovation and, in this manner, affects engagement, which assists in accumulating more job resources. According to Lockwood (2007), employees who are highly immersed in their work procedures, such as designing and implementing process changes, are more engaged.

A study conducted by Malik and Garg (2017) among IT professionals in India found a positive, significant relationship between a learning organisation and employee engagement.

The following hypothesis was formulated regarding the relationship between job resources (learning organisation) and employee engagement:

Hypothesis 3: Learning Organisation has a significant, positive impact on Employee Engagement

2.4.3 Emotional Intelligence (EI) and Employee Engagement (EE)

The first study conducted on the role of personal resources (self-efficacy, self-esteem and optimism) in the JD-R model found that job resources mediated the relationship between personal resources and employee engagement (Xanthopoulou et al., 2007). The study further found that employees who have personal resources are optimistic about their future and confident in their capabilities, and therefore may identify/create more opportunities within their working environment that enable goal attainment.

Bakker et al. (2008) regard personal resources as important factors associated with employee engagement. Xanthopoulou et al. (2009) found that personal resources relate positively to work engagement. The results suggest that employees most likely to experience work engagement are those employees who are self-efficacious and optimistic, and who believe it is important for the organisation. The findings emphasise that a requirement for the experience of engagement is the involvement of the self. This supports the theories that acknowledge personal resources as critical elements of employee wellbeing (Judge, Bono, Erez, & Locke, 2005).

Among the personal resources that have been considered in relation to work engagement are the PsyCap dimensions (Herbert, 2011); sense of coherence (Vogt, Hakenen, Jenny, & Bauer, 2016); personality dimensions (extraversion, conscientiousness, emotional stability), active coping styles, flexibility, adaptability, an achievement-striving orientation and perfectionism (Schaufeli & Salanova, 2011); emotional intelligence (Langenhoven, 2015; Middleton, 2016); and internal work value orientation (Van den Broeck, Van Ruysseveldt, Smulders, & De Witte, 2011).

For the purpose of this study, the personal resource that is considered is emotional intelligence. According to Elias et al. (1997), emotional intelligence (personal resource) is positively related to emotional health and adjustment, academic achievement and occupational success and satisfaction. These constructs are related to employee engagement. Furthermore, a study conducted by Duran, Extremera, and Rey (2012) similarly found that emotional intelligence is a key device for employee engagement.

It therefore was hypothesised that emotional intelligence has a positive relationship with employee engagement:

Hypothesis 4: Emotional Intelligence has a significant positive impact on Employee Engagement

2.4.4 Learning Organisation (LO) and Emotional Intelligence (EI)

A study conducted by Xanthopoulou et al. (2009) found, consistent with their hypothesis, that employees are more engaged on days characterised by many job resources. Job resources, such as team atmosphere and supervisor coaching, contribute to employee personal resources (self-esteem, self-efficacy, optimism levels), which in turn contribute to engagement.

According to Xanthopoulou et al. (2007), personal resources mediate the relationship between job resources and employee engagement. It is suggested that job resources activate employees' personal resources (self-efficacy, optimism and self-esteem) and therefore enable employees to feel more competent to control their working environment. This, in turn, makes employees feel more

confident and prouder of the work they execute, and enables them to derive more meaning from it, which in turn leads to engagement.

In a study conducted by Van den Broeck et al. (2011) it was found that personal resources (intrinsic work-value orientation) strengthen the health-enhancing impact of job resources on work engagement. Furthermore, Vogt et al. (2016) found that job resources predict personal resources (sense of coherence) and, in turn, personal resources (SoC) predict job resources, suggesting a reciprocal relationship between job resources and personal resources.

According to a study conducted by Ghosh (2015), emotional intelligence was found to significantly affect a learning organisation and its dimensions. To this researcher's knowledge, the reverse relationship has not been tested. The following hypothesis was formulated on the relationship between the job resource (learning organisation) and personal resource (emotional intelligence):

Hypothesis 5: Learning Organisation has a significant, positive impact on Emotional Intelligence

Hypothesis 6: Emotional Intelligence has a significant, positive impact on Learning Organisation

2.4.5 Work Overload (WO), Job Insecurity (JI) and Job Burnout (JB)

According to the JD-R model, the health-impairment process is where employees become exhausted due to the required sustained effort required by high job demands, which leads to health problems and energy depletion and in turn may lead to increased sickness and absenteeism (Bakker et al., 2003a).

Job demands are those facets of the job that require continuous effort, which is related to psychological and physiological costs (Schaufeli & Bakker, 2004). Job demands are significant predictors of outcomes like repetitive strain injury, psychosomatic health complaints and exhaustion (Bakker & Demerouti, 2014). This could be because of the tendency of job demands to consume energy resources and cost effort. Thus, employees who are continually exposed to high job demands may start to experience burnout and distance themselves both emotionally and physically from their work. The job demands that are considered in this study are work overload and job insecurity.

According to Ganster and Schaubroeck (1991), individuals who experience work overload are more likely to disengage from their work and withdraw in order to replenish diminishing energy levels. Leiter and Maslach (2005) assert that work overload drives exhaustion, which is the root cause of burnout. In addition, Gryna (2004) argues that work overload occurs when employees have high

job demands that exceed the time and resources available to meet those demands. Thus, work overload can lead to stress and in turn to burnout when the requirements of the job do not meet the capabilities, resources or needs of the employee (Gryna, 2004).

Similarly, De Cuyper and De Witte (2005) state that job insecurity is related to lower levels of job involvement, increased intention to leave, and decreased trust and engagement, and is also related to mental health complaints. Greenhalgh and Rosenblatt (1984) further state that the experienced threat of job insecurity is intensified by employees' sense of powerlessness regarding the situation. As a result, there is a strong relationship between job insecurity and an individual's level of job burnout.

The following hypothesis was formulated regarding the relationship between job demands and burnout:

Hypothesis 7: Work Overload has a significant, positive impact on Job Burnout

Hypothesis 8: Job Insecurity has a significant, positive impact on Job Burnout

2.5 MODERATING EFFECTS AMONG VARIABLES

2.5.1 The first interaction effect

The first interaction, as put forth by Bakker and Demerouti (2014), is where the impact of job demands on burnout is buffered by job resources. Research has shown that the impact of job demands (work pressure, emotional demands, work overload, etc.) is lessened by job resources such as opportunities for development, autonomy and performance feedback. Thus, employees who have a variety of job resources available are shown to cope better with numerous job demands.

Malakh-Pines et al. (1981) also found that employees are able to withstand greater work stress in organisations where employees are shown appreciation and are adequately rewarded for work completed. In companies that distribute rewards, appreciation and recognition inefficiently, employees are more prone to discouragement, demoralisation and eventually burnout. According to Malakh-Pines et al. (1981), appreciation on the job is more important than salary. These authors found that employees are more likely to be content with their salary if they receive appreciation, a sense of significance and satisfaction from their work.

Furthermore, Malakh-Pines et al. (1981) say that social relations are negatively correlated with burnout, thus the better the social relationships of the individual, especially amongst co-workers, the less burnout is experienced. It is argued that social support systems and social networks can be viewed as mediating variables that act as support and buffers for individuals in their social

environment, reduce the effect of stressful environmental factors and, in turn, slow the burnout cycle. This is supported by Demerouti et al. (2001), who found that high job resources such as feedback and social support may reduce the negative impact of job demands. Bakker, Demerouti and Euwema (2005) also found that the combination of low resources and high job demands significantly predicted job burnout.

Thus, the relationship between job demands and job burnout is weaker where employees have a high degree of job resources available. A learning organisation is regarded as a job resource, and therefore it is hypothesised that it will play a buffering role in the relationship between work overload, job insecurity and job burnout.

Moreover, Van den Broeck et al. (2011) found that personal resources (intrinsic work orientation) strengthen the buffering role of job resources (autonomy and learning opportunities) on the health-impairing impact (burnout) of workload. Thus, job resources offset the health-impairing impact of job demands. According to Xanthopoulou et al. (2007), personal resources have a negative relationship with exhaustion. Employees who are optimistic or efficacious may be more resistant to adverse conditions, as they showed lower reported levels of severe fatigue in a study conducted by Hobfoll (1989). Furthermore, employees feel more capable to perform their tasks when working in a resourceful environment without having to exert excessive effort, and therefore they are less likely to become fatigued. Xanthopoulou et al. (2007) say that employees who utilise personal resources do not perceive less job demands, but they experience less fatigue in meeting job demands.

From this it can be deduced that employees with high levels of emotional intelligence will focus less on job demands and more on job resources, and therefore will experience lower levels of exhaustion (burnout). Emotional intelligence is regarded as a personal resource and is hypothesised to play a buffering role in the relationship between work overload, job insecurity and job burnout.

The following hypothesis was formulated with regard to the buffering effect that job resources and personal resources have on the relationship between job demands and burnout:

- Hypothesis 9: Learning Organisation has a significant, negative moderator effect on the relationship between Work Overload and Job Burnout
- Hypothesis 10: Learning Organisation has a significant, negative moderator effect on the relationship between Job Insecurity and Job Burnout
- Hypothesis 11: Emotional Intelligence has a significant, negative moderator effect on the relationship between Work Overload and Job Burnout

Hypothesis 12: Emotional Intelligence has a significant, negative moderator effect on the relationship between Job Insecurity and Job Burnout

2.5.2 The second interaction effect

The second interaction is where the impact of job resources on engagement/motivation is strengthened by job demands (Bakker & Demerouti, 2014). Research has shown that job resources can have a positive effect on employee work engagement when there are high job demands. Thus, job resources become valuable to an employee confronted by challenging job demands and, in turn, this can foster dedication to the task. According to Crawford et al. (2010), *challenges* are those demands that are considered stressful yet have the ability to promote personal growth, mastery and future gains (e.g. high workload, high levels of job responsibility and time pressure). Such demands are viewed as opportunities to learn, achieve results and demonstrate competence, which in turn is rewarded.

In a study conducted by Hakanen et al. (2006), it was found that dentists under conditions of high job demands benefited most from their job resources (in terms of work engagement). Thus, when faced with high demands, job resources gained saliency and relevance and the dentists had the opportunity to utilise the resources available to them. This is supported by Bakker (2011), who found that engaged employees are more likely to increase their job demands in order to have a more challenging work environment, which in turn enables them to utilise their resources.

In the present study, work overload and job insecurity are regarded as the job demands. It can therefore be hypothesised that work overload and job insecurity experienced by employees will increase the impact of job resources and personal resources on employees' engagement.

The following hypotheses were formulated with regard to the positive effect that job demands have on the relationship between job resources and personal resources, and employee engagement:

Hypothesis 13: Work Overload has a significant, positive moderator effect on the relationship between Learning Organisations and Employee Engagement

Hypothesis 14: Job Insecurity has a significant, positive moderator effect on the relationship between Learning Organisations and Employee Engagement

Hypothesis 15: Work Overload has a significant, positive moderator effect on the relationship between Emotional Intelligence and Employee Engagement

Hypothesis 16: Job Insecurity has a significant, positive moderator effect on the relationship between Emotional Intelligence and Employee Engagement

2.6 THE CONCEPTUAL MODEL

The conceptual model illustrated in Figure 2.8 represents the latent variables, the interactions among them, as well as the 16 formulated hypotheses.

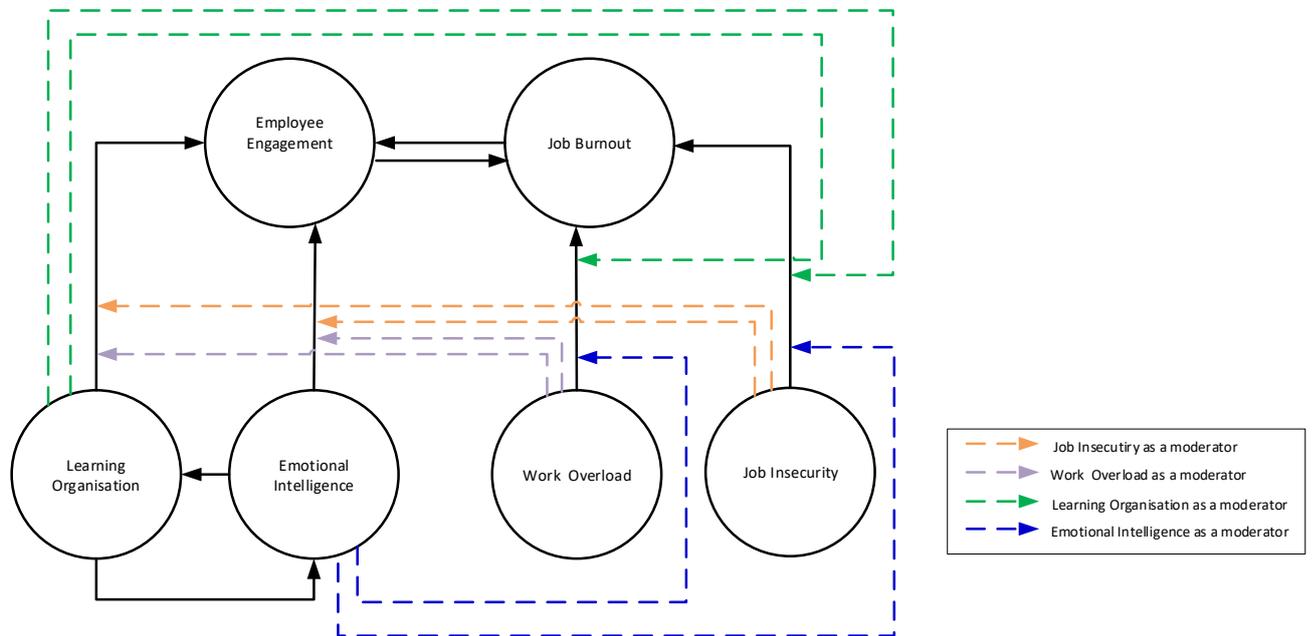


Figure 2.8 The conceptual model

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

Various studies utilising the perspective of Demerouti et al. (2001) and Schaufeli et al. (2002) regarding the effect of job demands and resources on employee engagement and burnout have been conducted both internationally (Bakker & Demerouti, 2014; Schaufeli & Bakker, 2004) and in South Africa (Rothmann et al., 2006). Following the literature study, this section serves to describe the research methodology that was followed to contribute to the existing body of scientific knowledge through answering the research-initiating question:

Why is there variance in engagement and burnout between employees within the mining and construction equipment supplier industry?

As stated in the introductory chapter, the main objective of the study was to identify the factors contributing to employee engagement and burnout within the mining equipment and construction industry by developing and empirically testing a structural model (based on the current literature) that explains the various antecedents of employee engagement and burnout (based on the JD-R model). Thus, the research study aimed to:

- Ascertain the most relevant antecedents of employee engagement and burnout within the mining and construction equipment industry;
- Propose and test an explanatory engagement and burnout structural model and the significance of the hypothesised paths; and;
- Highlight the findings and practical implications of the research results and, from this, recommend practical interventions applicable to the relevant industry.

The tools and procedures that were utilised to conduct the research and reach the outlined objectives are set out below. This includes the participants and sampling design, the selected measurement instruments and the validity and reliability of each measurement, the data collection procedure and data-capturing process. Following this, the statistical analysis and its application are considered.

3.2 SUBSTANTIVE RESEARCH HYPOTHESES

The proposed conceptual model presented in Figure 2.8 portrays the variables and their relationships developed through theorising. From this, the proposed structural model is drawn that portrays the substantive research hypotheses. These are substantive research hypotheses formulated in terms of the hypothesised relationships that were believed to exist among the endogenous latent variables (engagement, burnout, learning organisation and emotional intelligence) and the

exogenous latent variables (work overload, job insecurity). Substantive research hypotheses are strictly not testable and should therefore first be translated into operational terms. An important initial step towards the empirical testing of the proposed structural model was the development of substantive research hypotheses through theorising. There are 16 path-specific substantive research hypotheses.

Hypothesis 1: Employee Engagement (η_1) has a significant, negative impact on Job Burnout (η_2)

Hypothesis 2: Job Burnout (η_2) has a significant, negative impact on Employee Engagement (η_1)

Hypothesis 3: Learning Organisation (η_3) has a significant, positive impact on Employee Engagement (η_1)

Hypothesis 4: Emotional Intelligence (η_4) has a significant, positive impact on Employee Engagement (η_1)

Hypothesis 5: Learning Organisation (η_3) has a significant, positive impact on Emotional Intelligence (η_4)

Hypothesis 6: Emotional Intelligence (η_4) has a significant, positive impact on Learning Organisation (η_3)

Hypothesis 7: Work Overload (ξ_1) has a significant, positive impact on Job Burnout (η_2)

Hypothesis 8: Job Insecurity (ξ_2) has a significant, positive impact on Job Burnout (η_2)

Hypothesis 9: Learning Organisation (η_3) has a significant, negative moderator effect on the relationship between Work Overload (ξ_1) and Job Burnout (η_2)

Hypothesis 10: Learning Organisation (η_3) has a significant, negative moderator effect on the relationship between Job Insecurity (ξ_2) and Job Burnout (η_2)

Hypothesis 11: Emotional Intelligence (η_4) has a significant, negative moderator effect on the relationship between Work Overload (ξ_1) and Job Burnout (η_2)

Hypothesis 12: Emotional Intelligence (η_4) has a significant, negative moderator effect on the relationship between Job Insecurity (ξ_2) and Job Burnout (η_2)

Hypothesis 13: Work Overload (ξ_1) has a significant, positive moderator effect on the relationship between Learning Organisation (η_3) and Employee Engagement (η_1)

Hypothesis 14: Job Insecurity (ξ_2) has a significant, positive moderator effect on the relationship between Learning Organisation (η_3) and Employee Engagement (η_1)

Hypothesis 15: Work Overload (ξ_1) has a significant, positive moderator effect on the relationship between Emotional Intelligence (η_4) and Employee Engagement (η_1)

Hypothesis 16: Job Insecurity (ξ_2) has a significant, positive moderator effect on the relationship between Emotional Intelligence (η_4) and Employee Engagement (η_1)

3.3 STRUCTURAL MODEL

On the basis of the literature study and the hypotheses formulated above, a schematic representation was summarised in a structural model. The representation of the hypotheses in the structural model assists in answering the research-initiating question. The model allows for the formulation and empirical testing of the specific hypotheses once the latent variables have been defined. The structural model furthermore serves as an explanation of the observed correlation/covariance, as it assists in describing the process that brought about the correlation/covariance. The proposed structural model for this study is depicted in Figure 3.1 below:

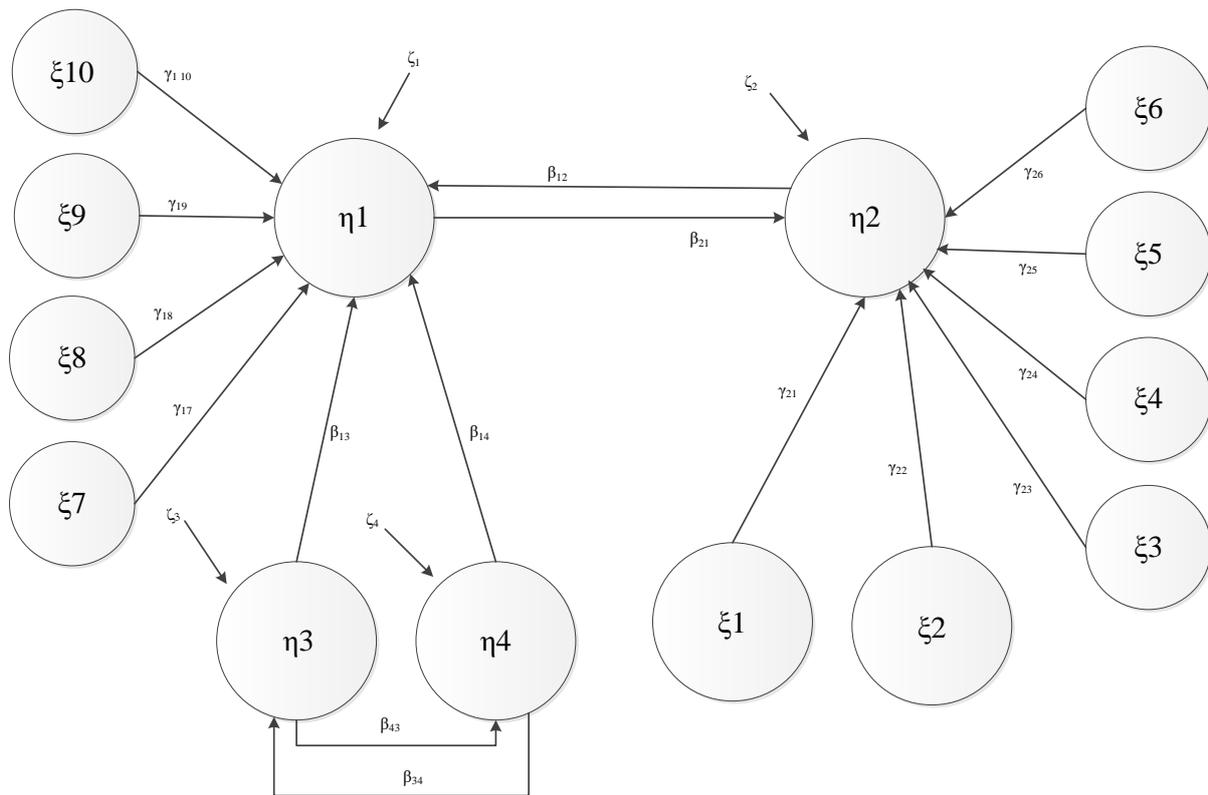


Figure 3.1 A theoretical model of the structural relationships among latent variables*

The Greek letter gamma (γ_{ij}) specifies a single-directional relationship between an exogenous variable (ξ_j) (i.e. independent variable) and an endogenous variable (η_i). The Greek letter beta (β_{ij}) indicates a single directional relationship between two endogenous variables (η_i and η_j) (i.e. dependent variable influenced by other variables). These symbols can be interpreted as beta weights, or as standardised partial regression coefficients (assuming a standardised solution) (Kelloway, 1998). Furthermore, the direction of the hypothesised linkages is indicated by β or γ , and the subscript next to either (e.g. γ_{13}). The first number signifies the target variable and the second the source variable (Diamantopoulos & Siguaaw, 2000). Lastly, the hypothesised structural

* The statistical method used to analyse the data was PLS-SEM. The bi-directional path between η_1 & η_2 was indicated within one model for ease of understanding. It should however be noted that PLS-SEM statistical analysis can only assess one linear relationship at a time. The model was therefore duplicated during analysis to consider the linear relationship of β_{12} & β_{21} .

model is unable to fully explain the variance in η_i in terms of the regression of η_i on η_j and ξ_j , and thus the structural error terms (ζ_i) associated with each endogenous variable (η_i) are indicated.

Some differences are evident from the comparison of the conceptual model (Figure 2.8) and the structural model (Figure 3.1). The structural model contains additional variables (dummy variables). In order to test the moderating effect of the hypothesis in SEM, separate variables have to be created for the interaction effects. This is done through the multiplication of the moderating variable score with the exogenous (independent) variable score that is hypothesised to influence the endogenous variable (dependent) (Little, Boviard, & Widaman, 2006, as cited in Langenhoven, 2015). The moderating variables (dummy variables) that directly influence the dependent (endogenous) variables are indicated in Table 3.1 by “*”.

Table 3.1

Summary of Latent Variables

η_1	Employee Engagement
η_2	Job Burnout
η_3	Learning Organisation
η_4	Emotional Intelligence
ξ_1	Work Overload
ξ_2	Job Insecurity
ξ_3	Work Overload*Learning Organisation influences Job Burnout
ξ_4	Job Insecurity*Learning Organisation influences Job Burnout
ξ_5	Work Overload*Emotional Intelligence influences Job Burnout
ξ_6	Job Insecurity*Emotional Intelligence influences Job Burnout
ξ_7	Learning Organisation*Work Overload influences Employee Engagement
ξ_8	Learning Organisation*Job Insecurity influences Employee Engagement
ξ_9	Emotional Intelligence*Work Overload influences Employee Engagement
ξ_{10}	Emotional Intelligence*Job Insecurity influences Employee Engagement

3.4 STATISTICAL HYPOTHESES

According to Tabachnick and Fidell (2007), when evaluating a complex hypothesis comprising more than one endogenous and exogenous latent variables, the recommended and preferred method of analysis is structural equation modelling (SEM). Thus, the preceding hypotheses were tested using SEM analysis. The statistical hypotheses presented below represent the reasoning underlying the statistical structural model outlined in Figure 3.1. According to Diamantopoulos and Siguaw (2000), to test the statistical model's fit it is necessary to test the extent to which the statistical model is consistent with the obtained empirical data.

The substantive research hypotheses could be expressed in terms of the following path-specific hypotheses, which correlate with the hypotheses formulated in Chapter 2. These statistical hypotheses were formulated using the statistical model depicted in Figure 3.1.

Hypothesis 1:

$$H_{01}: \beta_{12} = 0$$

$$H_{a1}: \beta_{12} < 0$$

Hypothesis 7:

$$H_{07}: \gamma_{21} = 0$$

$$H_{a7}: \gamma_{21} < 0$$

Hypothesis 13:

$$H_{013}: \gamma_{17} = 0$$

$$H_{a13}: \gamma_{17} < 0$$

Hypothesis 2:

$$H_{02}: \beta_{21} = 0$$

$$H_{a2}: \beta_{21} < 0$$

Hypothesis 8:

$$H_{08}: \gamma_{22} = 0$$

$$H_{a8}: \gamma_{22} < 0$$

Hypothesis 14:

$$H_{014}: \gamma_{18} = 0$$

$$H_{a14}: \gamma_{18} < 0$$

Hypothesis 3:

$$H_{03}: \beta_{13} = 0$$

$$H_{a3}: \beta_{13} < 0$$

Hypothesis 9:

$$H_{09}: \gamma_{23} = 0$$

$$H_{a9}: \gamma_{23} < 0$$

Hypothesis 15:

$$H_{015}: \gamma_{19} = 0$$

$$H_{a15}: \gamma_{19} < 0$$

Hypothesis 4:

$$H_{04}: \beta_{14} = 0$$

$$H_{a4}: \beta_{14} < 0$$

Hypothesis 10:

$$H_{010}: \gamma_{24} = 0$$

$$H_{a10}: \gamma_{24} < 0$$

Hypothesis 16:

$$H_{016}: \gamma_{110} = 0$$

$$H_{a16}: \gamma_{110} < 0$$

Hypothesis 5:

$$H_{05}: \beta_{43} = 0$$

$$H_{a5}: \beta_{43} < 0$$

Hypothesis 11:

$$H_{011}: \gamma_{25} = 0$$

$$H_{a11}: \gamma_{25} < 0$$

Hypothesis 6:

$$H_{06}: \beta_{34} = 0$$

$$H_{a6}: \beta_{34} < 0$$

Hypothesis 12:

$$H_{012}: \gamma_{26} = 0$$

$$H_{a12}: \gamma_{26} < 0$$

3.5 RESEARCH DESIGN

Quantitative, cross-sectional research was utilised in this study. According to Gravetter and Forzano (2009), quantitative research is based on the measurement of variables to obtain scores that are generally numerical in value and that are analysed by means of statistics for interpretation. Therefore, statistical analyses were used in this study, as mentioned. Furthermore, this study utilised cross-sectional research. The researcher therefore made inferences from the data collected at a particular point in time.

In addition, the research design for this study is an *ex post facto* correlational design. An *ex post facto* correlation design is research of a non-experimental nature; therefore, no variables were manipulated when the relationship between the variables were observed (Theron, 2014). This may

be because (a) the researcher is not able to manipulate or control the variables, or (b) the manifestation of the phenomena has already occurred (Theron, 2014). In short, variables are not manipulated and participants will not be randomly assigned. The purpose of *ex post facto* research is to test the validity of the statement, “if ξ then η ”. Extrapolations regarding the hypothesised relationship between the latent variables ξ and η are made from the associated variation in the independent and dependent variables (Kerlinger & Lee, 2000).

Through the use of established techniques and the researcher’s expertise, the *ex post facto* correlation design can control for extraneous variance, maximise systematic error variance and minimise error variance (Theron, 2014). Thus, the likelihood of providing unambiguous empirical evidence against which the hypotheses can be tested is increased with the use of this design.

3.6 SAMPLE AND SAMPLE DESIGN

Convenience sampling was utilised in this study. According to Keyton (2010), convenience sampling is a non-probability sampling method in which researchers choose participants who are convenient to obtain. This further presupposes a sampling method that does not rely on random selection. This sampling technique was utilised due to time constraints in gathering data within the private sector.

The representative and statistical power of the sample population depends on the extent to which inferences can be made from the observations drawn from the sample population and generalised to the target population (Theron, 2014). According to Kelloway (1998), sample sizes of at least 200 are regarded as satisfactory for SEM, although smaller sample sizes have been used. Two issues need to be considered in order to determine the sample size for the purpose of SEM. Firstly, the ratio of sample size to the number of parameters to be estimated should be considered. Large, complicated models contain more variables and thus have more parameters that have to be estimated and require a larger sample size. Sample size ratios to estimated parameters of between 5:1 and 10:1 are suggested (Bentler & Chou, as cited in Kelloway, 1998, p. 20). According to Burger (2012), it is acceptable if more freed parameters that have to be estimated are presented than observations available. Secondly, statistical power should be considered in determining sample size. Formulas for calculating the power of SEM were developed by MacCallum, Widaman, Zhang, and Hong (1999). In the context of SEM, power refers to the probability of rejecting the null hypothesis of close fit ($H_0: \varepsilon \leq 0.05$) when in fact the model fit is mediocre ($\varepsilon = 0.08$). In addition to these considerations, practical and logical considerations have to be made, like those relating to cost, availability of potential respondents and time constraints.

The participants in this study consisted of permanent employees of a mining and construction equipment supplier company that operates in all nine South African provinces. The company has its origin in Japan and operates globally, with subsidiaries in Germany, Brazil, Chile, Australia and the USA. The African Holdings head office is situated in Johannesburg, South Africa. The company currently employs 1 283 employees in the Southern African region (South Africa, Botswana, Namibia, Mozambique, Zambia).

The researcher wrote a letter addressed to the General Manager of Human Resources, outlining the purpose of the study and asking about the possibility to collect data from their South African operations. After approval, employees who had a registered company email address and access to a computer were asked to complete the online survey. The sample group consisted of 210 participants. There were 483 email addresses listed for employees in the South African operation to whom the link to the survey was sent. This means a response rate of 43.5%. The sample size obtained was not sufficient to conduct a full SEM with the number of parameters estimated for each subscale within this study. The limited sample size could be attributed to various constraints. Firstly, time constraints for both the researcher and the employees. The researcher requested all participants to complete the survey by a set date in order to have sufficient time for analysis. Employees may not have been available to complete the survey within the stated period. Secondly, the data collection method, which required employees to have access to computers and the internet and to have a valid company email address, may have been a constraint. Some employees might have received the email but not had sufficient internet access (especially in remote sites) to respond to the survey, or the survey may have been allocated to the employee's junk mail and therefore not been seen. Follow-up emails were sent to employees as a reminder of the deadline. Participation was clearly indicated as voluntary in order to remain in line with the ethical guidelines set for research of this nature.

The sample demographics, including age, gender, ethnic group, years of experience, company tenure and educational level, are supplied in Table 3.2. No relationships were hypothesised between the demographic information and the variables outlined in this study. However, the information given may inform HR managers in identifying organisational inferences and interventions related to these.

Table 3.2***Biographical Information of the Sample Population (n =210)***

Item	Category	Frequency	Percentage
Age	17 – 22	0	0%
	23 – 27	7	3%
	28 – 32	26	12%
	33 – 37	40	19%
	38 – 42	42	20%
	43 – 47	31	15%
	48 – 52	26	12%
	53 – 57	17	8%
	58 – 62	15	7%
	63 – 67	5	2%
Gender	Male	152	72%
	Female	58	28%
Ethnic group	African	46	22%
	Coloured	25	12%
	Indian	9	4%
	White	127	60%
	Asian	2	1%
	Other	1	1%
Nationality	South African	197	94%
	Other	13	6%
	Single/widowed	34	16%
	Engaged/In a relationship	15	7%
	Married	139	67%
	Divorced	17	8%
	Separated	3	1%
	Qualification	High school (not matric)	13
Matric		86	41%
Diploma		72	34%
Degree		19	9%
Honours degree		11	5%
Master's degree		8	4%
Company tenure	Less than 1 year	17	8%
	1 to 2 years	15	7%
	3 to 5 years	36	17%
	6 to 10 years	53	25%
	10 to 15 years	42	20%
	16 to 20 years	19	9%
	21 to 30 years	14	7%
	More than 30 years	13	6%

The sample ($n = 210$) included all major ethnic groupings, namely White ($n = 127$), African ($n = 46$), Indian ($n = 9$), Coloured ($n = 25$) and Asian ($n = 2$), although the majority of participants were White (60%). The participants' ages ranged from 23 to 67 years ($M = 42.53$, $SD = 9.84$), and the majority of participants were between the ages of 33 and 42 (39%). Many more men ($n = 152$) than women ($n = 58$) participated in this study, which is representative of the population in this industry. Of the participants, 41% had matriculation certificates as their highest qualification, 19% had degrees and 19% had postgraduate degrees, and the majority of participants had more than six to 10 years' experience (25 %) in the organisation.

3.7 MEASURING INSTRUMENTS

In order to test the hypotheses formulated, each latent variable identified within the structural model had to be measured by an instrument. Each variable was operationalised by the measurement instrument, therefore becoming measurable. The instruments utilised to measure these variables therefore had to have the necessary psychometric properties to provide valid and reliable results. A composite survey was compiled from existing questionnaires and was sent to the participants to be completed.

Five validated existing questionnaires were utilised in order to measure the variables of this study. Some variables were measured by utilising only a part of a questionnaire, and other variables were measured by using the whole questionnaire. The measurement instruments that were used in this study are: the Utrecht Work Engagement Scale 15-item version (UWES-15); the Maslach Burnout Inventory – Human Services Survey (MBI-HSS); the Dimensions of Learning Organisation Questionnaire (DLOQ); the Genos Emotional Intelligence Inventory (Genos EI); and the Job Demands-Resources Scale. Each one of these instruments is discussed in detail below.

3.7.1 Utrecht Work Engagement Scale questionnaire (UWES-15)

International and local studies have shown that employee engagement can be measured, with validity and reliability, using the Utrecht Work Engagement Scale (UWES; Bakker et al., 2008; Rothmann & Rothmann, 2010; Schaufeli et al., 2002). Research has also shown that the fit of the hypothesised three-factor structure to the data is better than that of alternate factor models (Rothmann & Rothmann, 2010). This study therefore utilised the UWES to measure employee engagement. According to Schaufeli & Bakker (2004b), various versions of the UWES are available and they differ in length. The UWES-15, which consists of 15 items that measure the three subscales of employee engagement, namely vigour, dedication and absorption, was used. The scale uses a seven-point frequency scale, ranging from 0 = “never” to 6 = “always/daily”. The scale

includes statements such as, “I am bursting with energy every day in my work” (vigour), “My job inspires me” (dedication) and “Time flies when I am at work” (absorption). Storm and Rothmann (2003) found the following alpha coefficients for the UWES in South Africa: vigour: .78, dedication: .89, and absorption: .78. A total score of .92 was obtained.

3.7.2 Maslach Burnout Inventory – Human Services Survey (MBI-HSS)

The intention was to measure burnout with the Maslach Burnout Inventory – General Scale (MBI-GS; Schaufeli, Leiter, Maslach, & Jackson, 1996). Due to time and financial constraints, the researcher utilised the original and more widely used burnout scale: the Maslach Burnout Inventory – Human Services Survey (MBI-HSS; Schaufeli et al., 1996). The MBI-GS is the third version of the original Maslach Burnout Inventory (MBI) and has 16 items. The MBI-HSS is the original version of the scale and has 22 items. Developed by Maslach, Jackson, Schaufeli and Schwab (Demerouti et al., 2001), the MBI-GS was designed to measure burnout of individuals outside the service industry, whereas the MBI-HSS initially was designed to measure professionals in the human services. The MBI-HSS measures the three dimensions of burnout, namely exhaustion, depersonalisation and reduced personal accomplishment (Maslach & Leiter, 1997; Maslach et al. 2001). The scale consists of 22 items and the items are scored on a seven-point Likert-type scale, ranging from 0 (Never) and 6 (Every day). For the purpose of this study, only the items that measure emotional exhaustion and depersonalisation (cynicism) were utilised (as noted in Chapter 2). Examples of the items include: “I feel emotionally drained from my work” (emotional exhaustion) and “I don’t really care what happens to some of the employees” (Depersonalisation/Cynicism) (Maslach et al., 2001). Burnout is indicated by high levels of exhaustion and depersonalisation (cynicism) (Bakker et al., 2005).

The factorial validity of the MBI-HSS has been confirmed in various studies, and internal consistencies ranging from .73 to .91 were found for the subscales of the MBI-HSS (Leiter & Schaufeli, 1996). Furthermore, Cronbach’s alpha coefficients for the scales were all above .7. According to Storm and Rothmann (2003), the following alpha coefficients were found for the MBI-GS in South Africa: exhaustion: .88 and cynicism: .78.

3.7.3 GENOS Emotional Intelligence Inventory (Genos EI)

Emotional intelligence was measured by the Genos Emotional Intelligence Inventory (Genos EI). The Genos EI was specifically designed for use by human resource professionals in the workplace setting. The Genos EI Inventory was derived from the Swinburne Emotional Intelligence Test (SUEIT) designed by Palmer and Stough (2001). Based on the preliminary analyses of the SUEIT, it was determined that there were five common dimensions, as mentioned earlier (Palmer et al., 2008). Gignac (2005, as cited in Gignac, 2010) examined the factor structure of the SUEIT and

found nine dimensions, of which seven measured EI. Based on Gignac's findings and the information derived from further investigation, the SUEIT was revised in 2006 and, from this, the Genos EI Inventory was created. The Genos EI consists of 70 items developed to measure seven EI dimensions: Emotional Self-Awareness (ESA), Emotional Expression (EE), Emotional Awareness of Others (EAO), Emotional Reasoning (ER), Emotional Self-Management (ESM), Emotional Management of Others (EMO), and Emotional Self-control (ESC) (Gignac, 2010).

The Genos EI focuses on the measurement of the frequency with which individuals may exhibit emotionally intelligent behaviour within the workplace. The Genos EI is a self-report inventory that consist of 70 items. The items are scored on a five-point Likert scale ranging from 1 = "almost never" to 5 = "almost always" (Gignac, 2008; Gignac & Ekermans 2010; Palmer, Stough, Harmer, & Gignac, 2009). The Genos EI Inventory is also available in a concise version (31 items) and a short version (14 items). The concise version was utilised for the purposes of this study in order to accommodate time constraints. Although the Genos EI concise version demonstrates lower subscale reliability compared to the full version, it still has an acceptable alpha coefficient level above .7 (ranging from .71 to .75) and an overall emotional intelligence reliability coefficient of .93 (Palmer et al., 2009). An example of an item is "I fail to recognise how my feelings drive my behaviour at work".

3.7.4 Dimensions of Learning Organisation Questionnaire (DLOQ)

Learning Organisation was measured by the Dimension of the Learning Organisation Questionnaire (DLOQ). There are seven dimensions of the learning organisation that form the basis of the DLOQ (Marsick & Watkins, 1999). The DLOQ embodies the key dimensions essential for creating the learning culture (Marsick & Watkins, 1999; Watkins & Marsick, 1993). The DLOQ measures the status of and changes in organisational learning practices and culture. Furthermore, measures of knowledge and financial performance are included and are used to assess the factors that influence the overall adaptiveness of the organisation (Marsick, 2013).

The original version of the DLOQ consists of 43 items that measure the seven dimensions. Through empirical validation, the instrument was refined and an abbreviated version was created that consists of 21 items that do not depreciate the original theoretical structure (Yang, Watkins, & Marsick, 2004). The abbreviated version was assimilated as an instrument after an empirical validation procedure to measure the concept of the learning organisation (Yang et al., 2004). In addition, 12 items that measure the level of performance improvements, in both the knowledge and financial domains, were added to emphasise practical application in an organisational setting.

The DLOQ (21 items) was used in this study and, for the purpose of this study, the 12 items measuring performance improvements in the knowledge and financial domains were omitted from the survey, as it did not directly relate to a dimension of the learning organisation. The dimensions of the DLOQ were measured on a six-point Likert-type scale (1 – almost never, 6 – almost always). Examples of items in the DLOQ are: “In my organisation, people are rewarded for learning” and “My organisation gives people choices in their work assignments” (Marsick & Watkins, 2003). The DLOQ has been tested extensively for validity and reliability and found to be both valid and reliable (Yang et al., 2004). According to Marsick and Watkins (2003), the scales of the DLOQ have proven consistently reliable (all scales > .70; Nunnally, 1978).

3.7.5 Job Demands Resources Scale (JDERS)

Work overload and job insecurity were measured by the Job Demands Resources Scale (JDERS). Jackson and Rothmann (2005) developed a South Africa-based job demands and resources questionnaire called the Job Demands Resources Scale (JDERS). According to a study conducted by Rothmann et al. (2006), the Job Demands Resources Scale showed (factorial) validity and is reliable and consistent for different organisations in South Africa. The JDERS consists of five dimensions, namely growth opportunities, overload, job insecurity, organisational support and advancement (Rothmann et al., 2006). The scale consists of 48 items with statements that measures the five factors. Respondents rate how frequently they experience the statements on a four-point Likert-type scale (1 = never; 4 = always). The JDERS (Jackson & Rothmann, 2005) was adapted for the purpose of this study. The two factors that load onto job demands that were measured for this study are overload (the amount of work an individual has and the emotional and mental load placed on him/her) and job insecurity (current feelings of insecurity regarding the job and level, and the future thereof) (Rothmann et al., 2006). Therefore, the JDERS (Jackson & Rothmann, 2005) was reduced from 48 items, as mentioned earlier, to 13 items. An example of a question on overload is: “Does your work put you in emotionally upsetting situations?” An example of a question on job insecurity is: “Do you need to be more secure that you will keep your current job in the next year?” (Rothmann et al., 2006). According to Rothmann et al. (2006), all of the factors have a reliability coefficient ranging from .75 to .9.

3.8 TREATMENT OF MISSING VALUES

When utilising questionnaires to collect data, the likelihood of encountering missing values is high. This can be attributed to non-response and/or oversight of participants, and can affect the results if not addressed. Before conducting statistical analysis, missing values need to be identified and addressed accordingly. According to Donnelly (2009), missing values can be addressed in various ways, depending on the number of missing values and the nature of the data. Donnelly (2009)

proposes the following ways to deal with missing values: list-wise deletion, pair-wise deletion, imputation by regression, multiple imputation, hot-deck imputation, structural equation modelling, expectation maximisation and full information maximum likelihood. Seemingly adequate variables may in fact be deficient if missing values are not considered when measuring the composite indicator variables (Burger, 2012).

In this study, the missing values were addressed through missing data imputation using the “k-nearest neighbour method”. According to Malarvizhi and Thanamani (2012), the k-NN method is an algorithm within a multidimensional space that is used to group the dataset into different groups. The assumption behind the use of k-NN for missing values is that “a point value can be approximated by the values of the points that are closest to it, based on other variables” (Obadia, 2017, p. 1). After imputation, all available data was included in the analysis.

3.9 STATISTICAL/DATA ANALYSIS

The data for this study was analysed using quantitative techniques. These include item analysis and structural equation modelling (SEM) and are discussed below. The objective of the data analysis was to test the statistical model derived from the conceptual model in order to answer the research question.

3.9.1 Item analysis

The design intention of scales is that the items selected to represent each latent variable would measure the intended latent variable exclusively. A prerequisite for reliability and validity is scale unidimensionality. According to Neuberg, West, Judice and Thompson (1997, p. 1022), the rationale behind unidimensionality is that the “interpretation of any measure – whether it represents a trait, a mood, an ability, or a need – is clearest if only one dimension underlies the measure”. A measure’s dimensionality is thus concerned with the homogeneity of items. A unidimensional measure has statistical properties representative of the scales’ items underlying a single construct/factor. The scale and/or subscales used to operationalise the construct furthermore should show the hypothesised dimensionality (Myburgh, 2013). Item analysis is one such procedure that can be utilised to examine the dimensionality of the scales used within this study.

The purpose of the measurements used is to reflect unidimensional sets of items that can explain the variance in each of the latent variables. The objective therefore is that participants respond to the items in a manner that reflects the underlying construct, in this case employee engagement, job burnout, emotional intelligence, learning organisation, job insecurity and work overload, that the items are intended to measure. A number of internal consistencies were utilised, including

coefficient alpha average, inter-item correlations, corrected item-to-total correlations and item variance.

Inter-item correlations provide a useful index of internal consistency reliability (Clark & Watson, 1995). It is the correlation of individual items with all other items in a scale, excluding the item itself (Myburgh, 2013). When a low item total correlation is obtained, it suggests that the item has little relation to the construct being measured by the other items in the scale. When a high item total correlation is obtained, it could mean that the items in the scale measure the same construct and that the items need to be revised for item redundancy. Clark and Watson (1995) argue that inter-item correlations should be moderate and should group around the mean in order to ensure unidimensionality.

Item-to-total correlations also reflect the extent to which an item in a scale is correlated with the remaining items in the scale and can be used as a means of retaining or deleting items. The degree to which a subscale's variance changes can also be utilised in order to determine whether an item succeeds in measuring the underlying construct (Myburgh, 2013). When the variance increases or decreases only marginally when an item is deleted from the subscale, it may indicate a poor item. Items in the subscale that correlate low with other items could suggest that the item does not adequately reflect the common latent variable of the subscale. The removal of such an item may only marginally increase or decrease the variance of a subscale. An item with small item variance indicates that the item does not adequately reflect the differences in the latent variables, and thus would not co-vary with other items in the subscale.

Item analysis was conducted on each of the subscales of the measurements used to measure the latent variables. The following rules of thumb were utilised in order to establish whether items should be retained or deleted. According to Robinson, Shaver, and Wrightsman (1991), an average inter-item correlation of .30 or higher is preferred. Clark and Watson (1995) and Bearden and Netemeyer (1998) advocate a coefficient alpha level of at least .70, and furthermore suggest that the retention of items with greater variance relative to others may increase overall scale variance. Bearden and Netemeyer (1998) furthermore suggest a corrected item-to-total correlation of .50 or above.

3.9.2 Structural equation modelling

SEM describes and analyses structured relationships between a set of variables (Riou, Guyon, & Falissard, 2015). The study intended to utilise covariance-based SEM using Lisrel, but due to sampling limitations and the complexity of the path models, this form of SEM could not be used to assess the data. An alternative method of SEM, known as partial least squares SEM (PLS-SEM),

was utilised. PLS-SEM often works with smaller sample sizes and identifies preeminent dependencies among concepts (Riou et al., 2015).

PLS path modelling is recommended for the testing and validating of exploratory models because of its prediction and exploration value. Furthermore, PLS path modelling is prediction orientated and can be a good solution for parameter estimation (Jakobowicz, 2006). PLS path analysis assists researchers in the explanation of endogenous variables.

The basis for PLS modelling is formed by the predictor specifications (Chin, 2010). The PLS approach does not take the hard approach of covariance-based maximum likelihood (ML) estimation, which considers the assumption of independence of observations and a specific joint multivariate distribution. The PLS technique utilises general soft distributional assumptions and is thus termed a 'soft' modelling approach (Chin, 2010). Thus, the PLS approach is distribution free and therefore the data is not required to be distributed normally.

PLS path modelling considers the conceptual model formed by manifest and latent variables. The PLS model is separated into two sub-models, namely the measurement (outer) model, which includes relationships among the manifest variables and their associated latent variables, and the structural (inner) model, which includes the relationships among the latent variables (Chin, 2010; Jakobowicz, 2006; Riou et al., 2015).

In addition, PLS is a components-based structural equation modelling technique and therefore it can model the paths among the manifest variables and their latent variables and the relationships among the latent variables (Chin, Marcolin, & Newsted, 2003). It is based on a PLS algorithm that estimates latent variables using both the inner and outer model (Jakobowicz, 2006).

A series of analyses had to be considered before the PLS model estimation could be conducted. Evaluation of PLS models should apply non-parametric, prediction-orientated methods (Chin, 2010). In order to estimate the measurement model fit, the reliability of the latent variables was evaluated using the composite reliabilities, the Fornell and Larcker (1981) average variance extracted (AVE) measure and the R-square. The coefficients are regarded as satisfactory when they exceed .70 (Charoensukmongkol, 2014). The PLS estimates reveal the measurement model reliability and validity according to the criteria specifically associated with the measurement model after systematic evaluation.

The structural model estimates were evaluated when the results of the computed latent variables showed satisfactory evidence for reliability and validity (Chin, 2010). Latent variables are related to one another within the structural model. Main effect and interaction effect significance is tested

through a bootstrapping sampling procedure. Bootstrapping treats the observed sample as a representation of the population. Through the application of various repetitive computations, the sampling distribution shape, spread and bias can be estimated (Mooney & Duval, 1993). Confidence intervals for all parameter estimates are provided through nonparametric bootstrapping. By assessing the mean value and standard error for each of the path model coefficients, confidence intervals can be interpreted. It can be concluded that there is a significant relationship between the hypothesised variables if the selected confidence interval does not contain zero, and the null hypothesis is rejected (Middleton, 2016). The accuracy of the path estimates to the true effect are assessed after bootstrapping. According to Chin (2010), the estimates of the structural paths in likelihood are more accurate when the reliability score for the estimated construct increases.

Furthermore, PLS path modelling was utilised to test the moderating effects applicable in this study. This is a two-step process. Firstly, an iterative process was undertaken in terms of which latent variable scores were estimated for each latent variable. Secondly, the latent variable scores were then entered into one or more regressions as dependent and independent variables. The recommendations for testing moderating effects in multiple regression analysis hold for PLS modelling. Moderating effects within the study refer to the moderating relationship within the structural model. Thus, the study considered the moderating effect of latent variables on the direct relationships between latent variables (Henseler & Fassott, 2010; Henseler, Ringel, & Sinkovics, 2009).

3.10 ETHICAL CONSIDERATIONS

The South African government has gone to great lengths in its Constitution to ensure the incorporation of fair and ethical practices to limit discrimination in the country's diverse environment (Laher, 2012). Ethics has become a fiery topic in many disciplines and is incorporated into South Africa's national law to provide clear guidelines on ethical conduct. Rossouw and Van Vuuren (2010, p. 4) state that "ethics concerns itself with what is good or right in human interaction". They further claim that ethics is based on three concepts: the 'self', the 'other' and the 'good'. Thus, ethical behaviour is the consideration of not only what is good for the self, but also what is good for the other.

Reber and Reber (as cited in Buckett & Levin, 2011) state that ethics is concerned with human behaviour believed to be acceptable, thus the good and bad and right and wrong in 'human conduct' in pursuing various goals and aims. Chadwick (as cited in Buckett & Levin, 2011) concludes that professional ethics focuses on the moral issues that may arise due to the specialist knowledge professionals acquire and how the use of such knowledge should be governed when a service is provided to the public.

The Constitution of the Republic of South Africa (Act 108 of 1996), the Labour Relations Act (No. 66 of 1995), the Employment Equity Act (No. 56 of 1998), the Health Professions Act (No. 56 of 1974) and the Ethical Principles of Psychologists and Code of Conduct are among the beacons that aim to guide such ethical behaviour within South Africa (Mauer, 2000).

These different principles and guidelines for behaviour are exactly that, a guide; they do not offer concrete answers for every possible ethical challenge faced. As ethics is a grey area, codes of conduct can be incorporated into practitioners' daily practices, yet ultimately practitioners make a choice on the basis of personal reference points on behaviour that is believed to be ethical in that particular situation or challenge faced (Buckett & Levin, 2011). Furrow (as cited in Burke, Harper, Kruger, & Rudnick, 2007) suggests that judgement calls faced by psychologists and assessors alike are influenced by "personal desires, contextual constraints and idiosyncratic particularities of the situation" (p. 110). Psychologists are expected to act in an ethical manner in order to preserve the welfare and rights of those to whom they deliver a service (Buckett & Levin, 2011). Thus, these codes of ethics communicate important expectations to practitioners, encouraging self-regulation and the continuous examination of personal values (Burke et al., 2007).

According to Buckett and Levin (2011), industrial psychologists face ethical challenges in which conflicting interests have to be juggled on a daily basis. Although ethics is a grey area, much trust is placed in practitioners not only to adhere to ethical guidelines, but ultimately to foster ethical thinking. The greatest ethical challenges faced by practitioners appear at the pre-testing stage. Choosing the appropriate test that is valid and reliable, does not unfairly discriminate and shows no bias to a single individual or grouping is of the utmost importance.

The purpose of reflecting on ethics and potential risks within this study was to ensure that the participants' dignity, rights, wellbeing and safety were protected. The study was identified as a low-risk study as there were no potentially serious risks or discomforts related to it. Care was taken to gain informed consent from all the participants. All participants were clearly informed of the reason for the assessment, the type of assessment that was to be used as well as the consequences of the intended use. Participants were informed that participation was voluntary and that they could withdraw from completing the assessment at any point.

In addition, written approval was obtained from the participating institution and management was informed of the reason for the research study and what the results would be used for. Care was also taken to only disclose information according to the guidelines set out in Annexure 12 of the Ethical Rules of Conduct of Practitioners Registered under the Health Professions Act (Act No. 56 of 1974) and to protect participant confidentiality as far as professionally possible.

A summary of the research results was given to all participants who were part of the initial participant group and all relevant management as feedback via an email. Any queries regarding the results were addressed by the researcher according to the ethical guidelines outlined. Lastly, care and sensitivity were taken to follow the ethical guidelines set out in Annexure 12 of the Ethical Rules of Conduct of Practitioners Registered under the Health Professions Act (Act No. 56 of 1974) in order to conduct the study in an ethical manner.

3.11 CHAPTER SUMMARY

This chapter has outlined the research methodology used within the present study. This included outlining the substantive and statistical research hypotheses. An *ex post facto* correlation research design was followed in this study, comprising an explanatory research methodology that considered the nature of the relationships among latent variables. The sample design and demographic information were described and the various measurement instruments used were outlined, along with their statistical properties. After this, the statistical analysis methods were discussed. The study used linear regression analysis via PLS path modelling. Lastly, the ethical considerations were reviewed and no major ethical concerns were identified.

Chapter 4 documents the statistical results obtained using the PLS statistical analysis for the hypothesised relationships among the exogenous and endogenous latent variables. The reliability and validity of the various measurement instruments and the path-specific relationships between variables are examined.

CHAPTER 4

RESULTS

4.1 INTRODUCTION

In this chapter, the research results obtained are presented and the analyses of the results reported on, as detailed in Chapter 3. This chapter outlines the results of the item analysis (which was performed to determine the psychometric soundness of the measurement instruments used), and the analysis of the measurement model fit (conducted in order to determine the psychometric quality of the indicator variables). Furthermore, the structural model fit and the significance of the model parameter estimates are detailed. Lastly, the findings of the analyses, the final scores and the hypotheses are interpreted.

4.2 VALIDATING THE MEASUREMENT MODEL

4.2.1 Item analysis

In order to provide an initial indication of the reliability and validity of the ensuing statistical analyses, item analysis was performed. The reliability and validity criteria of the study are dependent on the nature of the variables used. To measure instrument reliability, the Cronbach's alpha coefficient was utilised. Cronbach's alphas were considered satisfactory at $\geq .70$ (Nunnally & Bernstein, 1994). The Pearson product moment correlation was furthermore applied to establish the relationship among the latent variables. Inter-item correlation (a subtype of internal consistency reliability) was used to evaluate the consistency among items of the measurement instruments included in the study. Inter-item correlation values between 1.00 and $> .50$ were considered exceptional. Values between $.50$ and $> .00$ were deemed reliably acceptable (Tabachnick & Fidell, 2013).

Table 4.1

Means, Standard Deviations, and Internal Consistency Reliabilities of Subscales

Scale	Sample size	Number of items	Mean	Standard deviation	Cronbach's alpha	Average inter-item correlation
EE_VIG	210	5	27.88	5.83	.87	.58
EE_DED	210	5	29.50	5.47	.88	.59
EE_ABS	210	5	28.65	4.86	.75	.37
JB_EE	210	9	29.67	12.17	.90	.52
JB_DEP	210	5	13.84	5.66	.72	.34
EI_ER	210	5	17.84	4.01	.77	.42
EI_ESA	210	4	14.89	2.67	.49	.21

EI_ESM	210	5	17.87	3.11	.50	.17
EI_EE	210	5	17.21	3.25	.47	.16
EI_ESC	210	4	15.61	2.69	.61	.29
EI_EAO	210	4	15.43	2.34	.56	.25
EI_EMO	210	4	15.18	2.72	.62	.30
LO_CL	210	3	10.99	4.21	.83	.64
LO_DI	210	3	9.99	4.21	.90	.76
LO_TLC	210	3	10.30	4.24	.94	.85
LO_ES	210	3	11.00	4.15	.86	.68
LO_E	210	3	10.25	4.17	.87	.70
LO_SC	210	3	11.10	4.13	.85	.65
LO_SL	210	3	10.89	4.38	.92	.80
JI	210	3	6.86	3.00	.93	.81
WO	210	8	22.99	4.28	.81	.35

EE = Employee Engagement; EE_VIG = Vigour; EE_DED = Dedication; EE_ABS = Absorption; JB = Job Burnout; JB_EE = Emotional Exhaustion; JB_DEP = Depersonalisation; EI = Emotional Intelligence; EI_ER = Emotional Reasoning; EI_ESA = Emotional Self-Awareness; EI_ESM = Emotional Self-Management; EI_EE = Emotional Expression; EI_ESC = Emotional Self-control; EI_EAO = Emotional Awareness of Others; EI_EMO = Emotional Management of Others; LO = Learning Organisation; LO_CL = Continuous Learning; LO_DI = Dialogue & Inquiry; LO_TLC = Team Learning & Collaboration; LO_ES = Embedded Systems; LO_E = Empowerment; LO_SC = System Connection; LO_SL = Strategic Leadership; JI = Job Insecurity; WO = Work Overload

Item analysis was conducted on all items incorporated in the survey. A summary of the items assessing each sub-dimension of the variables is found in Table 4.1 above. The item analysis summary includes the mean, standard deviation, Cronbach's alpha and average inter-item correlation of all the items that measure the specific latent variables (i.e. subscales). Table 4.2 below provides a summary of the total mean, standard deviation, Cronbach's alpha and average inter-item correlation totals of the measurement instruments used.

Table 4.2

Internal Consistency Reliabilities of Scales

Scale	Sample size	Number of items	Mean	Standard deviation	Cronbach's alpha	Average inter-item correlation
EE	210	15	17.20	2.95	.90	.75
JB	210	14	6.06	2.23	.77	.62
EI	210	31	25.86	3.56	.88	.51
LO	210	21	24.84	8.64	.95	.74
JI	210	3	6.86	3.00	.93	.81
WO	210	8	22.99	4.28	.81	.35

EE = Employee Engagement; JB = Job Burnout; EI = Emotional Intelligence; LO = Learning Organisation; JI = Job Insecurity; WO = Work Overload

4.2.1.1 Employee Engagement

The Utrecht Work Engagement scale (UWES-15) obtained a Cronbach's alpha coefficient of .90 (Table 4.2), which indicates that the scale has high internal consistency reliability. The UWES-15 scale consists of three subscales (vigour, dedication, absorption). The Cronbach's alpha coefficient was not affected negatively by individual items within the scale and therefore no items were deleted.

An average inter-item correlation of .75 (Table 4.2) supports the finding of internal consistency. The individual inter-item correlations outlined in Table 4.1 range from .37 and .59. These results show that the UWES-15 has good internal consistency and measures what it set out to measure. The Cronbach's alphas of all three subscales were above .70 (vigour = .87; dedication = .88; absorption = .75) and thus satisfactory.

4.2.1.2 Job Burnout

The Maslach Burnout Inventory-Human Services Survey (MBI-HSS) has three sub-dimensions (emotional exhaustion, depersonalisation and personal accomplishment). Only two sub-dimensions were considered in this study, as discussed, namely emotional exhaustion and depersonalisation (cynicism).

The Cronbach's alphas were satisfactory for the two sub-dimensions measured at above .70 (emotional exhaustion = .90 and cynicism = .72) (Table 4.1). The total Cronbach's alpha coefficient for the scale was .77, which is satisfactory (Table 4.2). The Cronbach's alpha coefficient was not affected negatively by individual items within the scale and therefore no items were deleted.

An average inter-item correlation for the scale of .62 supported high internal consistency. The individual inter-item correlation ranged from .34 to .52 (Table 4.1), which shows that the items satisfactorily measured the construct "job burnout".

4.2.1.3 Emotional Intelligence

The Genos Emotional Intelligence Inventory obtained a Cronbach's alpha coefficient of .88 (Table 4.2), which indicates that the scale has high internal consistency reliability. The scale consists of seven subscales, namely emotional reasoning (ER), emotional self-awareness (ESA), emotional self-management (ESM), emotional expression (EE), emotional self-control (ESC), emotional awareness of others (EAO), and emotional management of others (EMO). The Cronbach's alpha for six of the seven sub-dimensions scored below .70 (ESA = .49; ESM = .50; EE = .47; ESC = .61; EAO = .56; EMO = .62) (Table 4.1), and therefore the reliability score of the six sub-dimensions was not satisfactory. This indicates that the items did not satisfactorily measure the

applicable latent variables of the “emotional intelligence” sub-dimension. Most of the subscales revealed poor items, some of which were reversed items. It could be asked whether the participants were confused by the reversed nature of the items. The deletion of these items is not warranted, however, as the Cronbach’s alpha would only marginally be improved. Thus, no items were deleted. The overall emotional intelligence scale had a high Cronbach’s alpha coefficient of .88 (Table 4.2), which indicates high internal consistency reliability even though the reliability scores of the sub-scales were not satisfactory.

Acceptable reliability furthermore was found for the total scale, with an average inter-item correlation of .51 (Table 4.2), which indicates acceptable reliability. The individual inter-item correlations ranged between .16 to .42. These inter-item correlations were considered acceptable.

4.2.1.4 Learning Organisation

The Dimensions of Learning Organisation Questionnaire (DLOQ) obtained a Cronbach’s alpha of .95 (Table 4.2), indicating high internal reliability. The DLOQ consists of seven sub-dimensions, namely Continuous Learning (CL), Dialogue and Inquiry (DI), Team Learning and Collaboration (TLC), Embedded Systems (ES), Empowerment (E), Systems Connections (SC) and Strategic Leadership (SL). The Cronbach’s alpha scores of all seven sub-dimensions were above .70 (CL = .83; DI = .90; TLC = .94; ES = .86; E = .87; SC = .85; SL = .92) and thus satisfactory.

An average inter-item correlation of .74 (Table 4.2) supports the internal consistency finding. The individual inter-item correlations outlined in Table 4.1 ranged between .64 and .85. These results indicate that the DLOQ has good internal consistency and measures what it intended to measure. All the Cronbach’s alphas were above .70 for the sub-dimensions (CL = .64; DI = .76; TLC = .85; ES = .68; E = .70; SC = .65; SL = .80) (Table 4.1) and therefore were satisfactory. The Cronbach’s alpha coefficient was not affected negatively by individual items within the scale and therefore no items were deleted.

4.2.1.5 Job Insecurity

The Job Insecurity Scale obtained a Cronbach’s alpha of .93 (Table 4.2), indicating high internal consistency reliability. An average inter-item correlation of .81 (Table 4.2) supported the internal consistency finding. The individual inter-item correlations outlined in Table 4.1 ranged from .82 to .88. The Cronbach’s alpha coefficient was not affected negatively by individual items within the scale and therefore no items were deleted.

4.2.1.6 Work Overload

The Work Overload Scale obtained a Cronbach’s alpha of .81 (Table 4.2), indicating high internal consistency reliability. An average inter-item correlation of .35 (Table 4.2) supported the internal

consistency finding. The individual inter-item correlations outlined in Table 4.1 ranged from .36 to .70. The Cronbach's alpha coefficient was not affected negatively by individual items within the scale and therefore no items were deleted.

4.2.1.7 Summary of results of item analyses

The purpose of the item analyses was to assess the internal consistency of each subscale and whether the items represent the latent variables the scales intended to measure. The items therefore had to perform as a homogenous stimulus set to which participants responded with behaviour that adequately reflected the latent variables. The item analyses therefore examined the extent to which the items in each subscale succeeded in this.

Item statistics were calculated for each subscale, namely Cronbach's alpha coefficients (α), inter-item correlations and item-total correlations. For the purpose of this study, $\alpha \geq .70$. Items were scrutinised according to these standards and, after analysis, the items were considered for deletion or retention.

In summary, the purpose of the item analysis was to assess the psychometric soundness of the indicator variables. The inclusion of the items in the measurement instruments was supported by the results obtained and no items were deleted from the scales used. The results of the item analysis, as outlined, were therefore satisfactory.

4.3 PARTIAL LEAST SQUARES (PLS) PATH ANALYSES

Partial least squares (PLS) path analysis, a prediction-oriented structural equation modelling (SEM) method (Jakobowicz, 2006), was used to consider the relationships within the proposed model. The data was analysed using SmartPLS version 4 software.

PLS path analysis follows a two-step process that evaluates the reliability and validity of the measurement tools and evaluates the measurement (outer model) and structural model (inner model). The measurement quality of the constructs used in examining the structural model is determined by evaluating the measurement model. Path coefficients are then examined (using nonparametric bootstrapping), after establishing the reliability of the latent variables in each scale in order to establish the significance (and strength) of the hypothesised relationships (Chin, 2010; Langenhoven, 2015). Once the measurement model has been shown to fit, the significance and strength of the paths among the variables can be examined to confirm the structural model fit.

4.3.1 Evaluation and interpretation of the measurement model

The function of reliability analysis is to examine the measurement instruments' reliability and the measurement model fit. This assists in determining whether the items contained in the

measurements used measure the latent constructs they set out to measure. The composite reliability and convergent validity of the latent variables were tested. The reliability statistics can be found in Table 4.3. Composite reliability is an indication of the reliability of the measurement instruments. A composite reliability score $> .70$ is deemed satisfactory (Wong, 2013). All the latent variable scores of reliability were found to be $> .70$ (Table 4.3) and therefore were satisfactory.

Average variance extracted (AVE) was used to establish the convergent validity among the latent variables (Wong, 2013). The AVE score provides an indication of the amount of variance in the indicator variable in the outer model that can be explained by common factors (Farrell, 2010, as cited in Theron, 2014). An AVE score $\geq .50$ is satisfactory and shows that the indicator variables measure the applicable latent variable (Pennstate, 2018).

Table 4.3

Reliability Statistics of the PLS Measurement Model

Scale	AVE	α
EE	.83	.91
JB	.82	.90
EI	.58	.94
LO	.77	.96
JI	.88	.96
WO	.41	.83

EE = Employee Engagement; JB = Job Burnout; EI= Emotional Intelligence; LO = Learning Organisation; JI = Job Insecurity; WO = Work Overload

The AVE scores for all of the latent variables except Work Overload (.41) were equal to or above .50. Thus, it can be argued that the constructs explained more than 50% of the variance in the items.

4.3.1.1 Discriminant Validity

Additional analysis was performed to establish construct validity (the degree to which a scale measures what it is intended to measure). Discriminant validity was utilised to compare the measures with each other and to determine if the measures actually measured what they were intended to measure. Discriminant validity was determined through calculating the heterotrait-monotrait ratio. A 95% confidence interval (CI) was used as a guideline to interpret the scores. If the CI score contains a value of 1 it indicates that the scales measure different things. If there is a “No” in the discriminate column in Table 4.4 below, it indicates that there is a strong correlation between the variables and thus no discriminant validity.

Table 4.4***Discriminant Validity***

Scales	Original sample	95% CI (Lower)	95% CI (Upper)	Discriminate
Employee Engagement → Emotional Intelligence	.51	.39	.63	yes
Job Burnout → Emotional Intelligence	.61	.46	.73	yes
Job Burnout → Employee Engagement	.54	.34	.70	yes
Job Insecurity → Emotional Intelligence	.18	.07	.35	yes
Job Insecurity → Employee Engagement	.09	.05	.21	yes
Job Insecurity → Job Burnout	.20	.08	.37	yes
Work Overload → Emotional Intelligence	.31	.24	.44	yes
Work Overload → Employee Engagement	.25	.20	.38	yes
Work Overload → Job Burnout	.66	.56	.77	yes
Work Overload → Job Insecurity	.18	.13	.30	yes
Learning Organisation → Emotional Intelligence	.35	.21	.49	yes
Learning Organisation → Employee Engagement	.57	.46	.66	yes
Learning Organisation → Job Burnout	.54	.39	.66	yes
Learning Organisation → Job Insecurity	.03	.04	.19	yes
Learning Organisation → Work Overload	.35	.23	.49	yes

EE = Employee Engagement; JB = Job Burnout; EI = Emotional Intelligence; LO = Learning Organisation; JI = Job Insecurity; WO = Work Overload

In the results obtained there are no highly correlated constructs and therefore it can be argued that the constructs are unique and measure what they are intended to measure and thus have discriminant validity.

4.3.1.2 Outer Loadings

The measurement model was evaluated through the examination of the outer loadings and the reliability analysis. A nonparametric bootstrapping analysis using a 95% confidence interval was utilised to conduct the final item reliability evaluation. Bootstrapping assisted in determining whether the item loadings were significant by considering the factor loadings. The factor loadings were evaluated by identifying whether zero falls within the 95% confidence interval or not. Statistically significant factor loadings are where zero falls outside the 95% interval and, if zero falls within the 95% confidence interval, the factor loadings are not statistically significant (Langenhoven, 2015; Middleton, 2016). The strength of the relationships among the latent variables and the items measuring them are tabulated in Table 4.5 below. The results indicate that all the paths among the items and the respective constructs are significant. Thus, the reliability of the items within the various measurement instruments can be confirmed.

Table 4.5***Outer Loading***

Latent variables	Path	Original sample	95% CI (Lower)	95% CI (Upper)	Significant	p-Value from T-test
Employee Engagement	VIG → Employee Engagement	.95	.93	.96	Yes	<.01
	DED → Employee Engagement	.92	.89	.95	Yes	<.01
Job Burnout	ABS → Employee Engagement	.87	.80	.91	Yes	<.01
	EEX → Job Burnout	.93	.92	.95	Yes	<.01
Emotional Intelligence	DEP → Job Burnout	.88	.82	.91	Yes	<.01
	EAO → Emotional Intelligence	.80	.70	.87	Yes	<.01
	EE → Emotional Intelligence	.77	.71	.83	Yes	<.01
	EMO → Emotional Intelligence	.83	.78	.88	Yes	<.01
	ER → Emotional Intelligence	.68	.57	.76	Yes	<.01
	ESA → Emotional Intelligence	.70	.60	.77	Yes	<.01
	ESC → Emotional Intelligence	.82	.76	.86	Yes	<.01
	ESM → Emotional Intelligence	.71	.56	.79	Yes	<.01
Learning Organisation	CL → Learning Organisation	.85	.81	.89	Yes	<.01
	DI → Learning Organisation	.87	.82	.90	Yes	<.01
	ES → Learning Organisation	.86	.80	.90	Yes	<.01
	E → Learning Organisation	.91	.88	.94	Yes	<.01
	SL → Learning Organisation	.87	.81	.92	Yes	<.01
	SC → Learning Organisation	.90	.86	.93	Yes	<.01
	TLC → Learning Organisation	.89	.85	.92	Yes	<.01
Job Insecurity	JI_1 → Job Insecurity	.92	.78	.96	Yes	<.01
	JI_2 → Job Insecurity	.94	.86	.97	Yes	<.01
	JI_3 → Job Insecurity	.95	.92	.99	Yes	<.01
Work Overload	WO_4 → Work Overload	.65	.52	.74	Yes	<.01
	WO_5 → Work Overload	.77	.68	.83	Yes	<.01
	WO_6 → Work Overload	.67	.53	.75	Yes	<.01
	WO_7 → Work Overload	.29	.06	.50	Yes	<.01
	WO_8 → Work Overload	.35	.14	.54	Yes	<.01
	WO_9 → Work Overload	.69	.58	.78	Yes	<.01
	WO_10 → Work Overload	.71	.61	.79	Yes	<.01
	WO_11 → Work Overload	.79	.73	.84	Yes	<.01
Moderators	EI*JI → EI*JI	1.07	.98	1.15	Yes	<.01
	EI*WO → EI*WO	1.04	.94	1.14	Yes	<.01
	JI*EI → JI*EI	1.07	.98	1.15	Yes	<.01
	JI*LO → JI*LO	1.11	1.02	1.18	Yes	<.01
	WO*EI → WO*EI	1.04	.94	1.14	Yes	<.01

WO*LO → WO*LO	1.12	.99	1.27	Yes	<.01
LO*JI → LO*JI	1.11	1.02	1.18	Yes	<.01
LO*WO → LO*WO	1.12	.99	1.27	Yes	<.01

VIG = Vigour; DED = Dedication; ABS = Absorption; EEX = Emotional Exhaustion; DEP = Depersonalisation; EI = Emotional Intelligence; ER = Emotional Reasoning; ESA = Emotional Self-Awareness; ESM = Emotional Self-Management; EE = Emotional Expression; ESC = Emotional Self-control; EAO = Emotional Awareness of Others; EMO = Emotional Management of Others; CL = Continuous Learning; DI = Dialogue & Inquiry; TLC = Team Learning & Collaboration; ES = Embedded Systems; E = Empowerment; SC = System Connection; SL = Strategic Leadership; JI = Job Insecurity; WO = Work Overload.

4.3.2 Evaluation and interpretation of the structural model

The structural model was analysed to establish the quality of the relationships among the outlined constructs. Important to note is that the structural model is termed the ‘inner model’, as it describes the construct obtained within the structural model (Riou et al., 2015). The objective of the analysis of the PLS structural model was to establish the extent to which the latent variables are related, and the nature of these relationships. The relationships and influence of the exogenous variables on the endogenous variables and the endogenous variables on one another were determined and reported. The analysis of the structural model includes testing for multicollinearity, an evaluation of the R-square values and an evaluation and interpretation of the main and moderating effects.

4.3.2.1 Multicollinearity

When regression analysis is conducted, an assumption is made that all the predictor variables are not highly correlated with one another. If the predictor variables are too highly correlated, an outcome may be an unstable regression determined by the estimated coefficients. Variance inflation factor (VIF) was used to test for multicollinearity. VIF measures the amount by which variance is inflated in the estimated regression coefficients in comparison to when the predictor variables are not linearly correlated. The increase in the variance of the regression coefficients caused by multicollinearity is problematic, as it could possibly make the regression coefficients unstable and more difficult to interpret.

There are several acceptable levels of VIF. The most commonly used and recommended maximum level of VIF is a value of 10 (Pennstate, 2018). The VIF recommendation of 10 corresponds to the tolerance recommendation of .10 (i.e. $1/.10 = 10$). Other literature recommends a maximum VIF value of 5 and even 4 (Pennstate, 2018). For the purpose of this study, a maximum VIF value of 5 or higher was considered as problematic. It can be seen from the findings outlined in Table 4.6 that the scores were below 5 and therefore no multicollinearity was found among the variables in this study.

Table 4.6***Multicollinearity***

	Employee Engagement	Job Burnout
Emotional Intelligence	1.506	1.225
Employee Engagement		1.691
EI*JI	1.259	
EI*JO	1.372	
JI*EI		1.259
JI*LO		1.214
WO*EI		1.367
WO*LO		1.394
Job Burnout	2.397	
Job Insecurity	1.12	1.117
Work Overload	1.685	1.168
Learning Organisation	1.379	1.249
LO*JI	1.41	
LO*JO	1.379	1.249

EE = Employee Engagement; JB = Job Burnout; EI= Emotional Intelligence; LO = Learning Organisation; JI = Job Insecurity; WO = Work Overload

4.3.2.2 Evaluation and Interpretation of the R-square

The R-square (R^2) value represents the predictive power of the structural model (Chin, 2010). It indicates the amount of variance in the endogenous variables that can be explained by the exogenous variables. The R-square (R^2) values obtained for the endogenous variables are shown in Table 4.7 below.

Table 4.7***R-Square Scores for the Endogenous Variables***

	R^2	R^2 adjusted
Employee Engagement	.47	.44
Job Burnout	.58	.57
Emotional Intelligence	.10	.10
Learning Organisation	.10	.10

The Employee Engagement score was .47 and the Burnout score was .58. This indicates that 39% of the variance in employee engagement can be explained by the effect of the exogenous latent variables on employee engagement. Furthermore, 58% of the variance in burnout can be explained

by the effect of the exogenous latent variables on job burnout. The Emotional Intelligence score of .10 and the Learning Organisation score of .10 are lower than the score for Employee Engagement and Job Burnout. This indicates that almost 10% of the variance in emotional intelligence and learning organisation can be explained by the effect of the exogenous latent variables. The low scores are a possible indication of alternative variables, not considered in this study, which could have had an impact on these variables.

4.3.2.3 Evaluation and Interpretation of the Main Effects

According to Henseler et al. (2009), the intention of PLS path modelling is to facilitate prediction, not to examine a theory. In order to determine the significance (and strength) of the hypothesised relationships, the path coefficients were examined after the reliability of each latent variable's scales had been established. PLS path coefficients commonly range between -1.00 and +1.00 (Middleton, 2016). There may be an absence of a relationship between the constructs if the value obtained is closer to zero. Bootstrapping was used in order to establish the significance between the constructs, and the 95% confidence interval was used to determine the significance of the path coefficients. The corresponding coefficients therefore will not be viewed as significant when zero falls within the 95% confidence interval. Thus, the cut-off point for statistical significance was set at $p \leq .05$. Table 4.8 illustrates the significance of the path coefficients obtained for the hypothesised relationships.

Table 4.8

Path Coefficients Between Variables

Path	Path coefficient	95% CI (Lower)	95% CI (Upper)	Description	p-value from T-test
H1: EE → Job Burnout	-.28	-.37	-.16	Significant	<.01
H2: JB → Employee Engagement	-.38	-.53	-.22	Significant	<.01
H3: LO → Employee Engagement	.34	.22	.46	Significant	<.01
H4: EI → Employee Engagement	.22	.10	.34	Significant	<.01
H5: LO → Emotional Intelligence	.32	.20	.45	Significant	<.01
H6: EI → Learning Organisation	.32	.19	.45	Significant	<.01
H7: WO → Job Burnout	.46	.36	.55	Significant	<.01
H8: JI → Job Burnout	.04	-.06	.15	Non-Significant	.47

EE = Employee Engagement; JB = Job Burnout; EI= Emotional Intelligence; LO = Learning Organisation; JI = Job Insecurity; WO = Work Overload

Hypothesis 1: Employee Engagement (η_1) has a significant, negative impact on Job Burnout (η_2)

Hypothesis 1 was accepted. The hypothesised negative relationship between Employee Engagement and Job Burnout was found to be statistically significant (PLS path coefficient = -.28). This indicates that zero was not found between the upper and lower control limit using the 95% CI,

and the null hypothesis was rejected ($H_{a1}: \beta_{12} < 0$). The findings are consistent with other research findings on the relationship between employee engagement and job burnout (Bakker & Demerouti, 2014; Bakker et al., 2014). The findings imply that there would be a decrease in the level of job burnout with an increase in the level of employee engagement.

Hypothesis 2: Job Burnout (η_2) has a significant, negative impact on Employee Engagement (η_1)

Hypothesis 2 was accepted. The hypothesised negative relationship between Job Burnout and Employee Engagement was found to be statistically significant (PLS path coefficient = $-.38$), with zero falling outside the 95% confidence interval, and therefore the null hypothesis was rejected ($H_{a2}: \beta_{21} < 0$). The results also indicated that the relationship between job burnout and employee engagement was negative. This finding implies that there will be a decrease in the level of employee engagement with an increase in the level of job burnout. Job burnout and employee engagement are considered as two separate constructs and are not dependent on each other. The result, however, shows that job burnout has a negative impact on employee engagement, therefore those employees who experience high levels of job burnout may not be as engaged as those employees who are not suffering from job burnout.

Hypothesis 3: Learning Organisation (η_3) has a significant, positive impact on Employee Engagement (η_1)

Hypothesis 3 was accepted. The hypothesised positive relationship between Learning Organisation and Employee Engagement was found to be statistically significant (PLS path coefficient = $.34$), with zero not falling within the 95% confidence interval and therefore the null hypothesis being rejected ($H_{a3}: \beta_{13} < 0$). According to the findings, employee engagement increases as job resources (learning organisation) increase. It is evident that employees who experience the organisation as a learning organisation will experience more engagement than those who do not share this view. Thus, employees who have access to inquiry and dialogue, system connection, strategic leadership, team dynamics and collaboration will more likely experience higher levels of engagement within the workplace.

Hypothesis 4: Emotional Intelligence (η_4) has a significant, positive impact on Employee Engagement (η_1)

Hypothesis 4 was accepted. The hypothesised positive relationship between Emotional Intelligence and Employee Engagement was found to be statistically significant (PLS path coefficient = $.22$), with zero not falling within the 95% confidence interval and therefore the null hypothesis being rejected ($H_{a4}: \beta_{14} < 0$). This is supported by previous research, which found a significant relationship between emotional intelligence and work engagement (Duran et al., 2012). The findings suggest that, as a personal resource (emotional intelligence) increases, employee

engagement will increase. Thus, employees who have high levels of emotional intelligence will more likely experience higher levels of engagement in their work than employees with lower levels of emotional intelligence.

Hypothesis 5: Learning Organisation (η_3) has a significant, positive impact on Emotional Intelligence (η_4)

Hypothesis 5 was accepted. The hypothesised positive relationship between Learning Organisation and Emotional Intelligence was found to be statistically significant (PLS path coefficient = .32), with zero not falling within the 95% confidence interval and therefore the null hypothesis being rejected ($H_{a5}: \beta_{43} < 0$). The findings suggest that personal resources (emotional intelligence) will increase as job resources (learning organisation) increase. Employees who experience the organisation as inquisitive and dynamic, who have system connections and strategic leadership, and who collaborate and share information are more likely to engage with other employees and therefore have an opportunity to grow their level of emotional intelligence.

Hypothesis 6: Emotional Intelligence (η_4) has a significant, positive impact on Learning Organisations (η_3)

Hypothesis 6 was accepted. The hypothesised positive relationship between Emotional Intelligence and Learning Organisation was found to be statistically significant (PLS path coefficient = .32), with zero not falling within the 95% confidence interval and therefore the null hypothesis being rejected ($H_{a6}: \beta_{34} < 0$). The results indicate that job resources (learning organisation) will increase as personal resources (emotional intelligence) increase. This is in line with other studies (Ghosh, 2015), which found a positive, significant relationship between emotional intelligence and a learning organisation. This indicates that employees with a higher level of emotional intelligence will be more likely to respond positively to an organisation's effort to create continuous learning, promote inquiry and dialogue, encourage collaboration and team learning, create systems to capture and share learning, empower people towards a collective vision, connect the organisation to its environment, and provide strategic leadership for learning and thus have a positive impact on a learning organisation.

Hypothesis 7: Work Overload (ξ_1) has a significant, positive impact on Job Burnout (η_2)

Hypothesis 7 was accepted. The hypothesised positive relationship between Work Overload and Job Burnout was found to be statistically significant (PLS path coefficient = .46), with zero not falling within the 95% confidence interval and therefore the null hypothesis being rejected ($H_{a7}: \gamma_{21} < 0$). This confirms previous research findings that work overload has a positive impact on job burnout. Thus, as job demands (work overload) increase, job burnout will increase. Employees will be more likely to experience burnout the greater their workload becomes.

Hypothesis 8: Job Insecurity (ξ_2) has a significant, positive impact on Job Burnout (η_2)

Hypothesis 8 was rejected. The hypothesised positive relationship between Job Insecurity and Job Burnout was found to be statistically not significant (PLS path coefficient = .04), with zero falling within the 95% confidence interval and therefore the null hypothesis was not rejected ($H_{08}: \gamma_{22} = 0$). The result is in contrast to that of previous studies that considered this relationship (Jackson & Rothmann, 2005). The results of this study indicate that as job demands (job insecurity) increase they will not have an impact on employees' level of job burnout. Thus, an employees' level of job insecurity may not necessarily affect their level of exhaustion or cynicism towards their work.

4.3.2.4 Evaluation and Interpretation of the Moderating Hypotheses

Two approaches were utilised to test for moderating effects. Firstly, the R^2 change test for interaction was used by considering the independent, moderator and dependent variables every time to examine whether the R^2 will significantly increase when the interaction between the independent and the moderator variables (independent*moderator) is included. This was done to determine whether a moderating effect exists between the hypothesised paths. The R^2 change and p-values are provided in Table 4.9. It is important to note that $p < .05$ is statistically significant at the 95% confidence interval.

Table 4.9

R² Change and P-values for the Moderating Effects

Path	ΔR^2	F- to remove	P-value
H9: WO*LO→Job Burnout	-3.893	.013	.90
H10: JI*LO→Job Burnout	-0.010	2.923	.08
H11: WO*EI→Job Burnout	-0.0005	.208	.64
H12: JI*EI→Job Burnout	-0.005	1.499	.22
H13: LO*WO→Employee Engagement	-0.02	5.85	.02
H14: LO*JI→Employee Engagement	-0.00	1.27	.26
H15: EI*WO→Employee Engagement	-0.04	9.65	<.01
H16: EI*JI→Employee Engagement	-0.01	1.45	.23

EE = Employee Engagement; JB = Job Burnout; EI= Emotional Intelligence; LO = Learning Organisation; = Job Insecurity; WO = Work Overload

Secondly, path coefficients were utilised in order to determine the strength, significance and direction of the hypothesised moderating effect in the structural model. The significance of a hypothesised path is determined by the presence of zero between the lower and upper bootstrapping values. The data used to determine the hypothesised relationships is presented in Table 4.10 below.

Table 4.10***Moderating Path Coefficients***

Path	Path coefficient	95% CI (Lower)	95% CI (Upper)	Description	p-value from T-test
H9: WO*LO→Job Burnout	-.08	-.16	.01	Not Significant	.07
H10: JI*LO→Job Burnout	-.07	-.18	.05	Not Significant	.23
H11: WO*EI→Job Burnout	-.06	-.14	.04	Not Significant	.22
H12: JI*EI→Job Burnout	-.01	-.12	.09	Not Significant	.81
H13: LO*WO→Employee Engagement	-.08	-.20	.08	Not Significant	.25
H14: LO*JI→Employee Engagement	-.05	-.16	.06	Not Significant	.34
H15: EI*WO→Employee Engagement	-.07	-.2	.06	Not Significant	.30
H16: EI*JI→Employee Engagement	-.03	-.11	.08	Not Significant	.62

EE = Employee Engagement; JB = Job Burnout; EI= Emotional Intelligence; LO = Learning Organisation; JI = Job Insecurity; WO = Work Overload

Hypothesis 9: Learning Organisation (η_3) has a significant, negative moderator effect on the relationship between Work Overload (ξ_1) and Job Burnout (η_2)

Hypothesis 9 was rejected. The p-value of Learning Organisation as a moderator of the relationship between Work Overload and Job Burnout was found to be higher than .05 ($p = .07$). A p-value higher than .05 indicates that a learning organisation does not have a statistically significant moderating effect on the relationship between work overload and job burnout.

When the moderating effect of learning organisation on the relationship between work overload and job burnout was tested further in terms of PLS bootstrapping, the same findings were found. The hypothesised moderating effect of learning organisation on the relationship between work overload and job burnout was found to be *statistically non-significant* at the 95% confidence interval. The PLS path coefficient was equal to $-.08$, with zero not falling in the 95% confidence interval and therefore the null hypothesis was not rejected ($H_{09}: \gamma_{23} = 0$). However, the relationship would be statistically significant if the 90% confidence interval was considered. The lower and upper intervals of the confidence interval are outlined in Table 4.10.

Hypothesis 10: Learning Organisation (η_3) has a significant, negative moderator effect on the relationship between Job Insecurity (ξ_2) and Job Burnout (η_2)

Hypothesis 10 was rejected. The p-value of Learning Organisation as a moderator of the relationship between Job Insecurity and Job Burnout was found to be higher than .05 ($p = .23$). A p-value higher than .05 indicates that learning organisations do not have a statistically significant moderating effect on the relationship between job insecurity and job burnout.

When the moderating effect of learning organisation on the relationship between job insecurity and job burnout was tested further in terms of the PLS bootstrapping, the findings were confirmed. The hypothesised moderating effect of learning organisation on the relationship between job insecurity and job burnout was found to be *not statistically significant* at the 95% confidence interval. The PLS path coefficient was equal to $-.07$, with zero not falling in the 95% confidence interval and therefore the null hypothesis was not rejected ($H_{010}: \gamma_{24} = 0$). The lower and upper intervals of the confidence interval are outlined in Table 4.10.

Hypothesis 11: Emotional Intelligence (η_4) has a significant, negative moderator effect on the relationship between Work Overload (ξ_1) and Job Burnout (η_2)

Hypothesis 11 was rejected. The p-value of Emotional Intelligence as a moderator of the relationship between Work Overload and Job Burnout was found to be higher than $.05$ ($p = .22$). A p-value higher than $.05$ indicates that emotional intelligence does not have a statistically significant moderating effect on the relationship between work overload and job burnout.

When the moderating effect of emotional intelligence on the relationship between work overload and job burnout was tested further in terms of PLS bootstrapping, the findings were confirmed. The hypothesised moderating effect of emotional intelligence on the relationship between work overload and job burnout was found to be *statistically non-significant* at the 95% confidence interval, and therefore the null hypothesis was not rejected ($H_{011}: \gamma_{25} = 0$). The PLS path coefficient was equal to $-.06$, with zero not falling in the 95% confidence interval. The lower and upper intervals of the confidence interval are outlined in Table 4.10.

Hypothesis 12: Emotional Intelligence (η_4) has a significant, negative moderator effect on the relationship between Job Insecurity (ξ_2) and Job Burnout (η_2)

Hypothesis 12 was rejected. The p-value of Emotional Intelligence as a moderator of the relationship between Job Insecurity and Job Burnout was found to be higher than $.05$ ($p = .81$). A p-value higher than $.05$ indicates that emotional intelligence does not have a statistically significant moderating effect on the relationship between job insecurity and job burnout.

When the moderating effect of emotional intelligence on the relationship between job insecurity and job burnout was tested further in terms of PLS bootstrapping, the findings were confirmed. The hypothesised moderating effect of emotional intelligence on the relationship between job insecurity and job burnout was found to be *statistically non-significant* at the 95% confidence interval. The PLS path coefficient was equal to $-.01$, with zero not falling in the 95% confidence interval, thus the null hypothesis was not rejected ($H_{012}: \gamma_{26} = 0$). The lower and upper intervals of the confidence interval are outlined in Table 4.10.

Hypotheses 9 to 12 were all found to contradict the findings of previous research (Bakker and Demerouti, 2014), which found that job resources and personal resources buffer the impact of job demands on strain (i.e. job burnout).

Subsequently, the relationship between job demands (i.e. job insecurity and work overload) experienced in the heavy earthmoving equipment supplier industry and job burnout is not less for those employees enjoying a higher degree of job resources (i.e. learning organisation) and who may have a higher degree of personal resources (i.e. emotional intelligence). As outlined in Chapter 2, it seems that the first interaction/moderating (buffering) effect does not have any impact on the relationship between job demands and job burnout. The non-significant paths may be a result of the small sample size and sample distribution, which could have affected the results, and possibly also as a result of using the MBI-HSS scale, which was originally designed for the service sector, although it was not identified as problematic as it had a sufficient Cronbach's alpha.

Hypothesis 13: Work Overload (ξ_1) has a significant, positive moderator effect on the relationship between Learning Organisation (η_3) and Employee Engagement (η_1)

Hypothesis 13 was rejected. The p-value of Work Overload as a moderator of the relationship between Learning Organisation and Employee Engagement was found to be higher than .05 ($p = .25$). A p-value higher than .05 indicates that work overload does not have a statistically significant moderating effect on the relationship between learning organisation and employee engagement.

When the moderating effect of work overload on the relationship between learning organisation and employee engagement was tested further in terms of PLS bootstrapping, the same findings were found. The hypothesised moderating effect of work overload on the relationship between learning organisation and employee engagement was found to be statistically non-significant at the 95% confidence interval, and thus the null hypothesis was not rejected ($H_{013}: \gamma_{17} = 0$). The PLS path coefficient was equal to -.08, with zero not falling in the 95% confidence interval. The lower and upper intervals of the confidence interval are outlined in Table 4.10.

Hypothesis 14: Job Insecurity (ξ_2) has a significant, positive moderator effect on the relationship between Learning Organisation (η_3) and Employee Engagement (η_1)

Hypothesis 14 was rejected. The p-value of Job Insecurity as a moderator of the relationship between Learning Organisation and Employee Engagement was found to be higher than .05 ($p = .34$). A p-value higher than .05 indicates that job insecurity does not have a statistically significant moderating effect on the relationship between learning organisation and employee engagement.

When the moderating effect of job insecurity on the relationship between learning organisation and employee engagement was tested further in terms of PLS bootstrapping, the same findings were found. The hypothesised moderating effect of job insecurity on the relationship between learning organisation and employee engagement was found to be statistically non-significant at the 95% confidence interval. The PLS path coefficient was equal to $-.05$, with zero not falling in the 95% confidence interval, and therefore the null hypothesis was not rejected ($H_{014}: \gamma_{18} = 0$). However, the relationship would be statistically significant if the 90% confidence interval was considered. The lower and upper intervals of the confidence interval are outlined in Table 4.10.

Hypothesis 15: Work Overload (ξ_1) has a significant, positive moderator effect on the relationship between Emotional Intelligence (η_4) and Employee Engagement (η_1)

Hypothesis 15 was rejected. The p-value of Work Overload as a moderator of the relationship between Emotional Intelligence and Employee Engagement was found to be higher than $.05$ ($p = .30$). A p-value higher than $.05$ indicates that work overload does not have a statistically significant moderating effect on the relationship between emotional intelligence and employee engagement.

When the moderating effect of work overload on the relationship between emotional intelligence and employee engagement was tested further in terms of PLS bootstrapping, the same findings were found. The hypothesised moderating effect of work overload on the relationship between emotional intelligence and employee engagement was found to be statistically non-significant at the 95% confidence interval. The PLS path coefficient was equal to $-.07$, with zero not falling in the 95% confidence interval, and therefore the null hypothesis was not rejected ($H_{015}: \gamma_{19} = 0$). However, the relationship would be statistically significant if the 90% confidence interval was considered. The lower and upper intervals of the confidence interval are outlined in Table 4.10.

Hypothesis 16: Job Insecurity (ξ_2) has a significant, positive moderator effect on the relationship between Emotional Intelligence (η_4) and Employee Engagement (η_1)

Hypothesis 16 was rejected. The p-value of Job Insecurity as a moderator of the relationship between Emotional Intelligence and Employee Engagement was found to be higher than $.05$ ($p = .62$). A p-value higher than $.05$ indicates that job insecurity does not have a statistically significant moderating effect on the relationship between emotional intelligence and employee engagement.

When the moderating effect of job insecurity on the relationship between emotional intelligence and employee engagement was tested further in terms of PLS bootstrapping, the same findings were found. The hypothesised moderating effect of job insecurity on the relationship between emotional intelligence and employee engagement was found to be statistically non-significant at

the 95% confidence interval. The PLS path coefficient was equal to $-.03$, with zero not falling in the 95% confidence interval, and therefore the null hypothesis was not rejected ($H_{016}: \gamma_{110} = 0$). However, the relationship would be statistically significant if the 90% confidence interval was considered. The lower and upper intervals of the confidence interval are outlined in Table 4.10.

Hypotheses 13 to 16 assessed the second interaction effect outlined in Chapter 2. This effect considers the impact that job demands will have on the relationship between job resources, personal resources and employee engagement. The results of the hypotheses were found to be in contrast to previous research on the Job Demands-Resources (JD-R) model (Bakker et al., 2014). It seems that the second interaction/moderating (buffering) effect does not have any impact on the relationship between job resources, personal resources and employee engagement.

4.4 INTERPRETATION OF FINAL SCORES

The scores related to the latent variable scales were investigated to inform the employees' standing on the latent variables. This information is deemed valuable by the organisation from which the sample was drawn, and assisted in the justification of practical implications and interventions for the organisation. The results, however, are not generalizable to the greater population, but provide guidance for appropriate organisational interventions.

4.4.1 Interpreting the Employee Engagement score

The UWES-15 (Schaufeli & Bakker, 2004) was used to establish the degree to which employees within the heavy earth-moving equipment supplier industry engaged with their work. The UWES-15 comprises three subscales that serve as a composite measurement indicator of employee engagement. Responses were scored on a seven-point Likert-type scale (0 = never, 6 = always/daily). None of the items in the scale are reverse scored. Schaufeli and Bakker (2003) advise that the UWES can be interpreted by considering the true mean of the scores obtained, using the scoring template in Table 4.11 below.

The total mean score obtained for employee engagement was 5.73 (SD = 0.98), which indicates employee engagement among employees at level 6. This suggests that the employees felt engaged a few times a week within their current job role.

The following mean scores were found for each of the subscales included in the UWES-15:

Vigour: The mean score for the Vigour subscale was found to be 5.57 (SD = 1.16), which indicates employee engagement at level 6. This indicates that employees felt engaged in their work a few times a week and were prepared to dedicate effort and time to their work. During these periods, employees were willing to invest effort in their job roles, persevere through difficulties and show

resilience while working, and they were seen to be exhibiting high levels of energy when engaging with various tasks.

Table 4.11

Scoring Template for UWES Mean Scores

Engagement level	Mean scores
1 - feels engaged once a year or less	0.00 to 0.99
2 - feels engaged at least once a year	1.00 to 1.99
3 - feels engaged at least once a month	2.00 to 2.99
4 - feels engaged at least a few times a month	3.00 to 3.99
5 - feels engaged at least once a week	4.00 to 4.99
6 - feels engaged a few times a week	5.00 to 5.99
7 - feels engaged daily	6.00 to 7.00

Dedication: The mean score for the Dedication subscale was found to be 5.90 (SD = 1.09), which indicates employee engagement at level 6. This suggests that employees are involved in and identify with their work a few times a week. Thus, during this time, employees showed enthusiasm and felt a sense of significance and pride in their work.

Absorption: The mean score for the Absorption subscale was found to be 5.73 (SD = 0.97), which indicates employee engagement at level 6. This suggests that employees were absorbed in their job tasks a few times a week. Thus, during that period, employees could be characterised as immersed in their job role, where they experienced time passing quickly and struggled to detach from their work.

4.4.2 Interpreting the Job Burnout score

The MBI-HSS (Maslach & Jackson, 1981) was used to determine the degree to which employees within the heavy earth-moving equipment supplier industry experienced job burnout during their work. The MBI-HSS contains three subscales that serve as a composite measurement indicator of job burnout. Only two subscales (emotional exhaustion and depersonalisation) were used to measure job burnout in this study. Responses were scored on a seven-point Likert-type scale (0 = never, 6 = every day). None of the items in the scale were reverse scored. Maslach and Leiter (1981) advise that the MBI-HSS can be interpreted by considering the true mean of scores obtained using the scoring template shown in Table 4.12.

Table 4.12***Scoring Template for MBI-HSS Mean Scores***

Job Burnout level	Mean scores
High emotional exhaustion	≥ 27
Moderate emotional exhaustion	17 – 26
Low emotional exhaustion	0 – 16
High depersonalisation	≥ 13
Moderate depersonalisation	7 – 12
Low depersonalisation	0 – 6

The total mean score obtained for Job Burnout was 6.06 (SD = 2.23), which indicates a high level of overall job burnout among employees. This suggests that the employees experienced job burnout in their work daily.

The following scores were found for each of the subscales included in the MBI-HSS:

Emotional Exhaustion: The mean score for the Emotional Exhaustion subscale was found to be 29.67 (SD = 12.17), which indicates a high level of emotional exhaustion. This suggests that employees feel emotionally drained by their work on a daily basis. During these periods, employees could be characterised as extremely tired, emotionally depleted and lacking energy as a result of intense cognitive, physical and emotional strain.

Depersonalisation (Cynicism): The mean score for the Depersonalisation subscale was found to be 13.84 (SD = 5.66), which indicates a score just above the cut-off for inclusion in the high depersonalisation category. This suggests employees experienced a strong sense of cynicism and depersonalisation towards their fellow colleagues and work duties on a daily basis. During these periods, employees are characterised by indifference, a loss of interest and a distant attitude towards others and their work in general.

4.4.3 Interpreting the Work Overload and Job Insecurity (Job Demands) score

The work overload scale, based on a subscale of the Job Demands-Resources Scale (JDRS) (Rothmann & Jackson, 2005), was used to determine the degree to which employees in the heavy earth-moving equipment supplier industry experienced work overload during their work. The Work Overload scale comprises eight items that serve as a composite measurement indicator of work overload. Responses were scored on a four-point Likert-type scale (1 = never, 4 = always). None of the items in the scale were reverse scored. There are no specific instructions within the literature

regarding the interpretation of the scores obtained. Therefore, the mean scores were categorised as set out in Table 4.13.

The Job Insecurity scale, based on a subscale of the Job Demands Resources Scale (JDRS) (Rothmann & Jackson, 2005), was used to determine the degree to which employees in the heavy earth-moving equipment supplier industry experienced job insecurity during their work. The Job Insecurity scale comprises three items that serve as a composite measurement indicator of job insecurity. Responses were scored on a four-point Likert-type scale (1 = never, 4 = always). None of the items in the scale were reverse scored. There are no specific instructions within the literature regarding the interpretation of the scores obtained. Therefore, mean scores were categorised as set out in Table 4.13.

Table 4.13

Scoring Template for Work Overload Scale and Job Insecurity Scale Mean Scores

Level	Mean scores
High work overload	3.01 to 4.00
Moderate work overload	2.01 to 3.00
Low work overload	1.00 to 2.00
High job insecurity	3.01 to 4.00
Moderate job insecurity	2.01 to 3.00
Low job insecurity	1.00 to 2.00

The total mean score obtained for Work Overload was 2.86 (SD = 0.53), which indicates a moderate level of work overload experienced among the employees. This indicates that employees experienced moderate levels of work overload that placed mental and emotional loads on them.

Furthermore, the total mean score obtained for Job Insecurity was 2.28 (SD = 1.00), which indicates a moderate level of job insecurity experienced among employees. This indicates that most of the employees felt moderately secure within their current positions. This could be attributed to the company culture, which values long service, and also the fact that it has not retrenched employees in over a decade, despite the current volatile climate.

4.4.4 Interpreting the Learning Organisation scale (Job Resources) score

The DLOQ (Marsick & Watkins 1999) was used to determine the degree to which employees in the heavy earth-moving equipment supplier industry experienced the company as a learning organisation. The DLOQ comprises seven subscales that serve as a composite measurement indicator of a learning organisation. Responses were scored on a six-point Likert-type scale (1 =

almost never, 6 = almost always). None of the items in the scale are reverse scored. There are no specific instructions in the literature regarding the interpretation of the scores obtained. Therefore, mean scores were categorised as set out in Table 4.14.

Table 4.14
Scoring Template for DLOQ Mean Scores

Level	Mean scores
1 – almost never	1.00 to 1.99
2 – rarely	2.00 to 2.99
3 – sometimes	3.00 to 3.99
4 – often	4.00 to 4.99
5 – very often	5.00 to 5.99
6 – almost always	6.00

The total mean score obtained for a learning organisation was 3.55 (SD = 1.23), which indicates that most employees sometimes experienced the organisation as a learning organisation.

The following scores were found for each of the subscales included in the DLOQ:

Continuous Learning: The mean score for the Continuous Learning subscale was found to be 3.67 (SD = 1.39). This suggests that, at the time of the survey, employees believed that the organisation sometimes created learning opportunities in the workplace where ongoing education and growth could be experienced on the job.

Inquiry and Dialogue: The mean score for the Inquiry and Dialogue subscale was found to be 3.33 (SD = 1.40). This suggests that, at the time of the survey, employees believed that the organisation sometimes created a culture for questioning, feedback and experimentation to foster inquiry and dialogue.

Collaboration and Team Learning: The mean score for the collaboration and team learning subscale was found to be 3.44 (SD = 1.41). This suggests that, at the time of the survey, employees believed that the organisation sometimes encouraged collaboration and teamwork.

Embedded Systems: The mean score for the Embedded Systems subscale was found to be 3.67 (SD = 1.38). This suggests that, at the time of the survey, employees believed that the organisation sometimes provided access to technology systems that are integrated with work and are maintained.

Empowerment: The mean score for the Empowerment subscale was found to be 3.42 (SD = 1.39). This suggests that, at the time of the survey, employees believed that the organisation sometimes empowered employees toward a collective vision in terms of which they are encouraged to set, own and implement a joint vision.

Systems Connection: The mean score for the Systems Connection subscale was found to be 3.71 (SD = 1.37). This suggests that, at the time of the survey, employees believed that the organisation sometimes provided clear information on the organisation's connection with its internal and external environment and the effect of each employee's role on the entire organisation.

Strategic Leadership: The mean score for the Strategic Leadership subscale was found to be 3.63 (SD = 1.46). This suggests that, at the time of the survey, employees believed that leadership sometimes modelled, championed and supported learning within the organisation.

4.4.5 Interpreting the Emotional Intelligence scale (Personal Resources) score

The Genos EI (Gignac, 2010) was used to determine the degree to which employees in the heavy earth-moving equipment supplier industry felt they possessed emotional intelligence. The Genos EI comprises seven subscales that serve as a composite measurement indicator of emotional intelligence. Responses were scored on a five-point Likert-type scale (1 = almost never, 5 = almost always). Twelve items were based on reverse scoring. There are no specific instructions in the literature regarding the interpretation of the scores obtained. Therefore, mean scores were categorised as set out in Table 4.15.

Table 4.15

Scoring Template for GENOS EI Mean Scores

Level	Mean scores
1 – almost never	1.00 to 1.99
2 – seldom	2.00 to 2.99
3 – sometimes	3.00 to 3.99
4 – usually	4.00 to 4.99
5 – almost always	5.00

The total mean score obtained for Emotional Intelligence was 3.69 (SD = 0.50), which indicates that employees sometimes exhibited emotionally intelligent behaviours in the workplace.

The following scores were found for each of the subscales included in the Genos EI:

Emotional Self-Awareness: The mean score for the ESA subscale was found to be 3.72 (SD = 0.66). This suggests that, at the time of the survey, employees sometimes exhibited emotional self-awareness whereby they consciously identified, perceived and understood their own emotions at work.

Emotional Expression: The mean score for the EE subscale was found to be 3.43 (SD = 0.64). This suggests that, at the time of the survey, employees sometimes exhibited behaviour in terms of which they expressed their emotions appropriately at work.

Emotional Awareness of Others: The mean score for the EAO subscale was found to be 3.85 (SD = 0.58). This suggests that, at the time of the survey, employees exhibited behaviour that showed they were sometimes able to identify the expression of emotions in others and the causes thereof within the workplace.

Emotional Reasoning: The mean score for the ER subscale was found to be 3.56 (SD = 0.80). This suggests that, at the time of the survey, employees sometimes exhibited behaviour that showed they utilised emotionally relevant information in the process of decision-making.

Emotional Self-Management: The mean score for the ESM subscale was found to be 3.56 (SD = 0.61). This suggests that, at the time of the survey, employees sometimes exhibited behaviour that showed they were able to successfully regulate and manage their own emotions at work.

Emotional Management of Others: The mean score for the EMO subscale was found to be 3.78 (SD = 0.67). This suggests that, at the time of the survey, employees sometimes exhibited behaviour that showed they were able to successfully regulate and manage others' emotions at work.

Emotional Self-Control: The mean score for the ESC subscale was found to be 3.90 (SD = 0.67). This suggests that, at the time of the survey, employees sometimes exhibited behaviour in which they appropriately demonstrated control of strong reactive emotions at work.

From the results obtained, it is evident that, although employees experienced emotionally intelligent behaviour a few times a week, the organisation should consider implementing measures to further develop and encourage emotionally intelligent behaviour within the workplace.

4.5 CHAPTER SUMMARY

The purpose of this chapter was to review the results obtained from the data arising from the statistical methods outlined in Chapter 3. As discussed, PLS path analysis and bootstrapping were used to assess the data obtained. The reliability and validity of the measurement (outer) model was tested through item analyses of all the subscales included in the survey. The structural (inner) model

was analysed to determine the significance of the relationships among the latent variables. All the measures used were found to be reliable and valid. Lastly, from the 16 hypotheses formulated, seven were found to be statistically significant at the 95% confidence interval. It is important to note that eight of the non-significant paths were related to the moderating effects. Hypothesis 8 was also found to be non-significant. Chapter 5 outlines the findings of the study, managerial implications and possible interventions to assist management, the limitations of the study and, lastly, recommendations for future research in this field.

CHAPTER 5

IMPLICATIONS, LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

5.1 INTRODUCTION

One of the salient roles of the industrial and organisational psychologists (IOPs) within an organisation is to effectively influence employee wellbeing so that it has a positive effect on employee performance and in turn on organisational success. Given that employee wellbeing is vital to healthy and successful organisational functioning, it is essential for IOPs to identify and understand the individual and situational factors that affect wellbeing. In addition, a thorough understanding of how these factors interact to influence employee wellbeing is required. This study therefore focused on the impact that employee engagement and job burnout would have on employee wellbeing by considering the various job demands employees face and the job/personal resources they have at their disposal to meet these demands.

Employee engagement and job burnout are products of the relationships among job resources, personal resources and job demands, as presented in the JD-R model (Bakker, 2011; Schaufeli, 2017). Job demands are things at work that may drain an employee's energy, such as work overload and job insecurity. In contrast, resources (job and personal) are those things – personal (emotional intelligence) and within the job (learning organisation) – that, when accessed, can assist an individual to meet job demands.

The JD-R model integrates two psychological processes. Firstly, the impairment (stress) process, which occurs when there are high job demands (work overload, job insecurity) and low resources to meet these demands and can lead to burnout, and which in turn may have negative outcomes such as low employee morale, absenteeism, poor work performance and impeded work ability. Secondly, the motivation process, where an abundance of resources (which have an intrinsic motivational quality) can facilitate employee engagement. From this it should be noted that high job demands and low job resources contribute to burnout, whereas the availability of abundant resources (and sufficient challenging job demands) promotes employee engagement. Thus, by increasing job and personal resources, job burnout can be prevented and employee engagement can be fostered, whereas decreasing job demands, such as work overload, affect only burnout directly and not employee engagement. Employee engagement, according to previous research, therefore is a result of both challenging job demands and the availability of abundant job and personal resources (the more challenging the job demands, the higher the motivation to use the resources available to the individual to meet those demands) (Bakker, 2011; Bakker & Demerouti, 2014; Schaufeli, 2017).

The presence of high job demands for employees within the mining and equipment supplier industry could fuel employee motivation to succeed in the job when viewed as a challenge and not a threat. Nevertheless, for employees to successfully meet the demands faced within the industry, access to both job and personal resources is vital. When employees have limited access to either job or personal resources, challenging job demands may be viewed as a hindrance, resulting in increased strain which in turn could lead to disengagement and burnout.

This chapter outlines the implications of this study based on the statistical analysis and results presented in the previous chapter. The results in Chapter 4 will be referenced to the JD-R theory and the degree to which this study's findings are aligned with previous research findings. Specific attention will be given to the practical implications of the findings, the limitations of the study and recommendations for future research.

5.2 FINDINGS AND IMPLICATIONS

The JD-R model presents a broader understanding for IOPs of the interaction found between employee engagement and burnout in diverse organisational settings. The overall objective of this study was to test a structural JD-R model of the hypothesised relationships between the variables and to determine the level of employee engagement, job burnout, job resources and job demands, and the personal resources of employees within the mining and construction equipment supplier industry. The research-initiating question was: "Why is there variance in engagement and burnout between employees within the mining and construction equipment supplier industry?" Of the 16 paths hypothesised, seven were found to be significant. None of the hypothesised moderator paths were significant, as set out in Chapter 4. This section considers the interventions in relation to the results, which could assist IOPs and HR managers in promoting employee wellbeing within the organisation.

According to various JD-R studies (Bakker & Demerouti, 2014; Bakker et al., 2014), work engagement is endorsed in organisational settings where sufficient resources are offered and a challenging work environment is promoted. Thus, organisations that provide employees with adequate resources to meet the challenging job demands on an organisational level can have a positive impact on employee engagement and, in doing so, on overall job performance. In addition, employees need to learn how to foster and utilise their own personal resources as opposed to relying solely on the organisation for the provision of resources. Insufficient resources (either personal or job related) and increased job demands that employees are not able to meet, could lead to job burnout and in this manner have a negative impact on the individual and the organisation. Interventions should therefore be aimed at developing employee engagement and reducing job burnout on both an organisational and individual level.

Bakker and Demerouti (2014) distinguish between organisation-driven interventions and individually driven interventions, as indicated in Figure 5.1.

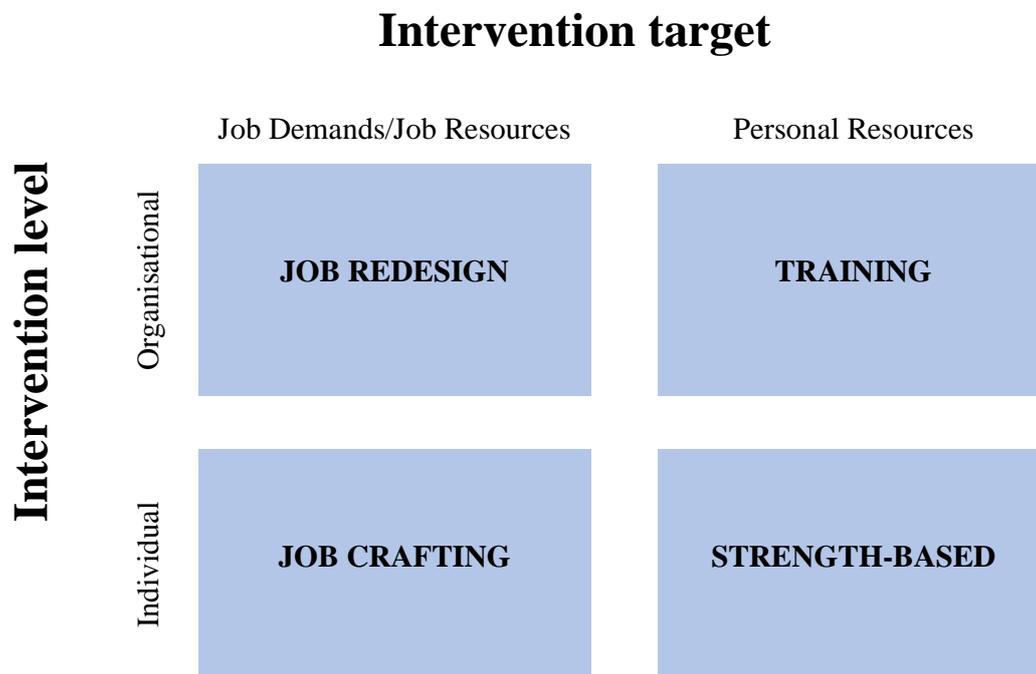


Figure 5.1 The JD-R interventions

(Bakker & Demerouti, 2014)

5.2.1 Organisation-driven interventions

Organisation-driven interventions are aimed at a group of employees and are interventions that the organisation can implement during working hours that are aimed at the empowerment of employees to assist in the development of their coping skills to meet job demands. Bakker and Demerouti (2014) propose two categories of interventions at an organisational level that can reduce job demands and increase resources, viz. job redesign and training programmes. The following interventions are proposed to increase job and personal resources and decrease job demands on an organisational level.

5.2.1.1 Job redesign as a means to reduce Job Demands and increase Job Resources

As alluded to previously, importance should be placed on decreasing job demands that are perceived as hindrances to performance rather than demands that challenge employees to utilise their resources. Work overload and job insecurity were considered in this study as job demands that could affect employee levels of burnout.

The hypothesised relationship between work overload and job burnout was found to be statistically significant. This indicates a strong, positive relationship between work overload and job burnout. Employees therefore are more likely to experience increased levels of job burnout the greater their

perceived workload becomes. This is in line with other research findings (Ganster & Schaubroeck, 1991; Gryna, 2004; Leiter & Maslach, 2005), which found that work overload accounted for more than 50% of job stressors and could be linked to increased smoking habits, increased heart rate, increased job dissatisfaction and lower self-esteem. The relationship between work overload and burnout was the strongest significant relationship in the study, and the findings also suggest that employees often experienced work overload. This is in line with the current trend in the industry, where employees have to shoulder greater workloads as the industry restructures (retrenches) and labour costs are cut. Greater demand is placed on employees to meet targets and deadlines with less (people) resources available to level the workload.

Alternately, the hypothesised relationship between job insecurity and job burnout was found not to be statistically significant. This contradicts previous research findings (De Cuyper et al., 2008) and may be attributed to an organisational culture that promotes long service, and the company's reputation for not retrenching employees even during difficult economic times. The results could also be attributed to the sample distribution. The majority of the sample population has been with the company for longer than six to ten years and may thus feel more secure in their current positions, or in general within the organisation.

Furthermore, the hypothesised relationship between a learning organisation (job resource) and employee engagement was found to be statistically significant. This is supported by various research studies that have found a strong relationship between learning organisation and engagement (Hewitt, 2015; Malik & Garg, 2017). Research has shown that employees feel more energetic, happily engrossed in their work and dedicated when they are offered learning opportunities by an organisation to increase their sense of competence and task confidence. It should be noted that, although the relationship between learning organisation and employee engagement was found to be significant, the results also indicate that employees only sometimes believe the organisation to truly be a learning organisation.

From the results it is evident that the organisation needs to consider interventions that are focused on reducing or redistributing some of the workload employees face, as this will affect employee wellbeing. Furthermore, it is advised that the organisation consider interventions that promote a learning organisation at an organisational level (empowerment, embedded systems to share learning, system connections and strategic leadership) to foster increased levels of employee engagement.

According to Bakker and Demerouti (2014), an intervention that can be considered to decrease job demands (viewed as hindrances) and promote job resources is job redesign. Alber (2007) defines

job redesign as a restructuring of job elements, such as responsibilities, tasks and duties, to create a more engaging and motivating job for employees. In order to motivate employees and create a sense of worth, job redesign entails increasing the diversity of assignments and functions through a process of analysing, revising, reforming, varying and rearranging the work-related content. Thus, it is the deliberate and purposeful planning of the work content, which includes both structural and social aspects of the job role that have an impact on the employee. Job design is a top-down process at the organisational level where a job and the conditions of employment are created (Bakker & Demerouti, 2014).

In considering the research results, the organisation can identify the departments where employees experience the greatest levels of work overload. From this it can then be asked whether the current departmental structure is still adequate to facilitate the current business process, or whether restructuring/job redesign would be needed. Examples of job redesign interventions that can be implemented by the organisation are job rotation (creating interdependent functional teams), so employees can learn various job tasks within the departments and, by so doing, be able to collaborate when there is increased pressure to deliver work. This empowers employees to collaborate, share knowledge (job resource) and assist each other in carrying the workload of the department. It also encourages a learning organisation through empowerment and embedded systems that stimulate learning. In addition, management can consider job enrichment (vertical distribution of role responsibility) for those employees who need a greater level of challenging job demands to utilise their available resources and facilitate learning and empowerment. It should be noted, however, that the research findings on the second interaction/moderator indicate that an increase in job demands would not necessarily increase the impact of job resources on employee engagement. This may be due to the already great workload employees experience and their belief that the organisation only sometimes offers them learning opportunities, collaboration and feedback to assist in dealing with their daily job demands. The organisation therefore will gain more by focusing on redesigning jobs to share/distribute the workload, indirectly creating team and individual learning opportunities and, in so doing, have a positive impact on employee engagement.

Further interventions that could be considered by the organisation to empower employees to better deal with job demands are effective time management training, the introduction of SCRUM meetings to promote collaboration and assist in the daily distribution of employee workloads, updating company policies and procedures, and assessing employees for work role fit.

5.2.1.2 Training as a means to increase Personal Resources

Training and development are viewed as essential roles within the human resources function. South Africa specifically has a great focus on skills development and invests considerably in empowering

organisations to train and develop their employees. According to Bakker and Demerouti (2014), personal resources can be increased through training. Thus, an organisation-level intervention to increase employees' personal resources could be focused on on-the-job training, in-house training, coaching and mentoring.

The hypothesised relationship between emotional intelligence and employee engagement was found to be statistically significant. This indicates a strong, positive relationship between emotional intelligence and employee engagement, which contradicts the findings of previous studies (Langenhoven, 2015; Middleton, 2016). Research has shown, however, that emotional intelligence (personal resource) is positively related to emotional health and adjustment, academic achievement and occupational success and satisfaction. These constructs are related to employee engagement (Thor, 2012). Furthermore, a study conducted by Duran et al. (2012) found that emotional intelligence is a key device for employee engagement. Although the relationship between emotional intelligence and employee engagement was found to be significant, it should be noted that the results indicated that employees sometimes exhibit emotionally intelligent behaviour, and that interventions should furthermore be aimed at encouraging the continuous expression of emotionally intelligent behaviour in all working situations.

According to Bakker and Demerouti (2014), personal resources are flexible and can be amplified to increase employee engagement and performance. According to research done in the field of neuroscience, emotional intelligence can be enhanced through targeted training techniques (Davidson, Jackson, & Kalin, 2000). This is supported by Nelis, Quoidbach, Mikolajczak, and Hansenne (2009), who found a significant increase in emotional intelligence (specifically emotional identification and emotional management abilities of the self and others) in those participants who received training. The results also found an improvement in the EI variables after the six-month follow-up. Thus, participants who received the training showed a significant improvement in their ability to identify their own and others' emotions and were able to better manage and control their emotions.

From this it is proposed that an organisation-level intervention, aimed at increasing emotional intelligence through training, should be implemented. Training programmes should include role-playing exercises, short teachings, group discussions and online webinars/articles that are aimed at increasing employees' skills in perceiving, evaluating, conveying and regulating their emotions. In addition, follow-up, short coaching sessions and additional on-the-job training can be utilised to amplify the effect of the training after a period of time.

Moreover, emotional intelligence is believed to play a dominant role in learning at both the individual and organisational level. The combination of personal resources and job resources fosters personal learning, development and growth and improves an individual's ability to more effectively mobilise additional resources required to meet job demands (Bakker, 2011).

The hypothesised relationship between emotional intelligence and learning organisation was found to be statistically significant. This indicates a strong, positive relationship between emotional intelligence and a learning organisation. Ghosh (2015) asserts that emotional intelligence becomes a critical enabler for a company to form, implement and internalise a learning organisation culture and philosophy, and therefore a catalyst in developing a learning organisation. Additionally, the hypothesised relationship between a learning organisation and emotional intelligence was found to be statistically significant. A learning organisation is vital for cultivating and training employees to increase their emotional intelligence. Thus, as Ghosh (2015) elucidates, increasing emotional intelligence (personal resource) within the organisation through focused training can in turn cultivate a learning organisation (job resource) that consequently creates a culture that promotes learning (therefore training) (forming a positive gain spiral) and which enables employees to learn emotional intelligence and better deal with increased job demands.

The importance of training on an organisational level is therefore vital to increase not only emotional intelligence (personal resource), but also to develop a learning organisation (job resource) that creates continuous learning opportunities, promotes inquiry and dialogue, encourages collaboration and team learning, creates systems to capture and share learning and empowers people towards a collective vision.

5.2.3 Individual-driven interventions

Individual-driven interventions are aimed at the individual and the capitalisation of their own strengths (Bakker & Demerouti, 2014). Each individual is unique in the personal and job resources they have at their disposal and the demands that they may face socially, economically, mentally, emotionally and spiritually. All these aspects affect an individual either directly or indirectly in the workplace. Through the implementation of individual approaches, organisations may address some of these specific problems or needs encountered by employees. Interventions proposed by Bakker and Demerouti (2014) that the individual can initiate within the organisation to increase his/her own job and personal resources and reduce job demands are job crafting and strength-based interventions.

5.2.3.1 Job Crafting as a means to reduce Job Demands and increase Job Resources

The JD-R model considers the significance of job crafting in the prevention of job burnout and the promotion of employee engagement. Although the study did not consider job crafting, as proposed within the JD-R model, it is important to note job crafting as an intervention that can be applied on an individual level to increase employee engagement and reduce job burnout.

Job crafting, according to Lyons (2008), refers to “spontaneous changes made by individuals to satisfy their own, personal needs and not necessarily the needs of the organization” (p. 25). Berg, Dutton and Wrzesniewski (2007) state that job crafting is the manner in which employees redesign their jobs in order to optimise job satisfaction, as well as resilience and work engagement. Job crafting is done by altering the boundaries of the job through changing the frequency with which a task is performed, controlling the amount of task acquired, and diminishing or expanding the task scope (Berg et al., 2007). Employees are often encouraged to customise their job according to their passions, strengths and motives (Berg et al., 2007). An example is a filing clerk designing a digital filing system to assist with filing activities to make his job less repetitive and easier. Next, job crafters can change interpersonal relationships at work through altering their interactions with others (Berg et al., 2007). An example could be a bookkeeper offering some financial advice in order to establish social connections with others in the organisation. Another form of job crafting is when individuals cognitively change the manner in which they perceive their job tasks and consider the job tasks not only in isolation, but also the value they add collectively (e.g. a receptionist seeing the job not only as a way to earn money, but that she is the image of the organisation’s brand and plays a vital role in the organisation’s success) (Berg et al., 2007).

Although job crafting traditionally was purely viewed as an individual-level intervention that enhanced job resources and assisted with reducing job demands, Van Wingerden, Bakker, and Derks (2015) propose training sessions on, and goal setting in job crafting could also increase an employee’s personal resources. Thus, organisations can assist employees in developing skills to facilitate such interventions through training. Van Wingerden et al. (2015) suggest four different exercises that can be implemented to cultivate this competency within employees, as illustrated in Figure 5.2.

Job crafting can improve employees’ work life by increasing their level of enjoyment in completing tasks. It is also believed to release energy and enthusiasm for the task at hand. Job crafting may also benefit employees through crafting the perceived negative element of the task to a more positive outlook, thereby increasing efficiency and effectiveness (Lyons, 2008). Lyons (2008) notes that higher self-esteem, willingness to change, perceived control, increased work-related motivation and higher productivity are all related to job-crafting behaviours.

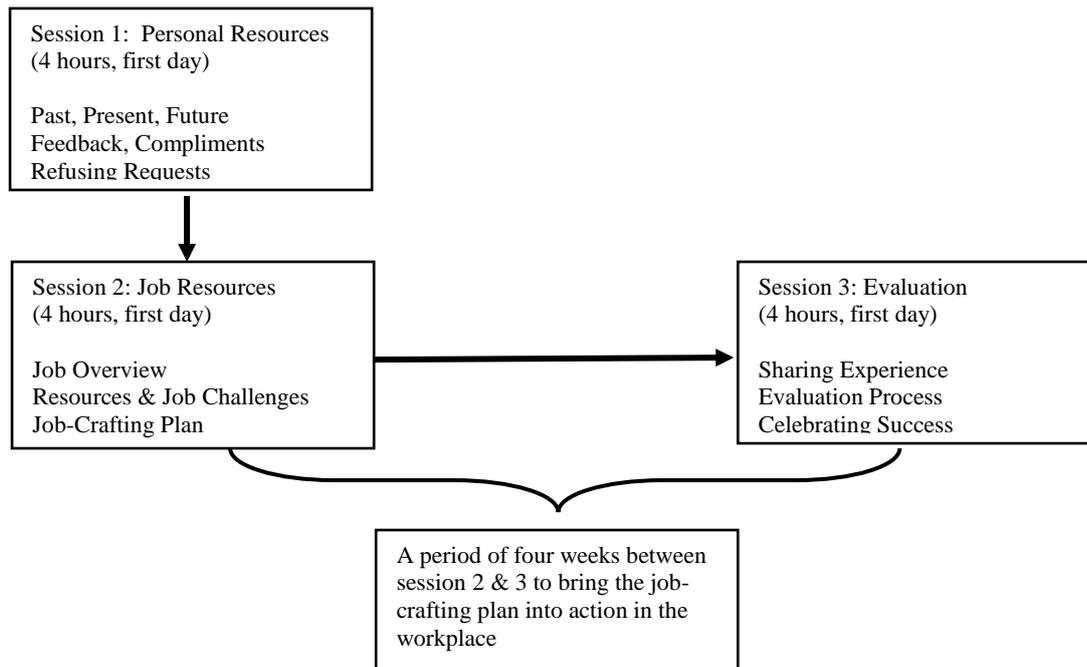


Figure 5.2 Design of the JD-R Intervention

(Van Wingerden, Bakker, & Derks 2015)

This behaviour may benefit the organisation in meeting its goals, as employees are believed to be more effective, productive and motivated when applying job crafting to job tasks. Thus, organisations should support job crafting and guide employees to align their job crafting with organisational goals so as to acknowledge the value that such activities can have for the organisation and individual alike.

5.2.3.2 Strengths-based interventions as a means to increase Personal Resources

Strengths-based interventions are aimed at developing the personal resources of employees. Individual strengths, according to Peterson, Park and Seligman (2004), are defined as positive traits that are reflected in an individual's feelings, thoughts and behaviour. According to Bergeron, Rosen, Shipp, and Furst-Holloway (2012), signature strengths are used in the workplace to optimise work relations and human functioning, as well as employee wellbeing. It is further also suggested that these strengths can be applied towards "acknowledging, understanding and enhancing the positive aspects of psychological functioning" in the organisation (Guse, 2010, p. 21). Applying these strengths can greatly increase individuals' psychological and subjective wellbeing (Govindji & Linley, 2007). Furthermore, individuals who understand what their strengths are and apply them are more likely to have higher levels of self-efficacy, self-esteem, psychological vitality, energy and resilience (Govindji & Linley, 2007), as well as an increase in employee work performance, work engagement and lower levels of stress (CAPP, 2010).

As opposed to the organisation-level intervention that utilises training, the individual-level approach would be more personalised, such as providing coaching or mentoring that is aimed at developing employees' personal resources. Either the employees' direct line manager, senior manager or external consultant could facilitate this process, through which the employees are guided over a period of time (usually longer than six months) to explore ways in which they can develop and apply their strengths within their working environment. Work engagement is dependent on the degree to which employees are able to then draw on these strengths and match them to their daily work activities (Bakker & Demerouti, 2014).

A strengths-based approach that is growing in popularity is appreciative inquiry (AI), which is a widely used practice for positive organisational development (Donaldson and Ko, 2010). It was developed in the 1980s and shares the same core idea as positive psychology, where there is a focus on positive human experience and functioning (Donaldson & Ko, 2010). Gorrell (2012) states that AI is an organisational change process that works from the assumption that the system works and is not broken, and that the focus on values, strengths and dreams is transformational in itself. AI is based on the premise that organisations will grow in the direction on which they continuously focus and ask questions about (Gorrell, 2012). As Whitney and Trosten-Bloom (2010) rightly say: "Words create worlds" (p. 2).

AI is believed to create a context for individuals within the organisation to be involved and heard by management through the change process. This fosters a sense of accountability and appreciation. It encourages communities of discovery and cooperation through communication and involvement (Gorrell, 2012). Furthermore, AI is beneficial in its ability to generate creativity, ownership and motivation within employees, and also enables individuals in the organisation to be more visionary and empowered to create a positive shared reality. AI also focuses on bringing energy into the system, usurping that which energises people rather than withdrawing energy from the system. It encourages positive emotions and thought processes and broadens individuals' thinking and action repertoire, making them more resilient on both the social and individual level (Whitney & Trosten-Bloom, 2010). Its focus is on the amplification of what is good in the organisation, therefore not amplifying the problem but rather encouraging discourse that can bring about positive transformation. This, on an organisational level, is done through large-group workshops where individuals can share lived experiences and what gives life and energy to these experiences through a process of appreciation and inquiry. It taps into the natural capacity for change and cooperation that is evident in all social systems. From this platform, a collective vision, design and desire can be co-created by employees for a shared, desired future state in the organisation that can be achieved without effort (Verleysen, Lambrechts, & Van Acker, 2015).

Four stages – also known as ‘the 4-D cycle’ – can guide the process of personal resource development in coaching through (1) discovery (i.e. a systematic, cooperative inquiry into the best that has been and that currently is); (2) dream (i.e. a consideration of the greatest possibilities for the future), (3) design (i.e. drafting design statements or stimulating propositions that define the ideal organisation or future state), and (4) destiny (i.e. a series of planned actions that support and motivate learning and innovation inspired by the previous steps) (Donaldson & Ko, 2010; Whitney & Trosten-Bloom, 2010).

AI is based on the belief that reality is co-created and meaning is shared. As was evident in the organisation-level intervention, the broadening of positive emotions (emotional intelligence) through either training or appreciative inquiry has an effect on job resources (learning organisation), thus increasing the learning and innovative capacity on both an individual and organisational level. Lastly, through communication (inquiry and dialogue), people are empowered to shift their action and attention from problems to focusing on uplifting ideals and greater possibilities for the future, which have a positive impact on employee engagement and enables individuals to deal better with job demands.

Strengths-based interventions in the form of coaching and mentoring are beneficial, but may be too time intensive and costly. Group workshops can be considered on a bigger scale to facilitate the process, but it might not have the same depth and impact as individual sessions. Avey (2014) notes that strengths-based interventions should be utilised as a form of leadership development and can thus be better utilised at a more senior/executive level if there is a need for an intervention at this level.

In addition to Bakker and Demerouti’s (2014) proposed organisation- and individual-level interventions outlined above, the organisation should also consider interventions aimed at raising awareness of burnout within an organisational context, and of stress management. The results of the study show that employees feel emotionally drained by their work on a daily basis and experience depersonalisation in relation to their clients and colleagues at work every day. Workshops on the construct of burnout in the workplace, and workshops giving basic training on stress management, can greatly assist employees in raising self-awareness of their current emotional state and of ways to deal effectively with daily stressors at work. The organisation can also offer individual assessments (MBI-GS) to those who have attended the workshops, and give individual feedback on the employees’ levels of burnout. Individuals who have been identified as high on the burnout scale can be counselled or advised to enrol in a company-elected employee assistance programme to assist with the burnout experienced.

5.3 LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

This study aimed to add to the existing body of knowledge within industrial and organisational psychology, notwithstanding the various limitations that had to be considered. The limitations serve as guidelines according to which future research can be improved and do not undermine the results obtained in Chapter 4.

First, the study relied on self-reported data via an electronic survey. Method bias (impression management), generally associated with self-report questionnaires, is a weakness. Thus, the participants could have manipulated their answers to some extent in order to present a more favourable view of themselves. In addition, according to Avey (2014), the exclusive use of self-report questionnaires can artificially inflate the correlations between predictors. Care was taken to limit this with reverse questions and built-in indicators that would reveal faking. These steps were however not sufficient to completely eliminate impression management.

Second, the use of an electronic survey limits access by employees who do not have access to computers on site/personally in order to complete the survey. The study participants were predominantly white, middle-aged and had been with the organisation for more than five years. They did not include the majority of blue-collar workers who do not have access to a company email address. The results therefore reflect the levels of wellbeing of office staff more so than that of workshop staff. It is advised that future studies within this specific industry consider paper-and-pencil tests and/or ensuring a computer is available to all employee (both office and workshop), specifically those who do not have access through their own means. Future research should consider the use of objective measures for latent variables, although these also have disadvantages that may influence reliability and validity.

Third, the use of a cross-sectional research design that collects data at one specific point in time is a limitation. As resources and demands are flexible and may differ over a period of time, it is advised that future research consider utilising a longitudinal research design in order to collect data at several points in time. This will enable the researcher to identify behavioural patterns over a period of time and therefore draw more definitive conclusions from the data collected.

Fourth, another limitation is the use of an *ex post facto* research design. The independent variables cannot be influenced by the researcher and hence the participants could not be randomised. Future research could therefore utilise an alternative research design that ensures randomisation.

Fifth, predetermined variables included in the JD-R model were researched in this study. There hence was limited consideration of alternative variables other than those predetermined within this study. It is thus recommended that future research considers other variables relating to the

constructs measured and that contribute to the theoretical explanation of employee engagement and job burnout within the JD-R model.

Despite this, the sample ($n = 210$) for the study was satisfactory, yet it affected the statistical analysis that had to be used in order to interpret the data. Various scholars would suggest a larger sample size in relation to the parameters set within the study. Furthermore, the small sample size did not allow for the use of SEM in LISREL to perform the analysis of the data and determine the fit statistics. The model fit statistics were not tested in this study. It is thus recommended that future studies consider bigger sample sizes from more than one organisation and conduct SEM analysis to determine population fit.

Next, job crafting and self-undermining, which form part of the updated JD-R model, were not considered in this study. It is therefore recommended that future research considers these variables and how they contribute to overall employee wellbeing in the workplace.

Furthermore, it was assumed that there was a linear relationship among the variables. The correlations and linear regressions might therefore have restricted the interpretation of the data, as the variables may have a non-linear relationship. It is recommended that future studies should consider conducting a curved regression or Anova analysis in order to assess if the relationship among these variables are non-linear.

Lastly, the study did not consider the individual subscales of the variables and their impact on one another. For example, the seven dimensions of a learning organisation and the effect of each of these dimensions on the subdimensions of engagement or burnout were not considered. It is therefore recommended that future studies consider the impact each subscale may have on the others to better determine which dimensions have the greatest influence or predicting effect on engagement and burnout.

5.4 DISCUSSION

This study aimed to determine the level of employee engagement and job burnout within the mining and construction equipment supplier industry by considering the relationship between job resources, personal resources and job demands. Thus, the primary objective of the study was to test a comprehensive structural JD-R model of the proposed relationships among the constructs and possible additional paths theorised. Furthermore, the study aimed to highlight the managerial implications of the research findings, as well as practical interventions the organisation could utilise to increase employee engagement and decrease job burnout. Reflecting on the objectives of the study, it can be concluded that all of the research objectives were met.

The research-initiating question asked: “Why is there variance in engagement and burnout between employees within the mining and construction equipment supplier industry?” A conclusion can be drawn that the latent variables depicted in Figure 2.8 explain significant variance in employee engagement and job burnout amongst employees within the mining and construction equipment supplier industry.

Of the 16 hypotheses formulated for the study, seven paths were found to be significant. Nine of the hypothesised paths were found to be non-significant, however, and of these, eight were the proposed moderating effects. This may be due to various reasons that could have affected the results, such as the small sample size. Limited studies have considered the specific variables and their moderating effects, and consequently the results could improve with future studies that consider a more diverse population and a greater sample size.

Considering the proposed hypotheses, Hypothesis 1, 2, 3, 4, 5, 6 and 7 were found to be significant and thus to support JD-R theory. Hypothesis 1 examined the relationship between employee engagement and job burnout and the results indicate that employee engagement had a significant, negative impact on job burnout, suggesting that as employees’ engagement increases their levels of job burnout would decrease. In turn, Hypothesis 2 tested the relationship between job burnout and employee engagement and the results indicate that job burnout had a significant, negative impact on employee engagement, thus supporting Schaufeli et al.’s. (2002) notion that burnout could be rephrased as an erosion of engagement within a job. Thus, as employees’ levels of emotional exhaustion (characterised by feelings of hopelessness, helplessness and emotional drain) and cynicism (negative attitude towards work and self) increased, their levels of vigour, dedication and absorption in the workplace would be affected negatively and most likely would decrease.

Hypotheses 3 and 4 tested the impact of job and personal resources on employee engagement. The results indicate that both emotional intelligence and a learning organisation have a positive, significant impact on employee engagement. This supports JD-R theory, which asserts that both job and personal resources predict employee engagement. Thus, as a learning organisation increases, employee engagement increases. This is supported by Sarti (2014), who found that greater learning opportunities have a direct effect on increasing employee engagement, and Rothmann and Pieterse (2007), who found that growth opportunities in the job (i.e. autonomy, learning opportunities and variety) predict employee engagement the best. In addition, as the level of emotional intelligence increases, employee engagement increases. This is in contrast to previous studies, which did not find a significant relationship between the two constructs of emotional intelligence and engagement (Langenhoven, 2015; Middleton, 2016). However, Xanthopoulou et al. (2009) found that personal resources relate positively to work engagement, and it can be

surmised from the results that emotional intelligence as a personal resource has a positive impact on employee engagement in this industry.

Hypotheses 5 and 6 supported the recurring interaction between job and personal resources, as discussed by Hobfoll (2002). Emotional intelligence and a learning organisation have a significant positive impact on each other and have the ability to generate resources, which in turn create a resource caravan that may result in positive outcomes. Therefore, an increase in emotional intelligence positively impacts a learning organisation, and an increase in a learning organisation has a significant, positive impact on emotional intelligence.

Hypothesis 7 considered the relationship between work overload and job burnout. A strong, significant positive relationship was found between work overload and job burnout. Thus, as employees' workload increases and their job demands exceeds their resources to meet those demands, their levels of burnout will increase. This is in line with JD-R theory and other research findings (Gryna, 2004; Rothman et al., 2006).

Hypotheses 8, 9, 10, 11, 12, 13, 14, 15 and 16 were all found to be statistically non-significant and thus did not support JD-R theory, as hypothesised (Bakker & Demerouti, 2014). Hypothesis 8 considered the relationship between job insecurity and job burnout. A non-significant relationship was found. As alluded to, this may be due to the organisational culture of long tenure and the company's philosophy of finding alternatives in difficult economic circumstances, rather than retrenching people. As recommended above, future studies should consider more than one organisation within this industry and use a larger and more diverse sample, including blue collar workers, in order to obtain a more representative sample of the industry and the effect of job insecurity on job burnout.

In addition, hypotheses 9, 10, 11 and 12 considered the first moderation effect, and a non-significant moderation effect was found. A learning organisation and emotional intelligence do not moderate the relationship between job demands (work overload and job insecurity) and job burnout. These results are in contrast to the proposed JD-R model (Bakker & Demerouti, 2014) and other studies on the moderation effect (Van den Broeck et al., 2011). Further studies, as recommended, may yield more informative results if a larger and more diverse sample size is obtained and analysed.

Hypotheses 13, 14, 15 and 16 considered the second moderation effect, and a non-significant moderation effect was found. In this context, increasingly challenging job demands would therefore not moderate the relationship between job/personal resources and employee engagement. These results are in contrast to other research findings (Bakker, 2011; Hakanen et al., 2006). This could

be due to the high levels of job demands the employees are already faced with in the industry and the type of resources considered in this study.

From the result outlined above it is advised that both human resource managers and line managers consider the impact of increased work overload on the levels of burnout experienced by employees and, in turn, the impact this has on employees' levels of engagement and thus on their ability to devote energy, be dedicated and become immersed in their work. Furthermore, job and personal resources should be cultivated, as these have a positive impact on employee engagement.

5.5 CONCLUSION

Employees are the cornerstones of any organisation, without which the organisation cannot function, and therefore great care should be taken to foster wellbeing within the working environment, in which engagement and burnout are essential components. This study aimed to empower IOP and HR management by considering the various factors that affect employee engagement and job burnout in the mining and construction equipment supplier industry. By testing the JD-R model and exploring moderating paths, the study has also contributed to the theoretical framework of the JD-R model, adding to the existing body of knowledge within behavioural sciences.

In conclusion, this chapter considered the practical implications of the research findings for HR managers and industrial psychologists. By considering the relationships among the constructs, possible interventions were considered that could be implemented by industrial psychologists on both the organisational and individual level to foster job and personal resources and decrease job demands, thereby ensuring a positive impact on employees' engagement levels and reducing job burnout within the workplace. Lastly, various limitations of the study and recommendations for future research were discussed.

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