A MODEL OF PERSONALITY TRAITS AND WORK-LIFE BALANCE AS DETERMINANTS OF EMPLOYEE ENGAGEMENT

by

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DECLARATION

I, **ABIGAIL NGOKWANA MOSHOEU**, student number 8271445, hereby declare that this thesis entitled, **"A model of personality traits and work-life balance as determinants of employee engagement"** is my own work, and that all the sources that I have used and quoted have been indicated and acknowledged by means of complete references.

I further declare that ethical clearance to conduct the research has been obtained from the Department of Industrial and Organisational Psychology of the University of South Africa. I also declare that the study was carried out in strict accordance with the Unisa Policy on Research Ethics and that the research was conducted with the highest integrity in all stages of the research process, taking into account Unisa's Policy on Copyright Infringement and Plagiarism.

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DEDICATION

This thesis is dedicated to my late parents (Daniel Mankopane and Lydia Ramaesela Moshoeu) for their love and support throughout my journey to realise my full potential. Mama le Papa, though I graduate in your absence and would have wanted that you read this thesis. I will forever value the times you assisted with my assignments. KE A LEBOGA BAKONE!

SUMMARY

A MODEL OF PERSONALITY TRAITS AND WORK-LIFE BALANCE AS DETERMINANTS OF EMPLOYEE ENGAGEMENT

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DEPARTMENT: Industrial and Organisational Psychology

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Employee engagement has been conceived as one of the "hottest topics in management" (De Cieri, Holmes, Abbott, & Pettit, 2002; Saks, 2006). Therefore, the need to further understand factors that enhance the level of employee engagement is of utmost importance if organisations are to successfully increase their competitive edge. The purpose of the present study was to develop a model of personality traits and work-life balance as determinants of employee engagement among employees in the various industries in South Africa. In particular, the present study investigated relationships between personality traits adapted by Martins (2000) which include five robust factors: agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability and work-life balance as measured by the Survey Work-home Interaction/NijmeGen (SWING) which consists of four dimensions, namely, negative work-home interaction, positive work-home interaction negative home-work interaction and positive home-work interaction. The study utilised Schaufeli's (2002) Utrecth Work Engagement Scale (UWES) which consists of three interrelated dimensions: vigour, dedication and absorption. A quantitative cross-sectional survey was followed and the data was collected from a population of 1 063 working adults through a Web-based survey.

The results revealed significant relationships between the variables. Specifically, the results revealed that positive work-home interaction and positive home-work interaction appeared to be stronger correlated to engagement than the five dimensions of personality traits. For instance, a Pearson correlation analysis revealed that positive work-home interaction (r = .33) and positive home-work interaction (r = .30) had the highest correlation with employee engagement. In the same vein, the canonical correlation analysis revealed that positive work-home interaction, positive home-work interaction, agreeableness, conscientiousness and emotional stability exhibited the highest correlation with the canonical employee engagement construct variate.

The results of the structural equation modelling further confirmed that the interaction of three personality traits, namely, agreeableness, conscientiousness and emotional stability and two of the work-life balance constructs, which are positive work-home interaction and positive home-work interaction, significantly and positively predicted employee engagement. The outcomes can be useful in informing employee engagement strategies, particularly in the recruitment, selection and retaining of highly skilful talents. Specifically, the study provided practical recommendations for employee engagement practices, based on the literature review and empirical results. This study highlighted the manner in which the personality traits and work-life balance variables impacted on employee engagement behavior.

Keywords: agreeableness, extraversion, conscientiousness, resourcefulness, emotional stability, positive work-home interaction, negative work-home interaction, positive home-work interaction, negative home-work interaction, spillover

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The aim of this chapter is to introduce the general and specific objectives of this research. The chapter provides the background to the research problem and motivation for the relevance of the research. This will be followed by the formulation of the research question with specific reference to the literature and empirical objectives of the study. The paradigm perspective guiding the research and the research method are discussed and chapter outlines are presented.

1.1   BACKGROUND AND MOTIVATION FOR THE RESEARCH

This study focuses on leverage and accelerating employee engagement within the various industries in South Africa and its relationship with personality traits and work-life balance. The focus of this area of research relates to the large number of employees that have been reported to be actively disengaged in their work-related roles (91%), while a relatively small proportion of employees are engaged (9%). A study conducted by the Gallup Group and Martins and Nienaber (South African Board for People Practises, 2014) on a South African sample shows that a considerable large proportion of employees are either not engaged (46%) or are actively disengaged (45%). In a longitudinal study conducted by Nienaber and Martins (2014) the engagement facets of line managers, strategy and implementation were also ranked the lowest among the engagement dimensions.

In the study conducted by the Deloitte (2014) as part of the Global Human Capital Trends 2014, the survey participants rated employee engagement and retentions as the second most important aspects that need to be given priority in South African organisations. In another study conducted by Public Display Technologies (2015), among a sample of 1100 participants in a variety of sectors in South Africa, approximately 84% of the survey participants believe that their work performance and motivation would improve if the workplace engaged more effectively with employees. Essentially, the results show a decline of 3% based on their longitudinal study, where a staggering 42 out of every 100 participants felt too demotivated and disconnected to effect any change in their

organisations. Collectively, these findings highlight the problem inherent in the employee engagement construct, that is, the difference between the elective effort organisations need and the amount of effort employees actually exert to help their organisation to succeed.

Schwartz (2010) indicates that organisations with low employee engagement actually lose 33% of their annual decline in operating income as compared to an 11% annual decline in earnings growth. In addition, organisations with high employee engagement estimate an increase of 19% of their operating income and 28% annual growth in earnings. These organisations tend to have lower employee turnover, higher productivity, higher total shareholder returns and better financial performance (Baumruk, 2006). In support of this finding, Bakker and Leiter (2010) posit that there is a connection between employee engagement and profitability increase through higher productivity, increased sales, customer satisfaction and employee retention. Undoubtedly, disengaged employees are a liability to the organisation and hardly challenge the status quo, while engaged employees exhibit emotional job attachment, unreserved commitment, increased productivity, high job passion, and in most cases, they go extra miles (Shuck, Rocco, & Albornoz, 2011a).

The world of work is continuously changing and has become increasingly volatile as a result of global competition, demographic and societal changes and rapid growth of Internet usage that compel organisations to seek new innovative ways to foster and preserve engagement in the workforce. For instance, aspects of technological advancement such as e-mails, laptops, i-phones, virtual meeting tools and enterprise social media tools (Downes & Koekemoer, 2011; Koekemoer & Mostert, 2010), which define the current digital workplace, have enabled job tasks to be performed in a variety of locations other than the organisational centralised offices, and have blurred the boundaries between job and home life. These advances have assisted employees in staying in contact with clients and employers after hours but this has begun to overlap into an individual's family life (Baral & Bhargava, 2011). Simalteneously, they are also considered as key indicators in retention and engagement with the added benefits of talent attraction, productivity, satisfaction and retention especially among the next-generation of employees (Deloitte, 2014).

In addition, the demographic and societal changes represent far reaching implications for organisations as they enable all three generations, namely, Baby Boomers, Generation X and Generation Y to work together within a single organisation, while holding different perceptions and expectations about meaningful work and what drives them to perform optimally (Hoole & Bonnema, 2015). These demographic and societal trends have changed the dynamics in the workplace and raised questions about the multigenerational workforce (Costanza, Badger, Fraser, Severt, & Gade, 2012). As far as employee engagement is concerned, there are conflicting results in the literature regarding the generational cohorts. Scholars maintain that substantive and meaningful generational differences between individuals do exist in workplaces because organisations have employees with a broad range of ages and generational memberships that influence the workplace (Costanza et al., 2012, p. 376) and individual behaviour in an organisational setting. For instance, Coetzee and De Villiers (2010) and Hoole and Bonnema (2015) found significant difference between the Baby Boomers and other generational cohorts which point towards how the former are considered engaged relatively to other cohorts. A study conducted by Smola and Sutton (2002) also found that generational differences do exist among Baby Boomers and Generation X, but limited to Generation Y. Therefore, understanding the work values attached among generational differences within the workplace can be a tool which organisations can use to create a more productivity, innovative and citizenship behaviour.

Now more than ever, organisations are looking for ways to tap into the ever-changing world of work (under-utilised capacities and talent of individuals). The desire to maximise human capital is not a new concept; the methods used are changing to reflect the important role employee engagement plays in the workplace. Engagement has been defined in many different ways and yet no agreement has been reached on its precise meaning. Engaged employees are generally those who give full discretionary effort at work, and are highly vigorous and dedicated to their job, while disengaged employees are those who are motivationally disconnected from work, who do not have the energy to work hard and who are not enthusiastic at work (Bakker, Schaufeli, Leiter, & Taris, 2008).

Arguably, employee engagement has been considered as the hottest topic to be incorporated within the human resource management agenda if organisations are to outmanoeuvre its competitive advantages. Nienaber (2016) conceive competitive advantage as the hallmark of rigorous strategy. Therefore, in order for organisations to successfully increase their competitive advantage, they need to develop strategies to attract, motivate and retain a highly skilled, flexible and adaptive workforce. These strategies are virtually embedded within human resource management and can be addressed with factors such as employee engagement, work-life balance and personality traits. Despite the popularity of the concepts within the organisational setting, research studies on individual and organisations effects of such practices are not well integrated.

Employee engagement has been conceptualised and operationalised as a positive cognitive affective and motivational construct that is characterised by three interrelated dimensions, namely vigour, dedication, and absorption in work-related roles (Bakker et al., 2008). An engaged employee is generally perceived as energetic, enthusiastic and as someone who is fully immersed in his or her work-related roles. Because of their positive state of mind, engaged employees often show excellent performance and willingness to help their colleagues; they exhibit organisational citizenship behaviours. An organisation needs employees who are energetic and dedicated, that is, who are engaged in their work (Bakker & Leiter, 2010). It is therefore imperative for organisations to explore the various antecedents that assist to boost their profile and enhance the ability of employees to become engaged and persistent, while maintaining engagement status (Kim, Kolb, & Kim, 2013).

According to Schaufeli and Salanova (2007), engaged employees are generally energetic about their work, feel connected to their work, and are better able to deal with job demands. These employees seek to identify with the mission, vision and values of their organisation and are willing to commit their emotional and personal energies to excel in their work (Saks, 2006). Therefore, having engaged employees is vitally important for the organisation as previous studies have shown that engaged employees help organisations reap benefits such as increased job satisfaction, organisational commitment, motivation and low turnover intention while simultaneously improving the health and well-being of

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employees (Harter, Schmidt, & Hayes, 2002; Saks, 2006; Schaufeli & Bakker, 2004a). Both Saks (2006) and Kahn (1990) also believe that employees who are engaged in their work roles are likely to be committed to the organisation effectiveness, while those who are disengaged are more likely to display less commitment and tendency to leave the organisation.

Accordingly, Bakker and Demerouti (2008) identified four reasons why engaged employees perform better than the disengaged, namely, that engaged employees often experience positive emotions such as happiness and enthusiasm. In addition, they experience better health and create their own job resources and personal resources. Finally, they transfer their engagement to others. These are the reasons why numerous studies reported positive effects of employee engagement outcomes.

Due to role shifts and the work pressure being exerted on today's employees, individuals are faced with greater levels of stress in their daily lives. Work and family are seen as the most significant life domains for an employee today, with the greatest challenge for employees being the ability to incorporate these role responsibilities and duties without having a negative effect on their health and well-being (Jaga, Bagraim, & Williams, 2013). Therefore, organisations should make a greater effort to focus on the work-family interface and individual health and well-being. Understanding the benefits of combining work and family roles will result in greater life balance for employees and improved organisations (Stoddard & Madsen, 2007) because work and family are found to be the most central and salient domains in an individual's life.

Basing their study on a sample of 545 managers employed in a variety of organisations, Fisher-McAuley, Stanton, Jolton and Gavin (2003) examined the relation between employees' beliefs about having a balance between work and personal life, and the feeling of job stress, job satisfaction, and reasons why one might quit his or her job. Their findings indicate that having a lack of work-life balance was an occupational stressor that leads to strain, including feeling of overall work strain, job dissatisfaction, non-work related reasons for leaving and turnover intentions.

The extent to which work interferes with the home environment on a regular basis has been reported to be positively related to distress in work responsibilities during the day, family intrusion into work during the day and self-reported family involvement for that day (Brink & De la Rey, 2001; De Klerk & Mostert, 2010; Koekemoer & Mostert, 2007). The demands of maintaining a career and caring for a family are often difficult to meet. For many workers, this has created the potential for interference or conflict to occur between their work and non-work lives, which in turn could impact negatively on the effort required at work. The challenge of combining work and non-work is an issue faced by many employees (Mageni & Slabbert, 2005) and therefore requires intervention from organisations.

The link between factors that contribute to employee engagement and the performance of an organisation has been the focal point of numerous empirical studies over the years. Each study has confirmed the linkage between employee engagement and the performance of an organisation. To foster engagement in the workplace, Amarakoon and Wickramasinghe (2009), as well as Kahn (1990) propose different ways in which organisations can adopt workplace behavioural practices. Evidence from the literature suggests that work-life balance can influence individuals' attitudes at work (Levenson, 2010) hence work-life benefits have become one of the fastest issues defining the current workplace, especially the digital workplace today. Parkes and Landford (2008) define work-life balance as an individual's ability to meet his/her work and family responsibility, as well as other non-work responsibility and activities with a minimum of perceived role conflict. The concept work-life balance can therefore be described as a competition for both time and energy between the different roles fulfilled by an individual (Fisher-McAuleye et al., 2003).

In similar vein, Demerouti and Geurts (2004) define work-home interaction (WHI) as an interactive process in which a worker's ability to function in one domain such as home is influenced by negative or positive load effects that have built up in the other domains, for example the workplace. It has become apparent that researchers have realised that the interface between work and home impacts on an employee's life and through this interference, the two domains could facilitate each other in a positive way. The assumption

that work can influence one's functioning in the home environment and vice versa in both a positive and a negative way is aligned with principles of the positive psychology movement and has been empirically tested by Greenhaus and Powell (2006) and Grzywacz and Marks (2000).

Previous studies have highlighted the usefulness and positive outcomes of incorporating work-life balance into the human resources strategy for both the employee and the organisation (Frone, 2003; Richman, Civian, Shannon, Hill, & Brenman, 2008). For instance, work-life balance has been associated with greater productivity, improvement of recruitment and retention, and reduction of absenteeism resulting in more motivated employees (Frone, 2003). The work-life balance has also been identified as one area that can effectively contribute towards employee engagement in terms of job satisfaction, organisation commitment and self-esteem (Downes & Koekemoer, 2011; Harter et al., 2002) which in turn can contribute to higher productivity (Harter et al., 2002) and lower organisational turnover.

Although there is a plethora of research that has explored the antecedents and outcomes of providing work-life benefits and promoting a supportive culture, one relationship that has received limited attention in research has been the effect of accessing work-life balance practices and employee engagement. Work-life balance is one way of providing employees with alternative work arrangements to keep them motivated and to maintain the higher level of productivity among them.

Kahn (1990) posits that people are available to place themselves fully into role performances depending on how they cope with the various demands of both work and non-work aspects of their lives. Psychological availability is one such necessary condition that points to the possible theoretical link between employee engagement and work-life balance. Kahn (1990) argues that individual differences can still matter 'to shape people's dispositions' to either engage or disengage in order to experience meaningfulness, safety and availability differently (p. 718).

Another possible route to explore the effect of work-life balance on employee engagement is through personality traits, specifically the Big Five personality. The Big Five personality is described by the following five factors: agreeableness, extraversion, conscientiousness, openness to experience and neuroticism. All five dimensions of personality are linked with positive work-related attitudes and performance in the workplace (Barrick & Mount, 1991; Bjørkelo, Einarsen, & Matthiesen, 2010, Chiaburu, Oh, Berry, Li, & Gardner, 2011). Other researchers have documented that personality traits predict global outcomes such as physical health, subjective well-being, job satisfaction and performance (Vogt & Laher, 2009; Zhai, Willis, O'Shea, Zhai, & Yang, 2013). The Big Five personality is deemed appropriate to capture critical stable individual differences (McCrae & Costa, 2008a) between work-life balance and employee engagement because of its stability.

Personality is defined as an individual's consistent patterns of thought, emotion, and behaviour which influence the selection and self-selection into jobs (McCrae & Costa, 2003; Valchev, van de Vijer, Nel, Rothmann, Meiring, & de Bruin, 2011). Personality influences how people interact with other individuals and how they evaluate and reward themselves. Personality also affects how individuals experience work events and work conditions, and how they emotionally and behaviourally react to them.

A few studies have examined the relationship between personality traits and engagement, with some researchers showing that certain personality traits are actually associated with engagement. For example, Kim, Shin and Swanger (2009) examined all the five factors of personality and engagement in a study among employees working for quick service restaurants. They found strong, positive and predictive associations between conscientiousness and engagement, whereas, neuroticism had a negative association with the construct. They concluded that employees with a tendency of conscientiousness were more likely to invest energy into their work, complete the job task and ultimately feel a stronger sense of professional efficacy.

Therefore, in order to understand how individual differences impact on the relationship between employee engagement and work-life balance, it is important to examine all five dimensions in relation to employee engagement and work-life balance in a single study. Since employee engagement is the focus of this research, this study uses Utrecht Work Engagement Scale (UWES) to determine the level of mental resilience, pride, passion, enthusiasm, energy, dedication and immersion employees feel towards their work-related role and their organisation in particular. In addition, because engagement is derived from the positive psychology movement with the focus on human strength and optimal functioning, the study takes, as a point of departure, personality traits and work-life balance as features that could impact on engagement.

The primary objective of this research is two-fold: to empirically examine the mediating role of the employee engagement construct on the relationship between personality traits and work-life balance and also to determine the moderating role of the biographical variables on the relationship between dimensions of personality traits and employee engagement as well as dimensions of work-life balance and employee engagement. Although the relationship between personality traits, employee engagement as well as work-life balance is well documented in Western studies, no study has ever tested the potential relationship between the variables in a single study.

1.2   PROBLEM STATEMENTS

In view of the preceding discussion, the research study intends to extend the current literature on employee engagement in the various industries in South Africa, by empirically investigating the effects of the constructs personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction) on employee engagement (vigour, dedication and absorption). It is hypothesised that the empirical investigation of this association can assist in constructing a model for employee engagement that can be useful to retain and attract skillful talents as well as maintain an engaged the workforce within the

various industries in South Africa. In view of the literature on personality traits, work-life balance and employee engagement two research problems are formulated.

Firstly, the theoretical models do not illuminate the relationship between personality traits, (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction) and employee engagement (vigour, dedication and absorption). In terms of the construct employee engagement, industrial and organisational psychologists and human resource practitioners in various organisations and industries, require such knowledge and information through theoretical and empirical observation to better inform intervention strategies to leverage employee engagement.

Secondly, although these constructs (personality traits, work-life balance and employee engagement) have been well-documented in the available literature, the effect between them within a single model has not been investigated (to the knowledge of the researcher) as manifested in studies on all 11 industries in the South African workplace. For these reasons, the research in its current form is original and novel; it therefore makes a contribution to the employee engagement literature.

The problem statements gave rise to the following general research question, from which the specific research questions outlined below were derived:

What is the relationship between personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability), work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction) and employee engagement (vigour, dedication and absorption) and can personality traits and work-life balance be used to predict and inform employee engagement within the work context?

To address the above-mentioned problem statement, the research is designed to clarify the following specific research questions formulated in terms of the literature review and empirical study:

1.2.1 Research questions regarding the literature review

- Research question 1: How does the literature conceptualise personality traits and its dimensions in the world of work?

- Research question 2: How does the literature conceptualise work-life balance and its dimensions within the context of contemporary world of work?

- Research question 3: How does the literature conceptualise employee engagement and its dimensions?

- Research question 4: What is the nature of the theoretical relationship, by means of a conceptual model, between personality traits, work-life balance and employee engagement in the organisational context and how can this relationship be explained in terms of an integrated theoretical model?

- Research question 5: Can a conceptual model of employee engagement be proposed based on the theoretical relationship among the constructs personality traits, work-life balance and employee engagement?

- Research question 6: What are the potential implications and limitations of the study as well as ideas for future research?

1.2.2 Research questions regarding the empirical study

The following research questions were formulated with regards to the empirical study:

- Research question 1: What is the nature of the statistical interrelationship between personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability), work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction) and employee engagement (vigour, dedication and absorption), as manifested in a sample of respondents employed in the various economic sectors?

- Research question 2: What is the nature of the overall statistical relationship between personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction) as a composite set of independent latent variables and employee engagement (vigour, dedication and absorption) as a composite set of a dependent latent variable.

- Research question 3: Do the variables of personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction) positively and significantly predict employee engagement (vigour, dedication and absorption)?

- Research question 4: Based on the overall statistical relationship between the dimensions of personality traits, work-life balance and employee engagement constructs, is there a good model that can fit between the elements of the empirically manifested structural model and the theoretically hypothesised model?

- Research question 5: Do the biographical variables (gender, generational cohort, functional job level and economic sector) significantly moderate the relationship among the constructs personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability), and the dependent

employee engagement (vigour, dedication and absorption), as well as work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction) and the dependent employee engagement (vigour, dedication and absorption)?

+ Research question 6: Do significant differences exist between the subgroups of biographical variables that act as significant moderators between the independent personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability), work-life balance variables (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction) and the dependent employee engagement (vigour, dedication and absorption)?

+ Research question 7: What recommendations can be formulated for employee only engagement within the industries and organisations, and what suggestions could be made for possible future research based on the outcomes of this research?

1.3   AIMS OF THE RESEARCH

From the above-mentioned problem statement, the following specific aims are formulated in terms of the literature review and empirical study:

1.3.1   General aim of the study

The general aim of this research was to construct and test a model on the relationship between personality traits and work-life balance as a determinant of employee engagement. The research aimed further to investigate which biographical characteristics (gender, generational cohorts, functional job level and economic sectors) significantly moderate the relationship between personality traits and employee engagement as well as work-life balance and employee engagement.

1.3.2   Specific aims in terms of the literature review

The following specific aims have been formulated for the literature review:

- To conceptualise personality traits variables consisting of agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability.

- To conceptualise work-life balance and its dimensions (negative work-home interaction, positive work-home interaction, negative home-work interaction and negative home-work interaction) within the context of contemporary workplace.

- To conceptualise employee engagement and its dimensions (vigour, dedications and absorption).

- To conceptualise the nature of the theoretical relationship between the construct personality traits and its dimensions (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance and its dimensions (negative work-home interaction, positive work-home interaction, negative home-work interaction and negative home-work interaction) as well as employee engagement and its dimensions (vigour, dedications and absorption) in terms of an integrated theoretical model.

- To propose a conceptual model of the employee engagement construct based on the theoretical relationship dynamics between the construct personality traits and its dimensions (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance and its dimensions (negative work-home interaction, positive work-home interaction, negative home-work interaction and negative home-work interaction) and employee engagement and its dimensions (vigour, dedications and absorption).

1.3.3 Specific aims in terms of the empirical study

In terms of the empirical study, the following specific aims were formulated:

- To empirically determine the nature and direction of the statistical interrelationship between personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability), work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction) and employee engagement (vigour, dedication and absorption), as manifested in a sample of respondents employed in the various economic sectors.

- To empirically determine the nature of the overall statistical relationship between personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction) as a composite set of independent latent variables and employee engagement (vigour, dedication and absorption) as a composite set of a dependent latent variable.

- To empirically determine whether or not the variables of personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction) positively and significantly predict employee engagement (vigour, dedication and absorption).

- To empirically determine whether or not personality traits and its dimensions (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance and its dimensions (negative work-home interaction, positive work-home interaction, negative home-work interaction and

positive home-work interactions) and employee engagement and its dimensions (vigour, dedication and absorption) have a good fit between the elements of the empirically manifested structure model and the theoretically hypothesised model.

- To empirically determine whether or not the various biographical characteristics (gender, generational cohort, job level, economic sector) significantly moderated the relationship between personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and employee engagement (vigour, dedication and absorption), as well as significantly moderated the relationship between work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction) and employee engagement (vigour, dedication and absorption).

- To empirically determine whether or not significant differences exist between the subgroups of biographical variables that act as significant moderators between personality traits and its dimensions (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability), work-life balance and its dimensions (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction) and employee engagement and its dimensions (vigour, dedication and absorption) as manifested in the survey participants.

- To formulate implications in terms of the constructs personality traits, work-life balance and employee engagement among a selected sample in the economic sector with specific reference to existing literature on the concepts within the framework of Organisational Psychology.

1.4   STATEMENT OF SIGNIFICANCE

The constructs personality traits and work-life balance appeared to have influential power over individual levels of engagement in their work-roles. However, no integrated theoretical and empirical model has yet been developed to explain the nature of the effect of personality traits, work-life balance and employee engagement variables. This is the first study that actually attempts to investigate the relationship between personality traits (measured through the Big Five instrument adapted by Martins, 2000), and work-life balance (measured by SWING Geurts, Taris, Kompier, Dikkers, Van Hooff, & Kinnunen, 2005) as determinants of employee engagement (measured by the Utrecht Work Engagement Scale (UWES) by Schaufeli & Bakker, 2004) and how these constructs manifest themselves across the different Standard Industrial Classification of all Economic Activities in South Africa.

1.4.1   Potential contribution on theoretical level

From theoretical perspective, this study can provide useful insight in identifying the relationship between the constructs personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability), work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction) as the independent variables and employee engagement (vigour, dedication and absorption) as the dependent variable, particularly if a significant relationship does exist. Such findings can be useful in the construction of a theoretical model of personality traits and work-life balance as determinants of employee engagement behaviour of staff that can be empirically tested.

1.4.2   Potential contribution on an empirical level

This study identifies a gap in existing knowledge and contributes to the existing research as follows:

- Extensive studies are available regarding the concept and importance of employee engagement, personality traits and work-life balance. There is a lack of empirical research focusing on employee engagement and its relationship with these variables in the South African context. This is the first empirical, model-based study on the relationship of the variables mentioned. This study, therefore, makes an important contribution to the existing research.

- The impact of constructs such as personality traits and employee engagement, which are the outcomes of good work-life balance, have rarely been investigated with respect to employee engagement. This study empirically demonstrates the influence of these variables on employee engagement.

- Furthermore, the study can also highlight whether different demographic variables such as gender, generational cohorts, functional job level and economic sectors differ in terms of perceptions of personality traits, work-life balance variables as well as employee engagement variables.

1.4.3 Potential contribution on a practical level

This study can assist practitioners, academics and policy-makers working in different industries and organisations to better understand the constructs of personality traits, work-life balance and employee engagement when considering key indicators that can impact on employee engagement in the industries. At practical level, industrial and organisational psychologists and human resource management personnel can develop a better understanding and streamlining of work-life balance and personality traits strategies that can effectively boost the level of influence regarding employee engagement within their workplace policies. Consequently, if this can be achieved, the outcome will be sufficient to justify the continuing relevance of this study. The positive result from the proposed research can indeed strengthen the notion that individual differences and work-home interaction do matter in terms of whether employees are engaged or disengaged in their work roles.

Additionally, where a statistical and practical significant relationship between these constructs exists, the findings may be useful for future researchers exploring the possibility of lowering the effects of turnover and absenteeism in attempts to allow call centre agents to cope better with work in a call centre environment. Furthermore, the research results may contribute to the body of knowledge on the psychological attributes and capacities that influence turnover and absenteeism in the call centre work environment. The ability to engage and retain valuable employees has a significant impact on an organisation's bottom line. Therefore, the question for management is how to ensure that the supervisors interact with individuals to generate an engaged workforce.

1.5   PARADIGM PERSPECTIVES OF THE RESEARCH

The integrated model of the research process in social sciences developed by Mouton and Marais (1990) classifies paradigm perspectives in terms of interrelated research aspects inherent in a specific domain. These aspects include the intellectual climate relating to a specific discipline as well as the theoretical and methodological beliefs that have been identified from the market of intellectual resources of a specific discipline. Consequently, the following section presents the relevant paradigm, meta-theoretical statements and theoretical models applicable for this study.

1.5.1   The intellectual climate

Thematically, the literature review will cover personality traits, work-life balance and employee engagement. The literature review on the constructs under investigation will be presented from the humanistic paradigm (Corey, 2001) and positive psychology movement (Schreuder & Coetzee, 2010; Seligman & Csikszentmihalyi, 2000), while the empirical study will be presented from the perspective of the positivist research paradigm (Blumberg, Cooper, & Schindler, 2005), which emphasises observable facts in any investigation.

1.5.1.1   Humanistic paradigm

Humanistic psychology focuses on the significant role and function of subjectivity in people's living experiences (Corey, 2001). People are viewed as purposeful and intentional beings that make sense of their experiences in an effort to understand and overcome life's difficulties. They develop their perception and reality through interaction between their phenomenological world and external and social contexts. This conceptual principle rests on the central premise that people function as holistic beings of social interest. This functioning allows a person to experience what s/he encounters in various personal and social contexts. The person generates meanings from experiencing and projects meanings into a new trial of experiencing.

1.5.1.2   Positive psychology paradigm

Positive psychology focuses on facilitating positive psychological capital or resources in organisations regarded as important in keeping employees healthy and resilient to hardships (Schreuder & Coetzee, 2010). According to Seligman and Csikszentmihalyi (2000), positive psychology is a scientific study of optimal functioning that aims to discover and promote the factors that allow individuals and communities to thrive. They maintain that positive psychology does not rely on wishful thinking, faith or self-deception, but rather tries to adapt what is best in scientific methods to the unique problems that human behaviour presents to those who wish to understand it in all its complexity.

Positive psychology should be seen as the need to move away from focusing on the negative side of human behaviour to paying attention to the positive side (Seligman & Csikszantmihalyi, 2000). The focus in positive psychology is more on rebuilding human strength and fulfilling the lives of healthy people and, more importantly, correcting the weaknesses (Luthans & Youssef, 2007; Seligman & Csikszantmihalyi, 2000).

1.5.1.3 Positivist research paradigm

The empirical study is presented from the positivist research paradigm, which explains observable social phenomena. Positivists believe that reality is stable and can be observed as well as described from an objective viewpoint (Neuman, 2011), without interfering with the phenomena being studied. Positivism is based on the assumption that the universe or reality conforms to permanent and unchanging laws and rules of causation and happenings and that there exists an intricacy and complexity that could be overcome by reductionism with the intention of asserting an importance and emphasis on impartiality, measurement objectivity and repeatability. In essence, a positivist is primarily interested in investigating social phenomena that can be studied and observed scientifically and empirically as well as repeatedly.

1.5.2 Market of intellectual resources

Mouton and Marais (1990) refer to the market of intellectual resources as the collection of beliefs that have a direct bearing on the epistemic states of scientific statements. In the current study, the meta-theoretical statements, theoretical models, conceptual descriptions of personality traits, work-life balance, employee engagement and the central hypothesis are described below:

1.5.2.1 Meta-theoretical statements

Meta-theory refers to the philosophical assumptions about the theoretical nature of the phenomenon to be studied and the questions that are asked about it. It represents an important category of assumptions underlying the theories, models, and paradigms that form the definitive context of the research. Accordingly, the meta-theoretical values and/or beliefs have become part and parcel of the intellectual climate of particular disciplines in the social sciences (Mouton & Marais, 1990). In terms of this study, a brief description of the meta-theoretical values is presented below:

(a)   Industrial and Organisational Psychology

This research is undertaken within the context of the Industrial and Organisational Psychology (IOP) discipline which is conceptually described as the application of psychological principles, theory and research to work-related settings. Schreuder and Coetzee (2010) hold that IOP is the field of study that is concerned with the study of human behaviour related to work, organisations and productivity in a particular type of location to generate new knowledge and technology with a view to dealing with the demands of globally and nationally changing contexts.

(b)   Organisational Psychology

Organisational Psychology focuses on the influence organisations have on the attitudes and the behaviour of their employees (Schreuder & Coetzee, 2010). Similarly, Odendaal and Roodt (2009) define organisational psychology as a field of study that investigates the impact of individuals, groups and structures on behaviour within an organisation for the purpose of applying such knowledge towards improving organisational effectiveness.

1.5.2.2   Conceptual descriptions

The following concepts are relevant for the purpose of this study:

(a)   Employee engagement

Schaufeli, Salanova, González-Romá and Bakker (2002) define employee engagement as a "positive, fulfilling, work-related state of mind characterised by vigour, dedication and absorption" (p. 74). Vigour is defined by Bakker and Demerouti (2008) as high energy levels and mental resilience at work. They further define dedication as being involved in one's work, experiencing significance, enthusiasm and challenge. Absorption refers to being engrossed in one's work, whereby time elapses rapidly and it is difficult to separate oneself from work (Bakker & Demerouti, 2008).

(b)   Work-life balance

Felstead, Jewson, Phizacklea and Walters (2002) define work-life balance as "the relationship between the institutional and cultural times and spaces of work and non-work in societies where income is predominantly generated and distributed through labour market" (p. 56). In this study, work-life balance is measured in terms of the work-home interaction that takes into account the direction of influence from work-to-home or home-to-work and the quality of influence (negative versus positive influence). In this context, work-life balance is defined as an interactive process in which a worker's functioning in one domain such as the home or work is influenced by either negative or positive load reactions that have built up in the other domains such as the work or home (Demerouti & Geurts, 2004; Geurts, et al., 2005; Pieterse & Mostert, 2005).

(c)   Personality traits

Pervin and Cervone (2010) define personality as "psychological qualities that contribute to an individual's enduring and distinctive patterns of doing things" (p. 8). It has been documented that personality traits are a relatively stable set of feelings and behaviour that have been formed by genetic and environmental factors (Costa & McCrea, 1992). Personality traits describe and explain individual differences in terms of individuals' thinking, feeling and behaviour in different situations in terms of the five factors. They give an individual his or her identity and unique nature including how the individual looks, behaves, feels and thinks. In other words, personality traits describe specific unique charateristics of an individual's behaviour. Trait theorists attempt to classify individuals according to personality traits, particularly through the measurement of these psychological characteristics that conatin five robust charateristics.

1.5.2.3   Central hypothesis

The central hypothesis of the research was formulated as follows:

There is a significant relationship between employee engagement, work-life balance and personality traits, and that personality traits and work-life balance significantly predict employee engagement. Moreover, individual employees from different generations, gender, marital status and education differ significantly in terms of employee engagement, work-life balance and personality traits.

1.6   RESEARCH DESIGN

Employee engagement in South African industries will be studied as a single case. The purpose of this study is to design a model of personality traits and work-life balance as determinants of employee engagement. South African economic industries are used as the research population in investigating the phenomenon of low employee engagement. Babbie (2014) refers to a research design as "the plan or structured framework of how the researcher intends conducting the research process in order to solve the research problem" (p. 647). Welman, Kruger and Mitchell (2005) consider a research design "as the process followed in an attempt to obtain data about the research phenomenon from the participants" (p. 52). It constitutes a research plan that specifies the methods and procedures to be followed when collecting and analysing the required information aligned with the research objectives. In this study, the research design constitutes the literature review and the empirical investigation to construct a model of personality traits and work-life balance as determinants of employee engagement.

1.6.1   Descriptive research

The overall research design follows a typical quantitative research approach aided by survey research. A survey is a useful tool in describing and explaining the characteristics of a large population (Babbie, 2007). Babbie (2007) argues that a carefully selected probability sample in conjunction with a standardised questionnaire provides a group of respondents whose characteristics can be generalised to the larger population. Thus, the survey research will be constructed within the framework of a descriptive research design where numerical information is collected and analysed systematically in order to give a

detailed description of the phenomenon under investigation (Terre Blanche & Durrheim, 2002).

1.6.2   Research variables

The research variable refers to the characteristics or phenomena of the object that is being investigated. Typical research variables applicable to the research design of an empirical study include the independent and dependent variables. The dependent variable relates to factors that are explained, predicted and affected by the independent variable. Neuman (2011) refers to the cause variable or condition that acts on something as the independent variable and the variable that is the effect, result or outcome of another variable as the dependent variable. In this particular study, the independent variables, which are the variables being measured, consist of personality traits and work-life balance factors, while the dependent variable is employee engagement.

The biographical variables such as gender, generational cohorts, marital status, parental status, functional job level, tenure and industry sectors were also reflected in the questionnaire. The biographical variables are often used to provide objective characteristics of the participants, which are easy to identify and measure.

1.6.3   Unit of analysis

The objects of the investigation, according to Terre Blanche and Durrheim (2002), are known as the units of analysis, because they are the entities from which information is required. Mouton and Marais (1990) states that units of analysis constitute of individuals, groups, organisations and social artefacts. The units of analysis in this study will be individual, specifically employees employed in the various industries. These individuals will be male and female of various generational cohorts reflecting South African working population.

1.6.4   Method to ensure reliability and validity

This section provides the methods to be considered in an attempt to ensure reliability and validity:

1.6.4.1   Reliability

Reliability is defined as the degree to which the research findings are repeatable and consistent, which is applicable to both the subjects' scores on the measures and the outcomes of the study as a whole (Terre Blanche & Durrheim, 2002). In this study, the reliability for the literature review will be ensured by merely selecting theory and model relevant to the focus of the research, whereas reliability for the empirical study will be ensured through computation of the internal consistency reliability, Rasch analysis and inter-item correlation manifested in the survey populations. The guideline of .70 and above provided by Nunnally and Bernstein (1994; 2010) was used to assess the acceptability and internal consistency reliability of the instruments. In addition, the Rasch analysis was used to assess the unidimensionality of the instruments by calculating the infit and outfit chi-sqaure statistics, in order to determine the accuracy of the items measured by the instruments. Brand-Labuschagne, Mostert, Rothmann and Rothmann (2012) emphasise that item and person as well as reliability indices are used to determine the reliability of the rating scales.

1.6.4.2   Validity

Terre Blanche and Durrheim (2002) define validity as the degree to which the specific concepts and research conclusions accurately reflect the intended design. The measure of validity generally provides a good fit between the conceptual and operational definitions of the construct and the usefulness of a particular purpose it is designed to measure. In this study, the validity of the literature review will be ensured by using only the literature that is relevant to the research focus areas, problem statement and aims of the study. This study

attempted to make use of recent literature from previous empirical studies in order to ensure the relevance and validity of the literature review.

In terms of the empirical research, validity will be ensured through the use of appropriate and standardised measuring instruments and examining their content and construct validity. It should be noted that the selected instruments have undergone rigorous scrutiny for their criterion-related validity (the extent to which an instrument measures a characteristics that cannot be directly observed but must instead be inferred from patterns in participants' behaviour). This was done to ensure the accurate prediction of scores with respect to relevant criterion, content and construct validity (the extent to which the measuring instruments measure the theoretical constructs they purport to measure).

1.6.5 Delimitations

This study was confined to research dealing with the relationship between the personality traits, work-life balance and employee engagement constructs. In an attempt to identify factors that could influence an individual's personality traits, work-life balance and employee engagement behaviour factors used as control variables were limited to gender, generational cohorts, functional job level and economic sectors. This study therefore only focused on the effects of the employee engagement behaviour variables on personality traits and work-life balance variables.

1.6.6 Ethical consideration

Prior to commencing the data collection process, several important ethical issues were addressed. The Ethical Committee at the institution was approached to obtain permission to conduct the study among academic staff. The employees were guaranteed confidentiality and informed that the data collected will be used only to aggregate responses. Moreover, participation in this study was completely voluntary and participants were informed that they could withdraw from participating at any time. In a nutshell, all ethical guidelines

applicable to the treatment of human subjects in research were observed in all the steps of the study.

1.7 RESEARCH METHODOLOGY

In an attempt to obtain scientific and objective research findings, the research method was structured into two phases, the literature review and empirical study.

Phase 1: Literature review

The literature review consisted of the following steps:

Step 1: Background and motivation of this study, including the aims, paradigm perspectives, research design and the research methodology.

Step 2: The conceptualisation of personality traits, focusing on theoretical perspectives of personality, development of the traits approach to the discovery of the five factor model of personality and its dimensions, evidence of the five factor model and limitations, as well as the five factor theory of personality and the measurements of the personality construct.

Step 3: The conceptualisation of work-life balance and work-home interaction focusing on different types on work-home domains, theoretical framework of work-life balance, antecedents and outcomes and the measurements of the work-life balance concept.

Step 4: The conceptualisation of employee engagement focusing on positive psychology movement, conceptual foundation and theoretical frameworks underlying employee engagement, antecedents and outcomes as well as the measurements of employee engagement. An integrated literature review on the theoretical relationship between personality traits, work-life balance and employee engagement will be provided.

Step 5: On the basis on the literature review, the research hypotheses were formulated.

Phase 2: Empirical study

The empirical research followed a descriptive and quantitative research approach consisting of a cycle of seven research steps. Figure 1.1 provides an overview of the seven steps of the research methodology utilised to answer the research questions and specific aims for the empirical study.
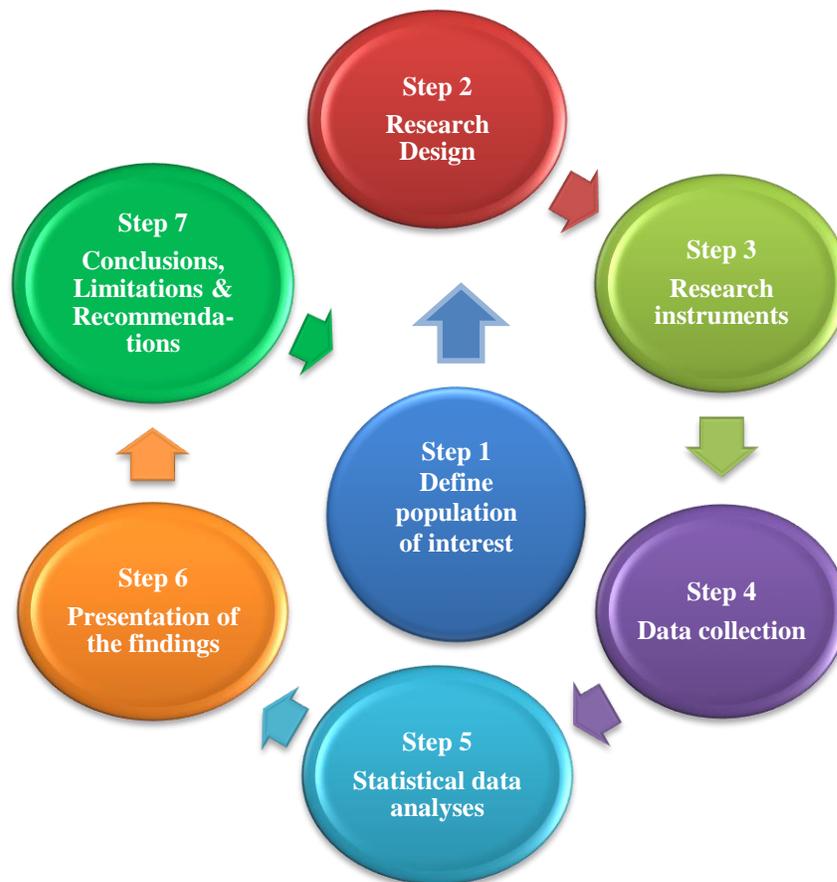
Figure 1.1.   *Overview of the research methodology*

The empirical study consists of the following steps:

Step 1: Selecting the sample: The sampling consists of individual employees employed in various industries. A company research database that consists of 285 000 South African working adults was used as sample frame. In this particular study, a sample size of 1 000

participants was considered appropriate to conduct required statistical analyses. The sample participants consisted of males and females of various generational cohorts.

Step 2: Research design: This research followed a quantitative research approach, specifically a survey design was used to collect data at one-time (cross sectional survey) in order to achieve the research objectives.

Step 3: Research instruments: Three standardised research instruments namely, the Big Five Personality Scale, the Survey Work-Home Interaction-NijmeGen (SWING) and the Utrecht Employee Engagement Scale (UWES) were used to conduct this research. In addition, biographical questions which gather information related to participants regarding their gender, generational cohorts, marital status, parental status, tenure, job position, and industries were added in the questionnaire.

Step 4: Data collection method: The actual survey was designed to be completed electronically through a self-completion Web-based survey. Participants were sent a solicited e-mail invitation that contains an introductory to the nature and purpose of the research as well as a link to the actual electronic survey platform.

Step 5: Statistical analyses: The statistical analyses such as the Statistical Package for the Social Sciences (IBM SPSS, 2015) and AMOS (Arbuckle, 2010) program were used for the analyses of the descriptive statistics, correlation and the multivariate statistics.

Step 6: Reporting and interpretation: The reporting and interpretation of the research results was presented and discussed in the form of tables and figures as well as graphs to describe the quantitative results.

Step 7: Conclusions and limitations as well as the recommendation of the research were discussed and possible future research outlined.

1.8   CHAPTER DIVISION

The research chapters are presented as follows:

Chapter 2 defines and describes the construct personality traits and its multifaceted dimensions. It delves into the theoretical perspectives of personality, development of the traits approach to the discovery of the five factor model of personality, evidence and limitations. More importantly, the five factor theory of personality and the measurements of the personality construct are discussed.

Chapter 3 defines and describes the construct of work-life balance (work-home interaction) and its multifaceted dimensions. The theoretical framework antecedents and outcomes as well as measurements of work-life balance are also discussed.

Chapter 4 defines and describes the construct of employee engagement and its related dimensions. The conceptual foundation and theoretical frameworks underlying employee engagement, antecedents and outcomes as well as the measurements of employee engagement are discussed.

Chapter 5 presents a comprehensive discussion of the research methodology undertaken for the empirical research and how the data collected is analysed.

Chapter 6 presents the research results. The results are presented in tables, figures and graphs format and conclusions relating to the research hypotheses are given.

Chapter 7 provides conclusions, limitations and recommendations arising from the research as well as possible further studies in relation to employee engagement, work-life balance and personality traits.

1.9   SUMMARY OF CHAPTER

This chapter provided an introduction to the research topic, its problem statement and motivation. The chapter further established the research objectives in terms of the literature review and the empirical study as an attept to construct and test a model of personality traits, work-life balance and employee engagement. The research model in terms of the paradigm perspectives, research design, research method and chapter division were provided.

The next chapter presents the review of the relevant literature related to the concept and structure of personality psychology.

CHAPTER 2:   PERSONALITY TRAITS

2.1   INTRODUCTION

The understanding of dynamics associated with personality in the workplace plays a vital role in determining how employees behave, react and engage with each other and the job-fit in particular. Specifically, personality awareness plays a vital role in terms of improving, motivating and persuading employees' behaviour in a particular way. Personality has been associated with numerous positive and consequential outcomes for both the individuals and organisations, and has been accepted as an indicator of employee performance within the workplace (Barrick, Mount, & Li, 2013). Therefore, this chapter is devoted to the understanding of the concept of personality contextualised within the domain of trait perspectives as the primary focus of the study. The chapter will cover different personality approaches that have instrumental and influential roles in the personality psychology. The discovery and development of the five-factor model of personality will be discussed in terms of its theoretical conceptual framework, generalisability as well as comprehensiveness.

2.2   CONCEPTUALISATION OF PERSONALITY

Personality psychologists have long been interested in understanding human nature, which at times is deemed too complex and arguably daunting to accomplish by some personality psychologists. Throughout its relatively long history, the study of personality has accumulated many definitions useful to the taxonomy of personality. John and Srivastava (1999) assert that personality has been constructed from a variety of conceptual, theoretical and empirical perspectives with varying levels of concepts and scales. It has been used along with aspects such as emotions, attitudes and behavioural response patterns of an individual in particular settings. Although each of these aspects contributed significantly in the understanding of individual differences in behaviour and experience, they were limited in presenting a universal definition of personality.

Mischel, Shoda and Smith (2004) also affirm that there is an abundance of definitions expressing the meaning of personality, yet not a single one has been advanced to be accepted as universal. In the same way, Larsen and Buss (2005) point out that personality is a very complicated construct to articulate due to comprehensive aspects that are attached to its understanding such as inner features and goals, social effects, qualities of the mind and body as well as relationships with others. It is therefore these aspects and other related ones such as temperament, values and character that presented difficulties in reaching a concise definition of personality. Perhaps the complexity of personality is justifiable, given the availability of several theories and models of personality.

Pervin (1996) conceptualised personality broadly "as the complex organised cognitions, affects and behaviours that give direction and patterns of the person's life. Like the body, personality consists of both structures and processes and reflects both nature and nurture. In addition, personality includes the effects of the past, including memories of the past, as well as construction of the present and future" (p. 414).

Funder (2001) defines personality as "an individual's characteristic of patterns of thought, emotion, and behaviour, together with the psychological mechanisms behind those patterns" (p. 2). These characteristics reflect an individual's volition or motivational control - that is, choices, preferences, wishes and desires -, and influences behaviours that are generally consistent over situations and time and that distinguish individuals from each other in terms of feeling, emotion and behaviour.

Larsen and Buss (2005) define personality as a "set of psychological traits and mechanism within the individual that are organised and relatively enduring and that influence individual interactions with and adaptation to, the intrapsychic, physical and social environments" (p. 4). According to them, personality impacts on social interactions and plays a key role in exposing the self by choosing tactics which influence or manipulate others, selecting people and environments and evoking emotional and behavioural responses in others.

McAdams and Pals (2006) also conceptualise personality broadly as "… an individual's unique variation on the general evolutionary design for human nature, expressed as a developing pattern of dispositional traits, characteristic adaptations, and integrative life stories, complexly and differentially situated in culture" (p. 212). Accordingly, personality encompasses elements such as traits, characteristics adaptation, social and cultural contexts which are essential constructs of the Five Factor Theory. For them, modern understanding of personality traits must take into cognisance of five of the basic principles that recognise the importance of evolution, traits, characteristics adaptation, life narratives, social and cultural contexts. Their conceptualisation of personality traits shares similarities with the theoretical framework (Five Factor Theory) of personality as derived by McCrae and Costa (1997).

Pervin and Cervone (2010) define personality as "psychological qualities that contribute to an individual's enduring and distinctive patterns of doing things" (p. 8). Their definition concedes that personality is a personal attribute that accounts for consistent patterns of experience and action that take place across time and in different situations over the lifespan of the individual and differentiates itself from one another. More importantly, their definition entails that personality is comprehensive and covers all aspects of an individual, including his/her mental life, emotional experience and social behaviour.

Regardless of the definition of personality used, most recent studies define it as composed of characteristics and tendencies that determine traits that are unique and those that are mostly common to an individual such as thoughts, feelings and emotions that persist over time (McCrae & Costa, 2003; Parks-Leduc, Feldman, & Bardi, 2014; Valchev et al., 2011) and manifests itself through measurable personality traits. In other words, people are to some degree considered similar, yet it is the differences and the rationale between them that spark interest in psychologists to measure personality.

Taken all together, the understanding of personality differs slightly across the many psychological orientations within the discipline of psychology. However, common features do exist that emphasise the uniqueness of individual differences (relative enduring) while

at the same time recognising their distinctiveness. Furthermore, the definitions also emphasise social environment, general behaviour pattern or individual differences, suggesting that an individual's behaviour occurs as a result of social interaction with others.

This study conceptualises personality within the framework of evolutionary psychology. The evolutionary approach to personality focuses on the possibility that behavioural patterns common to all people have a biological root that can be illuminated by considering the evolutionary history of the human race. It suggests that the way people think, feel and behave can be understood by considering which thoughts, feelings and behaviours increased the relative survival and reproduction of their ancestors. For this reason, the definition of personality offered by McAdams and Pals (2006) is of particular relevance to this study.

2.3 THEORETICAL PERSPECTIVE FOR UNDERSTANDING PERSONALITY PSYCHOLOGY

Personality as a field of study within psychology has been traced back to ancient Greeks and Romans (Matzler, Renzl, Mooradian, von Krogh, & Mueller, 2011; Mischel et al., 2004) who identified four bodily humors: sanguine (optimistic), phlegmatic (calm), melancholic (depressed) and choleric (irritable) as a major line of inquiry in modern psychology. It has been challenged by earlier findings that claim a modest relationship between traits and behaviour (Matzler et al., 2011) although little has been done to synthesize such a disparate construct.

Funder (2001) maintained that personality has been studied from a variety of paradigms, including classic ones such as traits, and newer ones such as social-cognitive approaches, although the challenge has been how to integrate all these approaches. Literature identifies a number of theories, models, and frameworks that underpin the approaches of personality, each with its own viewpoint of what entails personality and human personality in particular.

Over the years, a considerable number of approaches have been proposed to comprehensively understand the complexity of the personality construct. For instance, Laher (2007) and Mischel et al (2004) propose six conceptual frames for personality: psychodynamic-motivational, phenomenological, behavioural-conditioning, trait-dispositional, social cognitive level and biological. Similarly, Larsen and Buss (2005) also propose six approaches that differ slightly in labels, namely intrapsychic, cognitive-experiential, dispositional, social and cultural, biological and adjustment. Each of these different approaches attempts to describe different patterns of personality, by including how these patterns are formed and how people differ on an individual level.

The psychodynamic approach emphasises the importance of an unconscious process that drives human behaviour (Larsen & Buss, 2005; Pervin & Cervone, 2010). This theory is particularly concerned with intrapsychic events and probe motivations, conflicts and defence mechanisms, which are assumed to reveal themselves through dreams and free association. The psychodynamic theories are dominated by theories originating from the work of Sigmund Freud, Karen Horney, Erich Fromm, Harry Stack Sullivan and Erik Erikson (Ewen, 2010; McCrae, 2011). However, the Freud theory has been criticised for overemphasising the psychosexual stages of development and the difficulty in evaluating the theory (Ewen, 2010; Larsen & Buss, 2005). In addition, the theory has also been criticised for the lack of alignment with contemporary research on personality psychology.

The cognitive approach categorised in terms of social cognitive levels and cognitive-experiential emphasises characteristics associated with ways of thinking and processing of information on a cognitive and emotional level. This theory is based on the study of conscious thoughts, feelings, beliefs, and desires about self and others (Ewen, 2010; Larsen & Buss, 2005; Pervin & Cervone, 2010). The approach is concerned with the impact of cognitive processes on patterns of experience and social behaviour (Mischel et al., 2004). It considers people as rational scientists, calmly trying to anticipate, predict and control the events that occur in their world (Ewen, 2010; Larsen & Buss, 2005). Theorists that are involved in the cognitive theory include George Kelly, Albert Bandura and Walter Mischel (Ewen, 2010; Pervin & Cervone, 2010).

The humanistic/phenomenological theories are concerned with the individual's conscious experiences and ideas that individual's reality is determined by perception (Funder, 2001; Pervin & Cervone, 2010). Self-concept is the key structure for Rogers and represents an organised and consistent pattern of perceptions. The theorists from this approach include Carl Rogers, Abraham Maslow and Rollo May (Ewen, 2010; Funder, 2001; Pervin & Cervone, 2010).

The biological perspective is based on the assumption that individuals are a collection of biological systems which provide the building blocks for behaviour, thought and emotion (Larsen & Buss, 2005) and determine the role of genetics (Funder, 2001) as well as the environment in shaping of personality. The typical biological approach involves three general research areas namely, genetics, psychophysical and evolution. Specifically, the biological approach propounds that personality is influenced by genetics and not external environment and culture.

The behaviourism approach is concerned with the environment as the determinant of people's behaviour. This approach is primarily concerned with subjective and observable behaviour (Funder, 2001; Pervine & Cervone, 2010), and also the way in which people differ and give reasons for their differences. The theory seeks to understand specific patterns of behaviour that characterise individuals, as well as the conditions thereof. Theorists from the behavioural approach include BF Skinner, John Watson and Ivan Pavlov (Ewen, 2010; Funder, 2001; Pervine & Cervone, 2010).

The traits perspective of personality is concerned with identification, description and measuring of specific traits that make up the human personality. The theory attempts to describe human personality in terms of patterns of thoughts, feelings and actions as individuals interact with others. It particularly focuses in describing how different people think, feel and behave in their daily encounters with other people (McCrae, 2011). The trait theory views people as rational beings who can be reasonably relied on to provide information about their personalities. The theorists involved in the trait theory include,

Gordon Allport, Raymond Cattell, Hans Eysenck and Costa and McCrae (Ewen, 2010; McCrae, 2011; Pervine & Cervone, 2010). Trait theorists are concerned with three fundamental areas of importance, namely the conceptualisation of traits, the identification of the most important traits and formulation of a comprehensive taxonomy of traits (Larsen & Buss, 2005). The remainder of this chapter will deliberate further on personality traits.

Apart from the common and well-known theories of personality, Larsen and Buss (2005) further identified two extraordinary theories, social and cultural as well as the adjustment theories. The social and cultural theories are based on the assumption that personality is not something that merely resides within the heads, nervous system and genes of individual (Larsen & Buss, 2005); rather, it is determined by the different cultures that manifest certain types of behaviour. On the other hand, the adjustment theory is concerned with the relationship between personality and physical adjustment and health (Larsen & Buss, 2005). Specifically, the theory is particularly interested in understanding how personality influences an individual's abilities to cope, adapt and adjust to life occurrences.

It is clear from the approaches mentioned that no consensus has been reached that epitomises a measure of personality characteristics that give rise to differences in human behaviour. However, the trait theory remains one of the most common approaches that has been widely established and accepted to capture human personality. McCrae (2011) argues that the other approaches have little to contribute to the contemporary personality psychology field. The fundamental function of personality theories is to provide a description of personality, predict future behaviour and explain how personality translates into behaviour (Pervin & Cervone, 2010).

The 16 type instrument developed by the Myers-Briggs (1958) inventory serves as an example of such typological approaches to contemporary personality. The Myers-Briggs Type Indicator (MBTI) was developed by Katherine Cook Briggs and her daughter Isabel Briggs Myers (Eswaran, Islam & Yusuf, 2011; Potgieter & Coetzee, 2013) and is regarded as a well-known and widely used personality inventory based on the Carl Gustav Jung theory of psychological types (Eswaran et al., 2011; Potgieter & Coetzee, 2013). Jung's

theory is categorised into eight personality types on the basis of how people process and apply information and on whether they are more introverted or extroverted. The eight types of personality are Extroversion, Introversion, Sensing, Intuition, Thinking, Feeling, Judging and Perceiving.

The MBTI, on the other hand, is meant to understand how people perceive themselves and others' personality types, and most importantly, how personality preferences reflect their decision-making processes. In other words, Myers and Briggs expanded Jung's typology of personality types by adding four pairs of opposite preferences in line with the conventional methods of psychological measurement via a questionnaire known as the MBTI (Potgieter & Coetzee, 2013, Robbins & Judge, 2015). It serves as an extension of the Jung's theory of psychological type and operationalises personality types into a questionnaire. The four pairs are defined as follows:

- **Extroverted (E) versus Introverted (I)**. Extroverted individuals are outgoing, sociable and assertive, while Introverts are quiet and shy.
- **Sensing (S) versus Intuitive (N)**. Sensing types are practical and prefer routine, order and a focus on details whereas intuitive individuals rely mainly on unconscious processes.
- **Thinking (T) versus Feeling (F)**. Thinking people often use reasoning and logic to resolve their problems. Feeling types rely on their personal values and emotions.
- **Judging (J) versus Perceiving (P)**. Judging types want control and prefer their world to be ordered and structured. Perceiving types are flexible and spontaneous.

The theories use similar labels to describe personality. Eswaran et al (2011) point out that the difference is the additional concept of auxiliary or "back up" functions that is applicable in the MBTI instrument and the fact that its measurement consists of 16 types of personality as compared to Jung's typology of 8 types of personality.

The traits perspective is of particular interests in this study due to its focus of delineating personality and human personality on the basis of individual differences. In addition, the

perspective attempts to understand human personality in terms of identifiable and measurable traits and the degree to which certain recurring personality traits such as sociable, talkative, dependable, resourcefulness, anxious, exist among individuals. More detailed discussion on the traits follows in the next section.

2.4   TRAITS-DISPOSITIONAL APPROACH

The traits-dispositional approach is the construct used to describe human individuality that accounts for consistent patterns of thoughts, feelings and actions as individual interact with one another at a given situation in a lifetime. Rothmann and Coetzer (2003) refer to disposition as factors or variables that include personality characteristics such as needs, attitudes, preferences, cognitive ability, emotional intelligence and motives. In addition, Larsen and Buss (2005) refer to disposition as inherent tendency to behave in a particular way.

2.4.1   Defining traits

Traits have been defined as "dimensions of individual differences in tendencies to show consistent patterns of thoughts, feelings and actions/behaviours" (McCrae & Costa, 1997; Pervin & Cervone, 2010; Vogt & Laher, 2009). They are often described as relatively enduring characteristics and dispositions of how an individual will act, think and feel in particular ways, rather than absolute determinants of human behaviour. Traits are used to describe and summarise behaviour based on information about how someone typically behaves (Pervin & Cervone 2010; eSilva & Laher, 2012), with reference to broad dispositional patterns of behaviours, cognition and emotions across a range of life domains (McCrae & Costa, 2008a). Traits describe regularities in the person's behaviour and are also concerned with psychological characteristics by which people differ from one another. They remain the central assumptions of contemporary trait theory (Boyle, 2008).

Since traits are just adjective words that describe human characteristics, they are represented on a continuum, with every individual measuring somewhere from the higher

prevalence to the lower prevalence trait exhibited within the person (McCrae, 2010; Pervin & Cervone, 2010). In other words, traits are organised into a hierarchy of specific responses to a general style of psychological functioning or habits and people can be systematically classified according to the degree to which they exhibit a particular trait. McCrae and Costa (2003) contend that the greater the degree of the trait held by an individual towards exhibiting the trait-related behaviour, the greater the intensity with which they act and react in similar situations.

2.4.2 Trait perspectives of personality

A review of literature reveals several theorists of the trait system that have contributed significantly to the personality psychology over the years. This research includes the work of Allport and Odbert's (1936) model of personality, Cattell's (1943) 16 personality factor questionnaire, Eysenck's (1947) three factor model of personality leading to the work of Costa and McCrae's (1992) five-factor model of personality.

(a) Allport's (1937) model of personality

Gordon Allport (1937) is considered as the pioneer and principal exponent behind the conceptual understanding of personality and personality traits (Cheung, Cheung, Zhang, Leung, Leong, & Yeh, 2008; Larsen & Buss, 2005), by demonstrating that personality is the most appropriate way of studying individual differences. Cited in Robbins and Judge (2015, p. 48) Allport (1937) defined personality as:

- *"... the dynamic organisation within the individual of those psychophysical systems that determine his unique adjustments to the environment" (1937).*
- *"... the dynamic organisation within the individual of those psychophysical systems that determine his characteristic behaviour and thought" (1961).*

Allport (1937) was principally interested in the study of healthy people and their uniqueness as well as distinctiveness (Pervin & Cervone, 2010), and was adamant that the individual should not be confused with hidden unconscious impulse. It was for this reason

that Allport formulated two approaches which best capture his understanding of personality namely, idiographic (uniqueness) and nomothetic (disntinctiveness) approaches (Ewen, 2010). Conceptually, Allport's understanding of traits reflects how individuals attach meaning extracted from their natural language to describe themselves and others. In other words, his understanding of the traits construct was not related to any of the empirical research conducted by earlier psychologist or grounded in a particular theory, but focused on the meaning people attached and ascribed to their behaviour and those of significant others. Therefore, natural language serves as the foundation of personality traits in personality psychology. Despite all the contribution made in the understanding of human personality, Allport failed to support his claim with any model to explain how individual behaviour can be implicit (Pervin & Cervone, 2010).

Continuing this line of enquiry, Allport and Odbert (1936) consulted the Unabridged English Dictionary (Webster's New International Dictionary) and compiled a list of approximately 17 953 terms that were presumed appropriate to describe traits (John & Srivastava, 1999; Laher, 2013a; Loehlin & Goldberg, 2014) and also discern an individual's behaviour from their significant others. Allport and Odbert (1936) realised that structuring such overwhelming personality descriptors could be a tedious exercise and to epistemologically understand and describe the precise meaning of the personality construct would keep psychologists "at work for a life time" (cited in John & Srivastava, 1999).

In an attempt to make sense to the overwhelming list, Allport and Odbert (1936) decided to divide the list of personality terms into four major categories, (1) stable traits consisting of approximately 4 504 terms, (2) temporary states, mood and activities, (3) evaluative judgments of personal conduct and reputation and (4) physical characteristics, capacities and talents (John & Srivastava, 1999; Larsen & Buss, 2005; Laher, 2013a). These lists and their subsequent categorisation provided an initial structure for the personality lexicon in the natural language and further taxonomy research from the trait perspectives.

(b)   *Cattell's (1946) Taxonomy: The 16 PF*

In search of the basic dimensions of personality, Cattell (1946) began to peruse Allport and Odbert's (1936) personality-descriptive terms as a foundation for expanding research in the taxonomy. He was of the opinion that the fundamental problem inherent within the personality psychology was how to provide a taxonomy that will describe a systematic way for distinguishing, ordering and identifying individual differences. In fact, Cattell's (1946) attempted to develop a multidimensional model of personality structure from the 4 504 stable traits considered important at the time (Boyle, 2008; Laher, 2013a) through factor analysis techniques to build a taxonomy for basic traits.

Cattell (1946) used both the semantic and empirical clustering techniques as well as his own expertise knowledge of personality to reduce the 4 504 terms that were identified by Allport and Odbert's (1936). In the process, he grouped terms that were semantically similar under a single personality attributes and eliminated terms which appear as uncommon traits. Eventually, Cattell (1946) was able to reduce the list of personality-descriptive into manageable 171 terms.

Nonetheless, the 171 clusters of adjective terms were still considered too many and costly as well as time-consuming to be constructed in a single questionnaire (Laher, 2013a; John & Srivastava, 1999). On the basis of such limitations, the 171 adjective terms were further clustered by calculating a correlation analysis and Cattell's semantic understanding managed to reduce the terms to 67 clusters which were then subjected to factor analysis. Additional factor analysis as well as semantic and experimental clustering resulted in a further reduction of clustered terms which were eventually narrowed to 35 bipolar traits (Ewen, 2010; Laher, 2013a; Larsen & Buss, 2005).

The 35 bipolar traits were then subjected to several oblique factor analyses from which 12 factors were extracted, across three different types of data, including the life record (L-data), the self-rating questionnaire (Q-data), and the objective test (T-data) (Laher, 2013a; Pervin & Cervone, 2010). The 12 factors together with the combined four additional

dimensions eventually formed the basis of Cattell's sixteen traits which represent the structure of personality. Though Cattell (1946) claimed that his factor structures illustrated excellent correspondence across methods, he was, however, unable to extract more than eight of these factors in subsequent studies. These in turn, gave rise to the instrument called Sixteen Personality Factors Questionnaire (16PF) that is reflected below:

Table 2.1

16 Personality factors by Van Eeden, Taylor & Prinsloo (2013, p. 221)

Primary factor		Low-score personality	High-score personality
A	Warmth	reserved, cool	outgoing, participating
B	Reasoning	lower g, abstract	higher g, concrete
C	Emotional Stability	emotionally instable, easily upset	emotionally stable, adaptable,
E	Dominance	deferential, docile, cooperative	assertive, dominant, independent
F	Liveliness	taciturn, serious, introspective	carefree, cheerful, enthusiastic
G	Rule-Consciousness	expedient, inconvenient	conscientious, conforming,
H	Social Boldness	shy, timid	socially bold, venturesome
I	Sensitivity	utilitarian, objective	sensitive, tender minded
L	Vigilance	trusting, unsuspecting	skeptical, vigilant, suspicious
M	Abstractedness	practical, grounded	abstract, imaginative
N	Privateness	Forthright, genuine	polished, private
O	Apprehension	complacent, self-assured	apprehensive, indecisive
Q1	Openness to Change	conservative, traditional	experimental, open to change
Q2	Self-Reliance	group-oriented, affiliative	self-reliant, solitary
Q3	Perfectionism	undisciplined, tolerates disorder	controlling, perfectionist
Q4	Tension	calm, relaxed	tense, impulsive, impatient

As shown in table 2.1, each of the 16PF bipolar traits was known by the name of the positive pole. The factors were identified by the letter of the alphabet that indicates the order in which they were derived during the factor analysis (Irwing, Booth & Bates, 2014). It should further be noted that the letter Q represents the four factors that were obtained from the Q-data derived by Cattell.

Cattell's work, especially the model of 16 personality factors, remained a popular measure for personality assessments and also attracted numerous criticisms on the basis on its methodological consideration. This was largely because several attempts made to replicate Cattell's personality structures were unsuccessful, and several studies constantly obtained a five-factor structure across different samples. Accordingly, scientific efforts to replicate Cattell's work started with the careful crafted studies of Fiske (1949), Tupes and Christal (1961), Norman (1963), Borgatta (1964), Smith (1967) and Goldberg (1981) as well as Costa and McCrae (1992) to date. In all studies, only five of the 16 PF factors were realised (John & Srivastava, 1999; Laher, 2013a) which led to the diminished popularity of the 16 PF model in personality assessment (Larsen & Buss, 2005).

Fiske (1949) explicitly used 22 of Cattell's bipolar scales and factored as well as rotated eight intercorrelation matrices and obtained five fairly robust factors in each study. Fiske was able to reduce an infinite number of personality traits to five super-traits, which resembled what become known as the Big Five (Laher, 2013a; Larsen & Buss, 2005; McCrae & John, 1992). Essentially, Fiske's studies could not find evidence to support Cattell's personality factors, but rather revealed the five factor structures of personality. It could, therefore, be assumes that Fiske was the first researcher to actually discover what is now known as the Big Five (Laher, 2013a; Larsen & Buss, 2005).

Subsequent to Fiske (1949), Tupes and Christal (1961) reanalysed the correlations reported by Cattell (1946) and Fiske (1949) and found good support for five factor structures of personality (Laher, 2013a; McCrae & Allik, 2002). They conducted studies among eight different samples ranging from male air force officers to female university students, using rating method ranging from self-report to observer-rating (John & Srivastava, 1999; Laher, 2013a). Similar to Fiske (1949), their studies were unable to find anything like the degree of complexity reported by Cattell (1946). Instead, their study appeared to confirm the existence of the five-factor structure remarkably well. Unfortunately, most researchers were unaware of the findings reported by Tupes and Christal as the report was published in an obscure Air Force (Laher, 2013a), and the validity of the five factor structures of personality was largely ignored by numerous researchers. McCrae and Costa (2008b)

maintained that its rediscovery subsequently led to a growing acceptance and most importantly, the formulation of a theoretical framework of five factor theory.

Norman (1963) also attempted to replicate the lists derived from Cattell's 35 variables in four other studies, offering the trait dimension as steps 'toward an adequate taxonomy of personality attributes' (Goldberg, 1990, John & Srivastava, 1999). Norman (1963) argued that the five-factor structure were not exhaustive of what could be described as human characteristics, implying that there could be more factors representing the natural language used everyday comparable to Cattell's (1947) 35 lists of terms. Norman (1963) continued to further investigate the various levels of the concept, downward from the five factor level, through an intermediate level and eventually arriving at a three-tiered level of concept of personality descriptors (John & Srivastava, 1999).

Subsequently, Norman (1967) returned to the original list of Allport and Odbert's (1936) terms and in a way adding 171 terms (which resulted in 18125 terms) to determine whether the lists of terms as indicators of individual personality were exhaustively executed by earlier studies. In so doing, Norman supplemented Allport and Odbert's (1936) earliest list to almost 2 800 single worded descriptors extrapolated from the third-edition of the Unabridged English Dictionary to a sample of male university students (Goldberg, 1990; Ashton, Lee & Goldberg, 2004).

Through series of studies, Norman (1967) was able to further reduce the list to 1 431 terms, which were then considered to be appropriate for the development of a structured taxonomy. Further semantic sorting of the stable traits resulted in the classification of 75 semantic categories which were sorted into five dimensions, with each assigned a positive and a negative pole (Goldberg, 1990; John & Srivastava, 1999). Subsequently, Norman (1967) began to sort terms into a few broad categories and subsequently developed a more fine-grained classification of each of the initial categories where he numbered and labelled each five traits as reflected below:

Factor I=Surgency or Extroversion (talkative, assertive, energetic).

Factor II=Agreeableness (good-natured, cooperative, trustful).

Factor III=Conscientiousness (orderly, responsible, dependable).

Factor IV=Emotional Stability versus Neuroticism (calm, not neurotic, not easily upset).

Factor V=Culture (intellectual, polished, independent-minded).

Goldberg (1990) on the other hand, conducted several studies based on Norman's list of 2800 and extracted 1710 English personality-descriptive adjectives (inclusive of earlier 1431 descriptive terms) to be included in a self-report inventory (Ashton et al., 2004). Overall, Goldberg (1990) constructed different sets of variables to reduce estimated 2797 personality descriptors, initially compiled by Norman (1967), to substantive lists of 1131 terms for various reasons. Therefore, the remaining personality descriptors (1666) were then combined with four nouns obtained from Norman's list and were converted into adjective forms and 40 additional terms judged to be familiar and personality descriptive were also added (Ashton et al., 2004). This procedure finally resulted in Goldberg's set of 1710 personality-descriptive adjectives.

Goldberg (1990) began to score Norman's semantic categories as scales and factor analysed their intercorrelations in the self-rating data. After a variety of different methods of factor extraction and rotation, the five factors essencially remained the same, namely Extraversion, Neuroticism, Openness to experience, Agreeableness and Conscientiousness (Goldberg, 1990; John & Srivastava, 1999; Laher, 2013a). Moreover, Goldberg (1990) further found that the first five factors remained virtually invariant even when more than five were rotated (John & Srivastava, 1999; Laher, 2013a). It was Cattell's (1946) earlier work that served as the starting point for the subsequent lexically-based development of the popular five-factor model.

(c)   Eysenck's (1947) three dimensions

Eysenck's (1947) understanding of the construct personality differs profoundly from that of Cattell (1946) and Allport and Odbert (1936). Eysenck (1947) was particularly interested

in the biological foundation of personality traits. His understanding of personality reflects hypothetico-deductive reasoning methods as compared to an inductive reasoning (Larsen & Buss, 2005). In addition, Eysenck's (1947) understanding of personality relied on the secondary factor analysis method, which in principle differs from the factor analysis used by Cattell. Secondary factor analysis is a statistical analysis of an initial set of factors constituting a very large number of factors that are correlated with one another (Pervin & Cervone, 2010). Therefore, Eysenck (1947) used this secondary factor analysis to classify factors that were independent and those uncorrelated with the other factors.

Eysenck (1947) identified two major universal personality traits that can possibly be used to account for a general description of individual differences in his conception of biological bases. These personality traits consisted of Neuroticism (N) and Extroversion-Introversion (E) which formed the basis of the Maudsley Personality Inventory (MPI) (Chapman, Weiss, Barrett, & Duberstein, 2013) and afterwards included in the Eysenck's Personality Inventory (EPI) (Boyle, 2008). Chapman et al (2013) noted that Eysenck's inception of the EPI theory focussed explicitly less on subcomponents of Neuroticism and Extraversion, but rather more on the more circumplex created by the two conceptually orthogonal dimensions.

It was through the Eysenck Personality Questionnaire (EPQ) developed by Eysenck and Eysenck (1976) that the third factor was then added and labelled as Psychoticism, thereby replacing many of the EPI items by simply reducing the length of the items from 57 to 48 (Chapman et al., 2013). Alteration provided a more elaborated factor structure and reduced impulse content away from Extraversion on the EPI and onto the EPQ's Psychoticism scale. The addition of the psychoticism resulted in Eysenck's three super factors that formed the highest level of hierarchical organisation of personality structure. They were considered sufficient to explain human personality. As noted in Larsen and Buss (2005), Eysenck did not anticipate the possibility of further personality dimensions being added to this model in the future, because he was confident that the three hierarchical organisation of personality structure will best describe and explain human personality. Table 2.2

displays the model of the three hierarchical structures, where each of the three broad traits are assembled at the top of the hierarchy and subsume a number of narrow traits:

Table 2.2

Hierachical structure of Eysenck's system adapted in Larsen and Buss (2005, p. 74)

Superfactors	Narrower traits
Psychotism (P)	Aggressive, cold, egocentric, impersonal, antisocial, unempathic, creative, tough-minded
Extroversion vs. Introversion (E)	Sociable, lively, active, assertive, sensation-seeking, carefree, dominant, surgency, venturesome
Neuroticism (N)	Anxious, depressed, guilt feeling, low self-esteem, tense, irrational, shy, moody, emotional

From table 2.2, it is apparent that the last two factors, Extroversion vs. Introversion and Neuroticism, were quite similar to the five-factor personality traits, Extraversion and Emotional Stability (inverse of Neuroticism), identified by Norman (1967) and then by Goldberg (1990). The third factor added in Eysenck, however, corresponds and equally blends with lower levels of both Agreeableness and Conscientiousness (De Young & Gray, 2009). Although, a resemblance was established between psychotism and both agreeableness and conscientiousness, John and Srivastava (1999) were of the opinion that salient differences between these factors do exist.

(d)   Five factor dimensions

The Five-Factor Model (FFM) is the most researched taxonomy of traits around the world (Hull, Beaujean, Worrell, & Verdisco, 2010; McCrae & Costa, 1997; Raja & Johns, 2010) and responsible for the revival of personality assessment within the organisational context. It is considered as one of the dominant models in personality psychology, specifically amongst the trait theorists, and the most widely accepted solution to the problem of describing trait structure (McCrae & Costa, 2008b). It is the simplest and most effectiveness way to describe and understand relations among traits, though it lacks the

precision to indicate the reasons why people are prone to think, feel and behave the way they do.

Within this model, a large number of traits are combined into five broad trait dimensions that load onto orthogonal factors. These include Neuroticism (N), Extraversion (E), Openness to Experience (O), Agreeableness (A), and Conscientiousness (C) and each factor is subsumed by six personality facets or traits. These dimensions are found in trait adjectives as well as in questionnaires created to operationalise a variety of personality theories (Ashton & Lee, 2007; McCrae & John, 1992). They are assumed to be deep-rooted traits in an individual's personality, affecting behaviour and performance of many kinds and in a range of situations (Bjørkelo et al., 2010). However these traits are also assumed to overlap, suggesting that a person can be described as sociable, talkative, outgoing and cheerful.

There are different labels subscribed to the five dimensions of personality, namely Goldberg's Big Five (BF), Costa and McCrae's Five Factor Model (FFM) and Zuckermn's Alternative Five (AF). However, the BF and the FFM, are most commonly associated with the five dimensions and are at times used interchangeably (Rothman & Coetzer, 2003; McCrae & Costa, 2008a; Valchev et al., 2011). However, they but differ substantively with respect to their methodological considerations, theoretical foundations and exact composition of the personality dimensions (Block, 2010; Boyle, 2008; Valchev et al., 2011).

Funder (2001) and Larsen and Buss (2005) point out that the difference between BF and FFM appears in the nomenclature of these dimensions and also the sequence of their appearance in the different models. In addition, Block (2010) asserts that the difference lies with the fact that the BF were strictly derived from the usage of single-word common-language personality descriptors via the method of factor analysis into five factors, while the FFM is explicitly hierarchical in its two-level structure factors and facets and is primarily derived from questionnaire studies. The five factor model of personality will be discussed in more detail in the next section.

2.5 FIVE FACTOR MODEL OF PERSONALITY

The FFM has been considered by many as a widely accepted taxonomy that comprehensively captures the critical stable individual differences in personality (Barrick et al., 2013). This section presents the discovery and development of the FFM within the traits perspective as well as the underlying theoretical framework of the five factors of personality. In addition, the empirical evidence in terms of cross-language and cross-cultural generalisability and comprehensiveness as well as the potential criticisms are provided.

2.5.1 Discovery and development of five-factor model of personality

The five factor model of personality is one of the oldest and most prominent contemporary personality theories developed by Costa and McCrae (1992) and forms the highest level of the personality hierarchy (McCrae & Costa 2008a). In addition, McCrae (2011) asserts that the FFM describes individual differences in relation to the way people think, act, feel and behave in different situations. Theoretically, Metzer, de Bruin and Adams (2014) stated that the FFM is used to understand why people behave and think as they do by identifying a unique set of traits, characteristics or attitudes of a person. The trait theorists consider an individual's personality to be composed of a characteristic set of fundamental personality traits that were derived from analyses of the natural-language terms people use to describe themselves. The term natural language echoes the lexical approach derived by earlier trait theorists in the search of finding all the terms related to human personality (Goldberg, 1990; John & Srivastava, 1999). In simple terms, the lexical approach implies that the main dimension of human behabiour can be traced back to the language one uses to describe other people and events.

It suffices to assume that the five dimensions of personality had their origins in the English-language, specifically the lexical approach as developed by Allport and Odbert (1936 cited in Laher, 2013a; Loehlin & Goldberg, 2014). Subsequently, Cattell's early pioneering work

serves as a starting point by grouping terms into synonymous clusters with rating scales that contrasted groups of adjectives. Thus, intuitively, it was Cattell's early pioneering work that served as the starting point for the discovery of the popularised FFM personality structure.

Initially, the five factors structure of personality was reported from studies that failed to find evidence to support Cattell's personality factors. For example, Fiske (1949) explicitly used 22 of Cattell's bipolar scales and factored and rotated eight intercorrelation matrices to yield five fairly robust factors in each study (John & Srivastava, 1999; Laher, 2013a; Larsen & Buss, 2005). It was through studies conducted by Fiske (1949), Tupes and Christal (1961), Norman (1967) and Goldberg (1990) that the compelling five factors of personality, based on lexical research originated. These factors and their subscales were generally known as Extraversion (talkative, outgoing vs. quiet, shy), Agreeableness (gentle, sympathetic vs. harsh, cold-hearted), Conscientiousness (organised, disciplined vs. sloppy, lazy), Emotional Stability (relaxed vs. moody, anxious), and Intellect/Imagination (intellectual, imaginative vs. shallow).

Costa and McCrae (1992) started working on the NEO Personality Inventory (NEO-PI) by clustering analyses of Cattell's 16PF (Ching, Church, Kigbak, Reyes, Tanaka-Matsumi, Takaoka, Zhang, Shen, Arias, Rincon, & Ortiz, 2014; Laher, 2013b; McCrae & Costa, 2003;). Empirical evidence emerged that although Cattell's analyses yielded ubiquitous Neuroticism and Extraversion dimensions, they were able to persuade Costa and McCrae (1992) to acknowledge the importance of the Openness to Experience dimension (Ashton & Lee, 2007; Boyle, 2008; Laher, 2013b) which was subsequently added to the NEO-PI inventory. Initially, the NEO PI was constructed to measure three broad personality dimensions, namely Extraversion, Neuroticism and Openness to Experience.

Relevant literature confirms that two or three of the dimensions (Neuroticism, Extraversion and Openness to experience) included in Costa and McCrae's (1992) NEO-PI questionnaire were previously integrated into Eysenck's PEN hierarchy and Cattell's 16PF questionnaire. Interestingly, Block (2010) also considered the three dimensions of the NEO

questionnaire as substantively equivalent to three of Goldberg's adjectives factors, but argued that Costa and McCrae's (1992) NEO-PI questionnaire lacks the psychometric properties of two of the five Goldberg person-adjectives factors.

Conversely, Hull et al (2010) argue that Costa and McCrae's (1992) NEO inventory is a more parsimonious version of the instrument, selecting items from the NEO-PI through varimax rotation to maximise convergence and discriminant validity with the NEO-PI factors. They also found that three scales from the inventory were closely similar to those of the Big Five. In expanding their work, they incorporated the additional two dimensions, namely Agreeableness and Conscientiousness (Block, 2010; Costa & McCrae, 1992; 2008; Laher, 2013b) using self-reports, observer-rating, Q-sort techniques, examination of 16PF data and the assessment of frequencies with which people engage in particular types of action. They found a convergent discriminant relationship between their version of Agreeableness and Conscientiousness.

Incorporating two more dimensions into the NEO inventory inevitably suggested that a new revised version that constitutes five overarching personality factors was evident. This revised version is termed the NEO-Personality Inventory-Revised (NEO-PI-R) and is the most commonly used instrument to operationalise the FFM (Costa & McCrae, 1992; McCrae Terracciano, & 79 Members of the Personality Profiles of Cultures Project, 2005). The inventory relies on a sentence-length item format to describe individual differences in behaviour and is therefore different from the lexical which uses single adjectives. It has been replicated in many studies and languages and in different item format across the globe.

One of the problems identified was the length of the questionnaire which takes approximately 45 minutes to complete (NEO-PI-R, 240 items). As a solution, Costa and McCrae (1992) developed a shorter version known as NEO Five-Factor Inventory (NEO-FFI). The NEO-FFI is an instrument that consists of 60 statements, where respondents are requested to indicate the extent to which they agree or disagree with a range of statements about themselves. The NEO-FFI is therefore a brief measure for the FFM factors that assesses the broad traits only, where each trait is measured with 12 items. The instrument

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includes items which most closely correlate with the scales used in the NEO-PI-R version, but excludes items that measure the personality facets. The NEO-FFI was structured to address the limitation inherent in length questionnaire, thereby reducing the length of the questionnaire in that it measures five-factor scales without including the facet scores assessed in the five-factor structure.

Zhang and Akande (2002) claimed that the shorter questionnaire has been proven to report similar reliability and acceptable internal and external validity in the same way as lengthy questionnaire. Similar evidence has emerged regarding the comparability of criterion-validity for both shorter and longer questionnaires (Thalmayer, Saucier, & Eigenhuis, 2011). In other words, Costa and McCrae (1992) reported that the NEO-FFI accounts for 85% of the total item variance similar to the NEO-PI-R.

2.5.2   Theoretical conceptualisation of the five factor model of personality

The FFM model of personality is classified as the hierarchical organisation of personality traits outlined in relation to five basic dimensions: Extraversion, Neuroticism, Conscientiousness, Agreeableness and Openness to Experience (Loehlin & Goldberg, 2014; McCrae & Costa, 2008a). These dimensions have been determinedthrough self-reporting and ratings in studies conducted on adults and children using varieties of theoretically structured questionnaires as well as the analysis of adjectives from several different languages. They can provide a basis on which an organisation can formulate certain expectations about preferred and undesirable personality characteristics of its employees. These five dimensions are relatively independent constructs but together provide a meaningful classification for the study of individual differences in work attitudes. The section that follows explores each of the five broad dimensions of personality together with its underlying facets as described by Costa and McCrae (1992) and other researchers.

2.5.2.1   *Neuroticism*

Neuroticism refers to the general tendency to be emotionally unstable and to experience negative emotions such as fear, sadness, guilt, anger and distrust as well as to expect the worst from situations (Costa & McCrae, 1992; Curtis, Windsor, & Soubelet, 2015; Fischer & Boer, 2014; Vogt & Laher, 2009). It is a sense of apprehension and an underestimation of own abilities. The trait neuroticism has been conceived as a trait of normal personality falling along a continuum with emotional stability, its positive pole (Rothmann & Coetzer 2003). Neuroticism is one of the dimensions of personality traits that appear in most personality models and is associated with individual differences in basic human physiological and neurological mechanisms (Templer, 2012).

Neuroticism represents a predisposition to focus on the negative aspects of the self, others and the world, as well as a tendency to experience a high level of stress. People high in neuroticism tend to experience such negative effects as emotional instability, embarrassment, guilt, pessimism, and low self-esteem. The inverse reflects the degree to which people are calmer and confident as opposed to anxious and insecure (eSilva & Laher, 2012; Metzer et al., 2014; Vogt & Laher, 2009). Emotional stability is most strongly related to life satisfaction, job satisfaction and low stress levels.

People with low levels of emotional stability tend to be defensive and guarded, have a negative view of themselves, worry about others' opinions of them, and tend to make stable, internal, global attributions about negative events (Barrick et al., 2013; Robbins & Judge, 2015). Such people are more dissatisfied with their work and life in general and are more motivated to avoid failures as compared to completing particular tasks. Therefore, regardless of the term used, common to neuroticism is the tendency to have a negative view of the self, to experience negative affect and to be more sensitive to minor failures and frustrations of daily life.

Bakker, Boyd, Dollar, Gillespie, Winefield and Stough (2010) assert that the trait neuroticism has been hypothesised to influence work-related strain both directly and indirectly through its influence on workplace perceptions. In the former case, the effect is thought to arise because of a heightened vulnerability to aversive stimuli and the effects of

stress, while in the latter case, individuals high in neuroticism are thought to appraise certain work situations as threatening because they are more susceptible to anxiety-inducing environmental cues, and/or tend to view the world negatively.

In their study, Raja and Johns (2010) found that only one interaction term involving job score and neuroticism (ß= - .14, p < .01) was negatively and significantly related to job performance. In another study, Chiaburu et al. (2011) reported that neuroticism was negative and strongly associated with in-role performance, creative and organisational citizenship behaviour in higher job scope in all occupational settings. Similarly, Barrick et al (2013) maintained that job characteristics can provide trait-relevant cues to neurotic individuals to such an extent that a high scope job could be seen as an excessive burden, resulting in the worsening of PE fit, which in turn will magnify the negative effects of neuroticism on creativity.

The meta-analysis review of Barrick and Mount's (1991) work revealed that neuroticism was negatively associated with job performance in various organisational settings. In other words, people with high neuroticism were found to inversely relate to job performance, particularly regarding work-related aspects that require cognitively challenging work and demand initiative, as well as a variety of skills (Raja & Johns, 2010). Such people are expected to be wary and even vulnerable as well as anxious when performing complex job activities which require taking control in a less structured job situation. In essence, neurotic individuals are supposed to have less fulfilling and rewarding interactions at work than emotionally stable person.

The dimension neuroticism consists of six facets, namely anxiety, anger and hostility, depression, self-consciousness, impulsiveness, and vulnerability (Costa & McCrae, 2008; eSilva & Laher, 2012). *Anxiety* relates to feelings of nervousness, fear and feelings of being tense. *Anger and hostility* is the tendency to experience unfriendliness, aggression and related states such as frustration and bitterness. *Depression* relates to the tendency to experience feelings of guilt, sadness or hopelessness. *Self-consciousness* denotes shyness

or social anxiety. *Impulsiveness* is best defined by spontaneous and impetuous traits, and even recklessness. *Vulnerability* relates to susceptibility to stress.

2.5.2.2 *Extraversion*

The dimension Extroversion refers to the tendency to be assertive and to seek social interaction as well as to experience positive emotion (Bjørkelo et al., 2010; Curtis et al., 2015; Metzer et al., 2014; Parks-Leduc et al., 2014). It is sometimes used interchangeably with Positive Emotionality or Surgency (Barrick & Mount, 1991; Bjørkelo et al., 2010; eSilva & Laher, 2012) and resembles the major dimensions of dominance and nurturance in the interpersonal theory of personality. Therefore, people who possess a high level of extraversion are predisposed to have both positive emotions and cognition. They are often assumed to be more optimistic about the future, less susceptible to distraction and less affected by competition than introvert people.

In a similar vein, Eswaran et al (2011) posit that people who are high in extroversion are usually very jovial, vocal and interactive people. In fact, such people often appear to have a good deal of social interaction. Typically, extroverts exhibit behaviour such as being assertive, active, talkative, warm and friendly, while introverts are more reserved, independent of others, and even-paced (eSilva & Laher, 2012; Costa & McCrae, 2008; Metzer et al., 2014; Templer, 2012; Vogt & Laher, 2009).

Notably, people with high extroversion are characterised by a high need for social contact and attention (Costa & McCrae, 2008; Fischer & Boer, 2014). It is through their behavioural approach orientation that extroverted people spend most of their time in social interactions, even if the interactions have a negative potential, that is, regardless of the specific feature constellation of the situation. Individuals scoring high on extraversion are those who enjoy being around people and tend to be assertive, active and talkative. Extroverts like stimulation and excitement, and are generally cheerful and optimistic.

Robbins and Judge (2015) assert that extraverts tend to be generally happier in their work and in their lives as a whole. They tend to perform better in the work that requires significant interaction with others. Perhaps because they have more social skills, they usually have more friends and spend more time in social situations than introverts. The study by Srivastava, Angelo and Vallereux (2008) aimed to test whether extraverts are happier (positive affective) because they participate in more social interactions which, in turn, produce positive affect, or they derive more enjoyment from social interactions. Using the Day Reconstruction Method (DRM), their study found that social interactions partially mediated the relationship between extraversion and positive affect. This suggests that extraverts had greater social participation relative to introverts, and in turn, support the notion that extraversion personality is indeed seen as style of actively engaging with the environment.

In order to understand the social component of extraversion, Srivastava et al (2008) use a person-environment transaction to examine ways that people engage with their own world. The person-environment transaction consists of the proactive and reactive transaction, where the former involve processes like situations selection and modification in which individuals choose or alter their situations in life.

Based on the NEO-PI-R inventory, the six facets of Extraversion dimension include warmth, gregariousness, assertiveness, activity, excitement-seeking, and positive emotions (Costa & McCrae, 2008; eSilva & Laher, 2012; Judge, Rodell, Klinger, Simon, & Crawford, 2013). *Warmth* describes the tendency to be friendly towards others. *Gregariousness* refers to being sociable and a preference in others' social interactions. *Assertiveness* is best described by interpersonal power and dominance. *Activity* embodies characteristics such as being lively, and energetic. *Excitement-seeking* refers to the need for environmental stimulation and pleasure-seeking activities. *Positive emotions* describe a sense of animation, charisma and being zealous.

2.5.2.3 *Openness to experience*

Openness to experience refers to the tendency to be creative, curious and sensitive to aesthetics variety (Costa & McCrae, 1992; Curtis et al., 2015; eSilva & Laher, 2012; Metzer et al., 2014). It is the behavioural tendency of being genuinely open to new ideas of doing things. Typical behavioural tendencies associated with openness to experience embody people who have active imagination, attentiveness to inner feelings and intellectual, curiosity as opposed to being concrete-minded and narrow-thinking (eSilva & Laher, 2012; Metzer et al., 2014; Raja & Johns, 2010; Vogt & Laher, 2009). People who are open to new experiences are flexible, creative and intellectually oriented; they actively pursue novelty and cognitively stimulating experiences. In addition, open people have a higher level of tolerance for ambiguity and have the ability to absorb to any situation (Cheung et al., 2008). They are not easily distracted or intimidated by their situation.

Conversely, a person scoring low on openness to experience is associated with a preference for familiarity, simplicity, and closure. These individuals tend to be unadventurous, behaviourally rigid, socially conforming and conventional in their reasoning (Bjørkelo et al., 2010). The characteristics of a person low in openness to experience could easily be linked to those of performance avoidance and goal orientation where avoiding failure by conforming to normative-based standards is the goal.

Openness to experience has been assumed to generate the most controversial of the five basic factors of personality (Cheung et al., 2008; Congard, Antoine, & Gilles, 2012) and its understanding appears to be inconsistent with its psychological definition. McCrae and Costa (1997) argue that the dimension "openness to experience appears to be unusually difficult to grasp" (p. 826). It has been theoretically conceptualised with constructs such as Intelligence, Intellectance and Culture which are deemed to be unsuitable in encompassing the entirety of such a diverse dimension (Cheung et al., 2008; Congard et al, 2012; Larsen & Buss, 2005).

Consequently, Costa and McCrae (1992) argue that Culture cannot be an appropriate name for the factor, because it suggests an acquired sophistication that is not central to the factor as it is typically found in analyses of adjectives or scales. The construct "Culture" is

systematically linked to Norman's (1963) classification of the five factor model of personality. In similar vein, Costa and McCrae (1992) posit that Intellect could serve as the alternate name, but argue that the name is also misleading because it ignores the fact that many intellect-like terms are typically loaded on the Conscientiousness factor. Accordingly, openness to experience encompasses a sense of value for originality, novelty, knowledge, and experience, as well as a need for a variety of interests, and ability for liberal and abstract thinking (Taylor, 2004).

Within the FFM framework, Openness to Experience is conceptualised along six facets which include fantasy, aesthetics, feelings, actions, ideas and values (Costa & McCrae, 2008; eSilva & Laher, 2012; Judge et al., 2013). *Fantasy* embodies receptivity to inner imagination. *Aesthetics* refers to appreciation for beauty and art. *Feelings* entail openness to inner feelings and emotions. *Actions* entail the ability to try new things. *Ideas* denote intellectual curiosity. *Values* refer to readiness to re-examine own values and those of authority figures.

2.5.2.4   Agreeableness

Agreeableness refers to the tendency to be altruistic, trusting, modest, and compliant (Costa & McCrae, 1992; Cutis et al., 2015; Metzer et al., 2014). The trait agreeableness is concerned with the nature of an interpersonal relationship between people. Agreeableness is compatible with the motivational aspects and behaviours aimed at caring for people with whom one has personal contact (Bjørkelo et al., 2010; Parks-Leduc et al., 2014). Agreeable people are oriented towards helping others and cooperating with them in order to achieve organisational goals.

Templer (2012) describes agreeableness in terms of a collectivistic orientation in both the individual and societal level of analysis. Accordingly, an individual with collectivist behaviour shows sensitivity towards others and is more accommodating and compromising; s/he avoids conflict and confrontation. Research conducted by Vogt and Laher (2009) investigated the relationship between the FFM model (measured by BTI) of

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personality, individualism and collectivism. Based on a sample of 176 students from the University of the Witwatersrand, results indicated that there were no significant differences between the five-factor model and individualism and/or collectivism.

In similar vein, Templer (2012) conducted a study on a sample of 354 employees from organisations in Singapore to determine whether agreeableness has a strong positive relationship in a tight and collectivistic society. The results indicate that agreeableness plays a significant role in the explanation of job satisfaction within the work context in a tight and collectivistic society. This means agreeable individuals are encouraged and rewarded for engaging in harmonious relationships at work, which in turn, leads to higher job satisfaction. Employees are thus punished accordingly for not conforming to social norms which will lead to lower job satisfaction.

Conversely, Zhai et al (2013) conducted a study among as a sample of 818 urban employees from five Chinese cities to determine if there is a relationship between the Big Five and job satisfaction as well as subjective well-being. Their hypothesis was that agreeableness is positively associated with job satisfaction and subjective well-being. The overall findings revealed that the Big Five explained 6.1% of the total variance of job satisfaction, suggesting that the Big Five is a weaker predictor of job satisfaction in the Chinese context which is characterised by a collectivistic culture where connections play an important role in the workplace.

Matzler et al (2011) postulate that although the trait Agreeableness has been linked directly to workplace behaviours, attitudes and performance, the mechanism that mediates such a relationship has not been well-explored. This is due to an unclear validity of personality measures within the human resources applications. However, it is assumed that cooperative interactions and the desires to help others could best explain the relationship between agreeableness and workplace behaviours, attitudes and performance. In the study investigating the role of agreeableness as a determinant of employees' affective commitment and documentation of knowledge, which in turn, are themselves determinants of an employee's knowledge sharing, Matzler et al (2011) found strong support of the

relationship (the path coefficient (r ¼ .48) was highly significant and R^2 of the dependent variable (affective commitment) was .23). Their finding suggests that organisations could enhance and improve knowledge-sharing through personnel screening where applicants are required to submit their self-report pertaining to their personality and personality-like traits. That is, applicants with the tenacity to help and assist others will be more affectively committed to the organisation and engage in more effective sharing in the knowledge documentation.

Agreeableness is measured with six facets in the NEO-PI-R (Costa & McCrae, 1992; eSilva & Laher, 2012; Matzler et al., 2011). These facets are trust, straightforwardness, altruism, compliance, modesty, and tender-mindedness. *Trust* refers to the tendency to believe in the sincerity and good intentions of others, while the opposite signals suspicion that others are dishonest. *Straightforwardness* embodies being honest and sincere when engaging with other people. *Altruism* is described as the active concern for the well-being of others as part of humanitarian. *Compliance* refers to being cooperative, supportive, and accommodating, particularly during conflict situations. *Modesty* refers to the tendency to humble oneself and feel self-efficacy as compared to being arrogant. *Tender-mindedness* refers to the tendency to be guided by feelings, particularly feelings of empathy towards others.

2.5.2.5 *Conscientiousness*

The dimension conscientiousness has been defined in many different forms within the personality psychology. The lack of a clear and concise understanding of conscientiousness has resulted in some misinterpretation of its precise meaning. For example, the dimension has been linked with characteristics such as persistence, organised, reliable, thorough, goal-directed, responsible, hardworking and achievement-oriented (Barrick et al., 2013; Sutherland, De Bruin, & Crous, 2007). Other studies associate the dimension with achievement orientation, dependability and orderliness (Barrick & Mount 1991; McCrae & John, 1992; Raja & Johns, 2010; Vogt & Laher, 2009). Accordingly, to view conscientious as an achievement reflects the strength and ability to work harder and meet desired goals, whilst dependability is the interpersonal component of conscientiousness

that involves responsibility and dutifulness (Barrick & Mount, 1991; Sutherland et al., 2007), while orderliness reflects structuring work into small and manageable portion.

On the contrary, Costa and McCrae (1992) note that when describing the achievement-striving "individuals who score high on the conscientious dimension and its facets have high aspiration levels and work hard to achieve their goals … very high scorers, however, may invest too much in their careers and become workaholics" (p. 19). In other words, achievement-striving individuals tend to be self-focused and self-governing, and therefore are likely to achieve better performance through careful planning, goal-setting and persistence. People who exhibit this characteristic are motivated to achieve, succeed and persevere on difficult tasks.

Taylor and De Bruin (2006) also define conscientiousness as the degree of effectiveness and efficiency with which an individual plan, organises and carries out tasks. They therefore identified the facets of conscientiousness as order, self-discipline, effort, dutifulness and prudence. According to Taylor and de Bruin's (2006) definition, an individual with a high level of conscientiousness acts purposefully, displays behaviour that is strong-willed, determined and detail oriented. By contrast, an individual with a low level of conscientiousness displays the tendency to be careless in working towards goals, is lazy and tends to be irresponsible and impulsive.

Conscientiousness is generally conceived as the single best trait that predicts job performance, especially contextual performance in all occupational groups (Barrick & Mount, 1991; Sutherland et al., 2007; Templer, 2012), based on its anticipated impetus to learn, direct and achieve specific goals. Such people are motivated to achieve the end goals even if it means that the completion should be conducted outside the domain of the workplace. In general, individuals high in conscientiousness are predisposed to be organised, disciplined, diligent, dependable, and purposeful, and are more likely to correctly perform work tasks, take the initiative in solving problems, remain committed to work performance and comply with policies (Matzler et al., 2011).

Sutherland et al (2007) describe contextual performance as being characterised by activities that employees are neither necessarily contracted to do nor assess by performance appraisal, but necessary for the achievement of organisational goals. Contextual performance refers to activities that support the social, psychological and general environment of the organisation. Therefore, typical behaviour involved in contextual performance will be discretionary in nature, demonstrating efforts to assist and cooperate with others. As such, conscientious people tend to get involved with actions beyond the minimal requirements of their organisation, such as involving themselves in organisational citizenship behaviour.

Conscientiousness is operationalised in terms of six facets, namely competence, order, dutifulness, achievement striving, self-discipline and deliberation (Costa & McCrae, 1992; Judge et al., 2013). *Competence* entails belief in own self-efficacy and capabilities to execute tasks. *Order* embodies thorough, meticulous and organised characteristics. *Dutifulness* refers to the tendency to adhere to a particular standard of conduct and/or the importance of fulfilling moral obligations. *Achievement striving* is described by being conscientious and ambitious. *Self-discipline* embodies being responsible, devoted and having the capacity to begin tasks and follow through to their completion despite distractions. *Deliberation* relates to the tendency to carefully consider options before making decisions.

Taken together, it is clear that the five dimensions of the FFM are indeed the highest level of the personality hierarchy. Each of them is followed by another level of six key elements, called facets, which describe and separate the dimensions of individual personality, as well as the differences in patterns of thoughts, feelings, and behaviour (Costa & McCrae, 1992; Loehlin & Goldberg, 2014). There is a preponderance of studies showing that the five-factor model of personality is hierarchically organised, with broad traits (factors) at a higher level, and narrow and specific traits (or facets) at a lower level (McCrae, 2010). These facets are psychologically narrower aspects of the broader traits and strongly correlate with each other within a trait.

2.5.2 Empirical evidence of the FFM

Most psychological assessments are administered in English and then translated into a number of languages throughout the world to such extent that generalisation is possible across different language groups and cultural backgrounds. The section that follows provides the empirical evidence of the FFM with regards to its universality (cross-language and cross-cultural) and comprehensiveness as well as the limitations levelled against this model.

2.5.2.1 *Empirical evidence with regard to universality*

The term culture is described as collective norms, values, beliefs, thinking, perceptions and behaviours which characterise the unique ways shared by individuals in certain environments (Bergh & Theron, 2003). Culture, language and personality create a powerful dynamic that has a significant effect when assessing individual personality (eSilva & Laher, 2012). Culture and personality structure share a distinct relationship, while the concepts of culture and language are connected. This however, raises concerns as to whether the same inventories are applied across different cultures. In other words, the question of whether the FFM structure dominates in all cultures forms the basis of this discussion.

The term universal refers to uniform covariance among traits in humans, despite different in terms of culture, history, economy, social life, ideology, and every other form of cultural and behavioural expression (Allik, Realo, & McCrae, 2013; Chiaburu et al., 2011; Gurven, von Rueben, Massenkoff Kaplan, & Lerovie, 2013). Allik et al (2013) maintain that the term emerged as a result of the study conducted on the NEO-PI-R which was translated in over six different languages namely, German, Portuguese, Hebrew, Chinese, Korean and Japanese. The data obtained from these cultural studies was persuasive to suggest that the observed regularities will not be violated when other cultures and languages were subjected to the same critical examination. The fact that cross-cultural studies using translated NEO-

PI-R were found to exist in all of the cultures studied, suggests that there is a common human structure of personality.

The FFM was discovered through a convergence of lexical and questionnaire personality-related data representing a framework of individual differences that was exclusively validated across language and culture (Allik et al., 2013; Gurven et al., 2013; McCrae & Costa, 1997). There are, however studies that view the FFM as biologically constructed, based on human universal traits that transcend language and other cultural differences (Allik et al., 2013; Gurven et al., 2013; Ching et al., 2013). On the contrary, there are studies that disagree with the universality of the FFM, but instead propose an alternative number of factors (Ashton & Lee, 2007; Ashton, Lee, Goldberg, & Vries, 2009, van der Linden, Te Nijenhuis, & Bakker, 2010).

It was through studies conducted on over 40 languages and factor analyses conducted in 50 cultures that findings by McCrae et al (2005) on the universality of personality assessment across different ethnic groups were conclusive. Their studies were able to obtain a highly acceptable internal consistent reliability in the majority of ethnic groups, with exception to Asian and African cultures that obtained a slightly lower reliability. These findings suggest that Asian and African participants experience difficulty when interpreting and recognising some of the items. Essentially, this implies that the translated NEO-PI-R was not compatible with certain cultural aspects of the Asian and African ethnic groups. In this regard, Cheung, Cheung, Wada and Zhang (2003) were of the opinion that internationally constructed personality test undermine national identity and consciousness in the sense that participants are subjected to ideological thinking of the Western cultures. This is because previously disadvantaged groups were not sufficiently represented in the adaptation of international instruments (Meiring, Van de Vijver, & Rothmann, 2006).

Laher (2007) maintains that Asian and African perspectives on personality differ vastly from Western countries, implying that there are pertinent aspects that are embedded in a particular culture which overrule the universality of the FFM. Van Eeden and Mantsha (2007) contend that it is almost impossible to translate a version of a westernised

personality instrument into indigenous African languages because several personality descriptors cannot be translated. They explain that translation often distorts the original meaning of the items and renders them difficult to understand and accurately respond to. Instead, they propose that a personality test should be as far as possible culturally bound, regardless of the language used in the instrument.

On the same topic, Cheung et al (2008) argue that applying etic instruments and constructs on other cultures does not facilitate the discovery of universal constructs. They claim that such practices are susceptible to biased results fabricated by wrong based on a selective subset of universal constructs. They add that expressions of personality are not only applicable among people, but also transcend different cultural groups. Similar studies have demonstrated that administering psychological tests in a language other than an indigenous language has serious negative effects on item responses (Ching et al, 2014; eSilva & Laher, 2012; Nel, Valchev, Rothmann, van de Vijver, Meiring, & De Bruin, 2012).

In similar vein, Nel et al (2012) argue that international questionnaires do not take into account certain socio-economic and political issues of the test-takers. The assumption is that psychological tests can be replicated across different cultures. They maintain that there are certain issues relevant to specific cultures that should be considered when administering personality tests in other cultures or ethnic groups. For example, the study conducted by Taylor (2000) found that personality openness to experience did not work equally well for African as compared to white participants. Besides the numerous interpretations attached to openness to experience and the controversy when replicating the scale across different cultures, the study by Taylor (2004), found that African participants were unable to interpret and incoporate the personality openness to experience dimension into their indigenous languages.

To further support the above argument, Allik and McCrae (2004) using a secondary data analyses tool targeting 36 cultures, including South African ethnic groups, report that black and white respondents had different personality profiles, despite the fact that they were from the same country. Their study further reported that black respondents scored the

lowest on the traits extraversion and openness to experience. Inconsistent with other ethnic groups, they displayed the highest score in agreeableness. Several other studies also reported unsatisfactory psychometric properties, especially among black population groups (Laher, 2008; Nel et al., 2012; Valchev, van de Vijver, Meiring, Nel, Hill, Laher, & Adams, 2014).

Nel et al (2012) points out that even if personality structure can be considered universal, there are other cross-cultural variations in the expression of this structure that do not support this perspective. Researchers (Gurven et al., 2013; Nel et al., 2012) maintain that when administering psychological tests in culturally diverse environments Western-based personality tests should be incorporated with both the etic (universal) and emic (culture-specific) considerations in mind. This is especially relevant to trait theory-based instruments where behaviour is assumed to be influenced by a number of underlying traits or dimensions. Differences in the meaning attached to constructs and in the way constructs manifest themselves are expected, given the highly socialised nature of the concepts measured by personality tests.

For instance, the Chinese Personality Assessment Inventory (CPAI) was developed as an indigenous instrument which measures Chinese personality in mainland China and Hong Kong. The CPAI was constructed in such a way that it retained a maximum standard of validity and reliability when tested among Chinese samples. It uses a combination of etic and emic approaches that include personality traits found among English speaking people (the etics) and those relevant to the Chinese communities (the emics) (Cheung et al., 2008). The factor analytic structure revealed fairly comparable results between the CPAI and the FFM with specific reference to the personality dimension Openness to experience. It was reported that the Openness to experience dimension was weakly represented among the Chinese populations, while a new concept, Interpersonal Relatedness, which emphasises the interdependence among Chinese population, was absent in the FFM but was identified in the CPAI (Cheung et al., 2008; Nel et al., 2012).

In addition, the South African Personality Inventory (SAPI) was constructed by the South African researchers with the help of the Netherlands researchers to develop a personality instrument relevant to South African populations (Hill, French, Morton, van de Vijver, Valchev, Adams, & De Bruin, 2013; Metzer et al., 2014; Valchev et al., 2014). The SAPI is an inventory which takes into account of the dynamics inherent in South Africa such as different cultures, 11 official languages and socio-economic status when administering personality tests. Both the etic-emic approaches were utilised in the identification of culturally and linguistically adequate personality descriptive terms for all 11 official languages (Hill et al., 2013).

Put succinctly, it is theoretically impossible to absolutely achieve universality of any kind of personality factors in populations that are totally different from one another, whether in language or cultural background. Cross-cultural variations do exist when administering psychological assessment within different cultural backgrounds, particularly where people expresses or attach different meanings to their behaviour. In addition, Nel et al (2012) note that less supportive evidence of the universality of the FFM in different languages is an ongoing debate as a considerable number of studies seem to report weaker structural equivalence.

2.5.2.2   *Empirical evidence with regard to comprehensiveness*

The question as to whether the NEO-PI-R is as comprehensive and a complete instrument to measure the FFM and a widely accepted taxonomy of normal personality has been debated and a substantial amount of evidence supporting the comprehensiveness does exist. By virtue of the fact that the FFM has been translated in many different languages and administered to different types of samples worldwide, the instrument thus displays levels of internal consistency reliability and factorial structure to be considered comprehensive. Previous studies claim its comprehensiveness and argue that the FFM consists of all major traits that supersede older trait models such as Eysenck's three-factor model (PEN) and Cattell's 16PF (McCrae, 2010; Meiring, Van de Vijver, Rothmann & Barrick, 2005). Conversely, recent studies seems to differ and argue that the FFM is not entirely

comprehensive enough to describe all that needs to be known about human personality (Allik et al., 2013; Gurven et al., 2013) researchers are adamant that the FFM does not adequately account for the dynamic processes that shape human behaviour and experience on an ongoing basis. They argue that more than five factor structures of personality are required to sufficiently explain the human personality.

Despite adding more factors to explain human personality, there are other studies that still advocate that certain personality traits that are essentially applicable to a specific culture should be taken into account when administering psychometric tests (Laher, 2008; Nel et al., 2012). These studies demonstrate that the relevant cultural background should be taken into account in any psychological assessments. As noted by Laher (2008), there are particular factors that exist outside of a Euro-American context, which should be considered and incorporated if a model or theory is to be regarded as truly universal. These unaccounted for characteristics make it difficult to justify the comprehensiveness of the FFM.

Critics of the FFM argue that the model is not comprehensive enough because it leaves out important aspects of human personality and that individuals vary on each of these five personality traits (Block, 2010; Boyle, 2008). It is not yet clear from the available lietarure that the FFM provide optimal model which is replicable and comprehensive for understanding human personality. Various other factors were proposed that indeed show that the FFM are not comprehensive enough to describe human personality. For instance, Thalmayer et al (2011) and Veselka, Just, Jang, Johnson and Vernon (2012) are in support of the two higher-orders. While some researchers propose a six factor model (Ashton & Lee, 2007; Ashton et al., 2009, van der Linden et al., 2010) others argue for a seven factor (Cloninger, Svrakic & Przybeck 1993 cited in De Young & Gray, 2009) model of personality. Ashton and Lee (2007) presented supporting evidence for six factor model suggesting that while the addition of the Honesty and Humility dimension is valid, it should be separated from Agreeableness to form its own factor. This led to the establishment of the HEXACO model. It is notable that HEXACO emerged from the same measurement

used to produce the FFM, while some of the five-factor dimensions are closely related to HEXACO.

McCrae (2010) explain that the FFM is not intended to be a comprehensive taxonomy of individual differences but simply serves to summarise the variance common among groups of specific traits. He proposes that the FFM should be discerned from views of the BF, in the sense that the latter construct does not exhaust valid personality trait variance. McCrae (2010) therefore identified additional factors as trait isolates, which comprise specific dispositions unrelated to either of the five constructs or any other trait.

2.5.3 Limitations of the five factor model of personality

The success of the FFM as a description of personality traits structure did not go unchallenged. In fact, its popularity and extensive research has made it a target of numerous critiques from various perspectives. Such perspectives range from researchers that argue for an alternative model (Ashton & Lee, 2007; Ashton et al., 2009; Thalmayer et al., 2011; Veselka et al., 2012), and those that succumb to its inherent limitations (Block, 2001; Boyle, 2008; McCrae & Costa, 2008b). These limitations are despite what proponents of the five-factor model aver that the five-factors are necessary and reasonably sufficient for describing the major features of personality and provide a universal descriptive framework of individual differences.

The strongest criticism levelled against the FFM relates to its formation through factor analysis in earlier studies such as Cattell's (1946), Norman's (1967) and Goldberg's (1990). As previously stated, the FFM was derived from the lexical hypothesis (where personality descriptors were encoded in what people observe about themselves and others in social environment) and a series of questionnaires that were conducted which repeatedly resulted in five robust factors explaining individual personality. Essentially, there was no theory that specified the grouping of terms (personality descriptors) into the different factors. Thus, earlier traits psychologist considered the FFM from the perceivers'

representations of temporary stable and cross-situational patterns of thought, feeling and behaviour.

It was for this reason that Block (1995; 2001) criticised the FFM for being developed through empirical research, rather than theoretically. In other words, Block (1995) criticised earlier researchers such as Cattell (1946), Fiske (1949), Tupes and Christal (1961) and Norman (1963) for relying on their subjective understanding when describing personality descriptors that represent human personality. He emphasised that such descriptors were derived from two specific English dictionaries and were tested among an English-speaking population which presumably excluded other none English-speaking populations.

In addition, Block (1995; 2001) argued that the personality descriptors were inadequately and subjectively analysed through factor analysis. Factor analysis is a statistical tool for reducing the number of factors required to describe individual personality. It identifies clusters of variables that are related and those unrelated to each other, and systematises the quest for those basic requirements of scientific constructs, convergent and discriminant validity (Costa & McCrae, 1992). Block (2010) unequivocally expressed concern about the method of factor analysis, arguing that factor analysis cannot account for making principal and dominant claims about people's thoughts, feelings and reactions in their daily encounters. Accordingly, Block (2010) was adamant that people are not passive recipients who are subjected to lawlike algorithm, but are capable of influencing situations or events in their preferred directions, by manipulating fewer factors that seem to account for most of the common variance in personality traits. Although, Block did not give any alternative methods when rejecting the use of factor analysis, his criticism instead motivated the scientific community to further research the FFM more extensively before settling on a structural model of traits which act as a usable basis of personality assessment (McCrae, 2011).

Another criticism levelled against the FFM pertained to the actual number of factors involved in describing human behaviour. It was proposed that a sufficient number of

factors be added instead of relying on five global factors (Block, 2001). Block argued that the five factors were not enough to capture and describe human personality, and proposed that more personality descriptors be added. His criticism gained support among those researchers who agitated for more than a five factor structure of personality (Ashton et al., 2009). The five factors were deemed limiting in their ability to predict specific behaviour and provide descriptions of people's personalities.

The existence of a higher-order structure of personality or orthogonal has also being challenged. On the contrary, there are studies that challenge the comprehensiveness of FFM with psychologists arguing that the five factors are not the highest level of hierarchy (Ashton et al., 2009; Thalmayer et al., 2011; Veselka et al., 2012). For instance, all three factors identified by Eysenck (1947) are considered as the highest hierarchical structure of personality and empirical evidence supports its replicability. Eysenck (1947) regarded the high correlations found between each of the three factors and their correlations with factors assumed to be of a higher order (the relationship between Agreeableness, Conscientiousness and Psychoticism) to be evidence of fewer basic factors than the FFM (De Young & Gray, 2009).

Likewise, Anusic, Schimmack, Pinkus and Lockwood (2009) and Veselka et al (2012) cited the study conducted by Digman (1997) based on a sample of adults and children whose results show two orthogonal higher-order personality traits termed as α (social development) and β (personal growth). The extracted α factor consists of dimensions of Agreeableness, Conscientiousness and Emotional Stability (reverse-keyed Neuroticism), while the β factor consisted of dimensions of Extraversion and Openness to experience (Anusic et al., 2009; Congard et al., 2012; McCrae & Costa, 2008b; Veselka et al., 2012).

Van der Linden et al (2010) also conducted a meta-analysis study on 212 big five personality studies and found evidence of a two-factor solution known as *Stability* and *Plasticity* that closely resembles the α and β respectively. Stability refers to the extent to which a person is consistent in motivation, mood and social interactions, while plasticity

refers to the extent to which a person actively searches for new and rewarding experiences, both intellectual and social.

Consistent with the above discussion, the FFM was further criticised for lack of consistency in as far as the composite set of facets or lower-order traits were concerned. Initially, Costa and McCrae (1992) conceptalised the 30 facets (six lower-order for each factor) that had been empirically validated as a model of trait taxonomy, while other researchers considered far less low-order facets (De Young & Gray, 2009). Accordingly, DeYoung and Gray (2009) maintained that "each of the five factors should be divisible into two distinct phenotypic aspects with partially distinct genetic bases" (p. 338), because, they were able to reduce the 30 facets constructed by Costa and McCrae (1992) to a mere 10 lower-order traits with each factor having two lower-orders.

In an attempt to clarify the status quo, both Goldberg (1990) and McCrae and Costa (2008b) pronounced that the Big Five or FFM was never intended to be discovered through theory building. However, they acknowledged the processes undertaken to achieve these five robustic factors that account for the structural relations among personality traits. The Big Five and FFM are more descriptive of human personality and lack the explonatory of why human behave in the manner they do. However, attempts were made to resolve some confusion through the Five Factor Theory (FFT) as the theory underpinning the FFM of personality (McCrae & Costa, 2003; 2008b). Accordingly, the FFT represents an effort to explain the development of personality in an individual throughout his/her lifespan (Laher, 2013a) and is consistent with the current knowledge about human personality (McCrae & Costa, 2008b). It was on such basis that McCrae (2010) states that Block's efforts to halt the FFM "bandwagon" (Block, 1995, p. 209) was unsuccessful.

With regard to the number of factors, McCrae and Costa (1997) state that the five factors of personality cannot possibly capture all of the variation in human personality, thereby giving opportunity for the researchers to either expand or reduce the traits. Numerous studies had initially offered different numbers of the factors such as Eysenck's (1947) three-factor model and Cattell's (1943) 16 factor model. Others such as Norman (1963),

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Goldberg's (1990), and Costa and McCrae (1992) proposes five factor model and Ashton's et al (2004) six-factor model (Ashton & Lee, 2007; Cheung et al., 2008; van der Linden et al., 2010) as well as Cloninger's et al (1993) seven-factor models (cited in De Young & Gray, 2009).

McCrae and Costa (2008b) were also not silent about the hierarchical structure of the FFM. They articulate that the so-called two higher-order structure (alpha and beta) can be viewed as evaluative biases that are similar to what were termed as the low positive valence and negative valence factors. They were, however, unable to find evidence to support their underlying two factor structure of the human personality as perceived by their critics (McCrae & Costa 2008b).

In addition, McCrae (2010) states that the FFM was never intended to be a comprehensive taxonomy of individual differences, but only serve as dispositions, that is, personality traits. He further explains that the hierarchical structure of the FFM (defined by factors and facets) should be distinguished from the Big Five, which represent only five broad factors. The next section discusses the five factor theory of personality

2.6   FIVE FACTOR THEORY OF PERSONALITY

The Five Factor Theory (FFT) was developed to clarify some confusion surrounding the role of traits in personality, specifically the FFM and to propose a model of a personality system (McCrae, 2011). The FFT is meant to answer to some of the criticisms levelled against the FFM by Block (McCrae, 2010; 2011) and others. Essentially, the FFT serves as a theoretical framework for understanding the five-factor model of personality (Costa & McCrae, 2008; McCrae & Cost, 2003; McCrae, 2010; 2011) and explains the mechanism by which an individual's personality evolves (McCrae & Cost, 2003; 2008a; Metzer et al., 2014) and why an individual thinks, acts, feels and behaves in a specific matter. It was developed to account for numerous studies and findings that have used the measures of the FFM.

The FFT personality system implicitly and explicitly explains the individual differences (personality traits) in terms of their interactions between the different components. Theoretically, the FFT illustrates and acknowledges the different interaction patterns between internal and external forces within the development of an individual's personality. Pervin and Cervone (2010) maintain that a system is a collection of highly interconnected parts whose overall behaviour reflects not only the individual parts, but also the organisation. Therefore, the FFT describes "how biological and cultural interact in the development of habits, attitudes, values, roles and the relationships, which express both the individual's traits and the influence of the social environment" (McCrae & Allik, 2002, p. 303).

Figure 2.1 provides a schematic diagram of the different components of the FFT personality system. The system consists of three central components (represented by the rectangles), three peripheral components which mark the interface with systems outside personality (represented by the ellipse), and dynamic processes (represented by arrows) regulating interaction between these parts (McCrae & Costa, 2003; 2008a; McCrae, 2011). The central and peripheral components are linked together through a dynamic process because they represent a set of processes that are continuously in flux and changing (Laher, 2013a; McCrae & Costa, 2003) and further indicate how these components are interconnected with each other (the basic postulates of the FFT). This section briefly described the FFT personality system and its interconnected components.
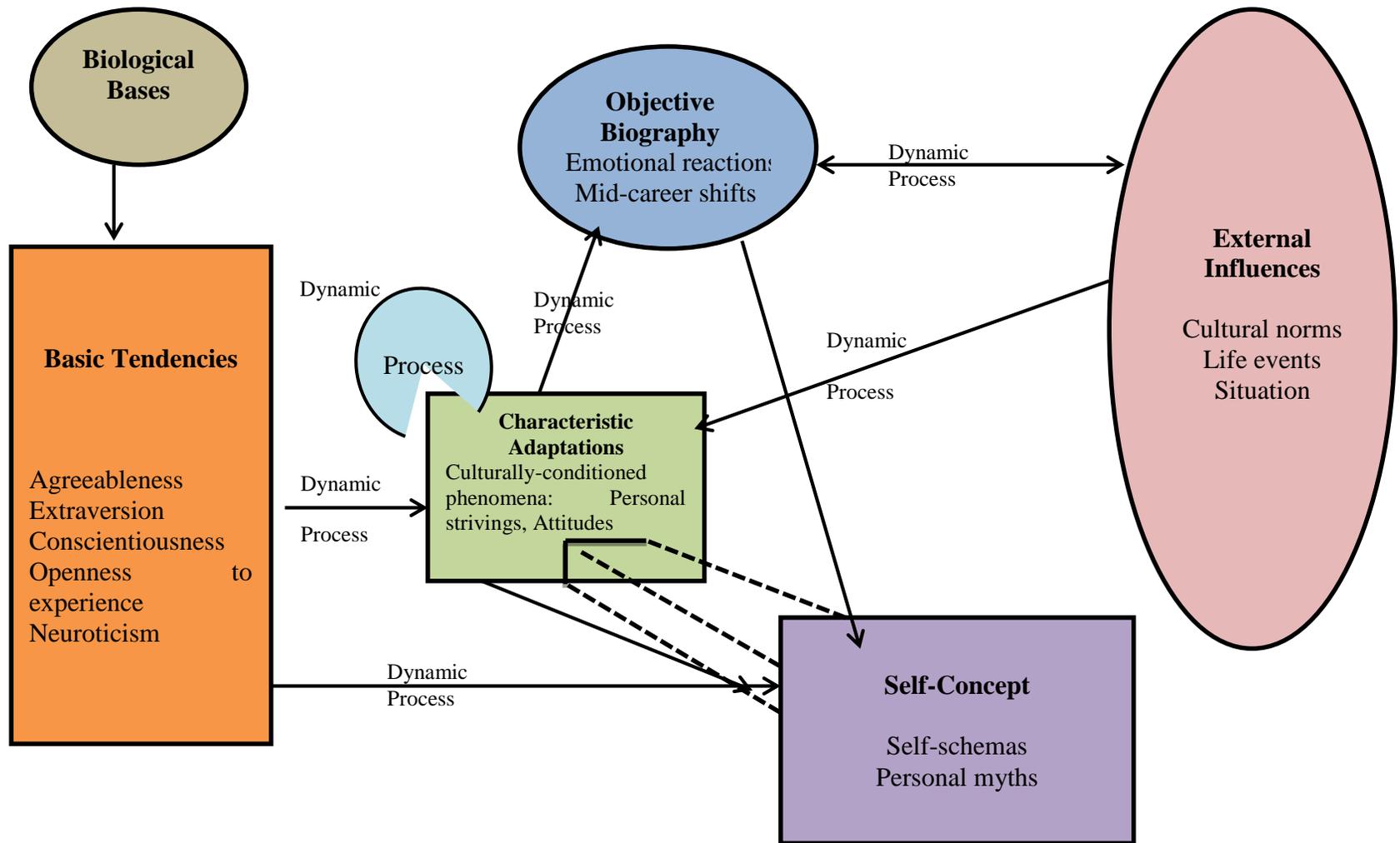
Figure 2.1. Five factor theory of personality system as outlinde by McCrae and Costa (2003, p. 192)

Displayed in Figure 2.1 are the different parts that constitute personality as a system and its operationalisation across an individual's lifespan. Costa and McCrae (2011) and McCrae (2011) consider personality traits from a system perspectives made up of central components labelled as basic tendencies and characteristics adaptation as inputs from biology and environment with the stream of experience and behaviour as its outputs. The arrows indicate the causal pathways that are postulated by the theory. Briefly, the FFT consists of inputs and outputs as well as the dynamic processes that indicate how these different components are interrelated.

The central components of the FFT personality systems are represented by rectangles and consist of three elements labelled as, *basic tendencies, characteristic adaptations and self-concept*. Each of these central components plays an essential role in describing and understanding individual differences. For example, the *basic tendencies* are conceived as abstract potentials that give rise to specific patterns of thought and behaviour that are learned in a particular social environment. It is the human language which is most often used to implicitly and explicitly describe and explain culturally-bound patterns of behaviour.

These basic tendencies are considered stable personality traits that transcend language and other cultural differences and are assumed to be biologically-based properties of the individual (Costa & McCrae, 2011; Gurven et al., 2013; McCrae & Costa, 2003; 2008a). These tendencies are deemed to reflect innate abilities and predispositions (McCrae, 2011). They include Neuroticism, Extraversion, Openness to Experience, Agreeableness and Conscientiousness. The arrow from the biological base pointing towards basic tendencies reflects the heritability of personality traits since all individuals are considered to be shaped by the same genome (Boyle, 2008).

Although the basic tendencies are viewed as stable over a lifespan, there are however, compelling empirical findings that show continuing mean-level changes within the five-factor model. For instance, prior studies found that agreeableness and conscientiousness gradually increase while neuroticism, extraversion, and openness to experience are prone to gradually decreasing after reaching maturity years (Allik et al.,

2013; Laher, 2013). These findings are consistent with those by McCrae and Costa (2008a) who noted that "personality development is determined by biological maturation and not life experience" (p. 167).

On the contrary, other studies claim that personality changes as a result of various encounters in the lifespan. In a longitudinal study, Specht, Egloff and Schmukle (2011) provide strong evidence that personality changes throughout an individual's whole life course or as a result of major life experiences using the change indicators namely, mean-level stability and rank-order consistency. Their study found that the mean-level change of emotional stability dimension increased roughly among the young people until age 30 ($d = .10$), whereas the mean-levels of the other four dimensions decreased over time ($-.17 \leq d \leq -.10$). This finding suggests that age has a distinctive influence on each of the Big Five personality traits.

The lack of direct interaction between basic tendencies and the external environment clearly shows the interdependence of personality traits in their origin and development from culture. Laher (2013a) also maintains that basic tendencies are biological in nature and deeply grounded in the interaction between different people. However, such interdependence of basic tendencies from culture does not necessarily imply that cultural background is unimportant, but merely emphasises that personality is inherent; it paves the way for the development of characteristic adaptations.

The *characteristic adaptations* are the concrete manifestations of traits such as culturally-conditioned phenomena like personal striving and attitudes which are not static but easily adaptable like basic tendencies. The characteristic adaptations are presumed to develop as the individual interacts with his/her environment (Costa & McCrae, 2011; McCrae & Costa, 2003; 2008a). They include aspects such as skills, habits, attitudes, roles, knowledge, beliefs, relationships and self-concepts that people acquire during the course of their lifetime (McCrae & Costa, 2008b). Therefore, all of these characteristics are shaped to some extent by the basic personality traits.

McCrae and Costa (2003) refer to character adaptation as specific patterns of behaviour that influence both the personality traits and external environment (situational variables). A clear distinction between *basic tendencies* and *characteristic adaptations* forms an essential part of the theory, as it is the basis for explaining the stability of personality (McCrae & Costa, 2003). The basic tendencies reflect abstract capacities while the characteristic adaptations are concrete, acquired structures that develop as the individual interacts with the environment (Laher, 2013a).

Self-concept is conceived as the subsidiary of *characteristic adaptations* and describes the life experiences and social feedback encountered by the self (Laher, 2013a; McCrae & Allik, 2002). It also provides the sources of information from which people draw when completing a personality questionnaire (McCrae & Allik, 2002).

Apart from the three central components, the FFT also consists of three peripheral components that connect personality traits to adjoining systems that are made up of the *biological base, external influences and objective biography* represented by ellipse (McCrae & Costa, 2003). The *biological base*s represent one of the major assumptions of the theory, and confirm that *basic tendencies* have a biological basis. The *External influences* are made up of the enduring situation (cultural norms) and immediate situation (specific life events). Both the biological base and external influences represent interactions of personality traits with the physical body and the environment (Costa & McCrae, 2011; McCrae & Costa, 2003). Finally, *Objective biography* represents the behaviours and experiences of everything a person does in a lifespan. It is particularly interested in everything a person does, thinks, feels and experiences in their entire life.

Therefore, each of the boxes and ellipses represent a formal conceptualisation of personality and the content of the boxes and arrows linking them represent the five-factor theory of personality (McCrae & Costa, 2003; 2008a). Essentially, each of these components interacts with and influences other components to describe the human personality. For example, *basic tendencies* represent the endogenous (tied to genetically shaped biologically based response systems, largely unaffected by environmental

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factors and remarkably stable throughout adulthood), and *external influences* represent the exogenous (externally) influences on the person (Laher, 2013a). This implies that in the case of culture, traits are independent from the cultural background; rather, culture influences traits.

Characteristic adaptations are shaped by the interaction between *basic tendencies and external influences*. The association can be seen through the arrows that link the different components of the system. The arrows represent the dynamic, psychological processes that create a meaningful system from the separate components. Laher (2013a) refers to the errors as dynamic processes that represent a set of process that are continuously in flux. Aspects such as perception, copying, role-playing, reasoning, planning, among others, represent the dynamic process (Laher, 2013a; McCrae & Costa, 2008b) as a way an individual interprets the association between the different components of the systems. Table 2.3 illustrates the different postulates made by the five-factor theory specifying how each personality system operates (McCrae & Costa, 2008a).

Table 2.3

Five-factor theory postulates *by McCrae and Costa (2008a)*

Basic tendencies
1a.   *Individuality*: All adults can be characterised by their differential standing on a series of personality traits that influence patterns of thoughts, feelings and actions.
1b.   *Origin:* Personality traits are endogenous basic tendencies.
1c.   *Development*: Traits develop through childhood and reach mature form in adulthood; thereafter they become stable and cognitively interact individuals.
1d.   *Structure*: Traits are organised hierarchically from narrow and specific to broad and general dispositions. Neuroticism, Extraversion, Openness to Experience, Agreeableness and Conscientiousness constitute the highest level of the hierarchy.

Characteristics adaptations

2a. *Adaptation*: Over time, individuals react to their environments by evolving patterns of thoughts, feelings and behaviours that are consistent with their personality traits and earlier adaptations.

2b. *Maladjustment*: At any one time, adaptations may not be optimal with respect to cultural values or personal goals.

2c. *Plasticity*: Characteristic adaptations change over time in response to biological maturation, changes in the environment or deliberate interventions.

Objective biography

3a. *Multiple determinations*: Action and experience at any given moment are complex functions of all those characteristic adaptations that are evoked by the situation.

3b. *Life course*: Individuals have plans, schedules and goals that allow action to be organised over long time intervals in ways that are consistent with their personality traits.

Self-concept

4a. *Self-schema*: Individuals maintain a cognitive-affective view of themselves that is accessible to consciousness.

4b. *Selective perception*: Information is selectively represented in the self-concept in ways that (i) are consistent with personality traits; and (ii) give a sense of coherence to the individual.

External influences

5a. *Interaction*: The social and physical environment interacts with personality dispositions to shape characteristic adaptations and with characteristics to regulate the flow of behaviour.

5b. *Apperception*: Individuals attend to and construe the environment in ways that are consistent with their personality traits.

5c. *Reciprocity*: Individuals selectively influence the environment to which they respond.

Dynamic processes

6a.   *Universal dynamics*: The ongoing functioning of the individual in creating adaptations and expressing them in thoughts, feelings and behaviours is regulated in part by universal cognitive, affective and volitional mechanisms.

6b.   *Differential dynamics*: Some dynamic processes are differentially affected by basic tendencies of the individual, including personality traits.

Table 2.3 shows that McCrae and Costa (2008b) found the 16 postulates of the FFT as acceptable and valid, with the exception of two postulates considered most controversial, namely structure and development. For instance, the postulate of structure claims that the five factors constitute the highest level of the hierarchy in understanding personality, though other studies disagree This postulate has been proven wrong as there are other higher-order factors (two factors and six factors). On the other hand, the postulate development was also found to be controversial in the sense that it asserts that traits reach maturity at adulthood and remain stable thereafter. There is evidence that demonstrates a continuing mean-level change after 30 years of age in all the five factors (Allik et al., 2013; Laher, 2013; Specht et al., 2011). These studies report a tendency for gradual increase in agreeableness and conscientiousness, and a gradual decline in neuroticism, extraversion and openness to experience as the people reach maturity.

Of all the postulates, origin is considered the most fundamental postulate because it is consistent in its assertion that human personalities are not shaped by cultural background and as such does not acknowledge the role of the environment in determining trait levels. It however considers human personality to be more genetically and hereditably constituted as compared to any association to the environmental factors (culture). Consequently, environmental factors are considered secondary in shaping and influencing human personality. It is clear that the FFT does differ profoundly from other theories in its understanding of the foundation of human personality and recognising that personality is exclusively endogenous, and could only change in response to

intrinsic maturations or other biological inputs (Costa & McCrae, 2011; McCrae & Costa, 2003).

Taken together, the FFT is most applicable to the current study as it is the only theoretical framework available that attempts to explain the origin and understanding of human personality.

2.7   MEASUREMENT OF PERSONALITY

Several measures of personality assessments developed internationally have been applied to South African samples with a multicultural and multilinguistic background. A number of these tests were reported to be incompatible with South African samples. However, there are instruments that have been proposed and tested among South African samples taking into account the legislation guiding the use of Westernised personality assessments. These instruments include, among others, the NEO-Personality Inventory-Revised (NEO-PI-R), NEO-Five Factor Inventory (NEO-FFI), Sixteen Personality Factor (16PF), (15PF), Basic Traits Inventory (BTI) and South African Personality Inventory (SAPI). These instruments attempt to accurately measure why people behave and think as they do by identifying the uniqueness of traits, characteristics or attitudes of a person, understanding a person's performance potential and possibly career interest.

The next section briefly describes some of the personality measurement instruments that have been adapted and tested among South African samples.

2.7.1   Neo-Personality Inventory-Revised (NEO-PI-R)

As previously stated, the NEO-PI-R (Costa & McCrae, 1992) is an internationally-based personality assessment tool considered most widely used (Boyle, 2008) based on the framework of FFM. It is viewed as an inclusive and acceptable taxonomy of normal personality to measure FFM and is invariant across diverse cultures. It measures individual personality in terms of five robust factors, each measured by 48 items, which

are then subdivided into six sets of 8 items (eSilva & Laher, 2012; Judge et al., 2013; Veselka et al., 2012). The NEO-PI-R is based on the supposition that personality traits are arranged in a hierarchy from very broad to very narrow, and that both highly general dimension and relatively specific facets should be assessed (Laher, 2013a; Loehlin & Goldberg, 2014).

The NEO-PI-R is a self-report questionnaire which consists of 240 items and takes approximately 45 minutes to complete (Costa & McCrae, 1992; Templer, 2012; Veselka et al., 2012). The items are measured on a five-point Likert scale where participants are required to rate each of the self-reflective statements on a continuum of 0 (strongly disagree) to 4 (strongly agree). The instrument is available in two different forms, Form S (self-reporting) and Form E (observer rating). It can be administered individually or in a group. A shorter version was constructed to eliminate the negative effects resulting from completing a lengthy questionnaire, such as fatigue, incomplete questionnaire, time and money.

In South Africa, there is a fairly marginal proportion of empirical research conducted with the NEO-PI-R version (eSilva & Laher, 2012; Meiring et al., 2005). This is largely due to the fact that internationally based personality tests have been found unsuitable among South African samples with a multicultural and multilinguistic background (eSilva & Laher, 2012; Metzer et al., 2014; Valchev et al., 2014). In addition, poor translation and language proficiency have also been found to distort the meaning of the questionnaire. For example, unsatisfactory personality tests have been reported among Black samples as one of the limitations for applying NEO-PI-R in a multicultural group (Laher, 2008; Meiring et al, 2005; Nel et al., 2012; Valchev et al., 2014). Laher (2010) reported satisfactory internal consistency reliability of the NEO-PI-R in a study conducted among university students equivalent to those found in the US and other Western countries.

The current study will operationalise the five factors of personality traits with the instrument adapted by Martins (2000). The instrument has been adapted for the South African sample on the basis of the FFM and the NEO-PI-R and uses slightly different

labels for the five factors and facets. It measures personality in terms of five broad domains, namely: Conscientiousness, Agreeableness, Emotional Stability, Resourcefulness and Extraversion (Martins, 2000). The instrument measures personality in terms of 35 items on a continuum of positive and negative scale and assesses individual personality accurately through observers' rating. It therefore differs from other measurements of personality that heavily rely on self-reports.

Agreeableness denotes good-naturedness, cooperativeness and courteousness while conscientiousness embodies persistence, determination, hard work, dependability and propensity towards achievement. Emotional stability is subdivided into being calm, enthusiastic, free from anxiety, depression and insecurity andresourcefulness comprises attributes such as broad-mindedness, creativity, imagination, artistic sensitivity and intellectual ability. Finally, extroversion is characterised by sociability, friendliness and talkativeness. The measurement of personality adapted by Martins (2000) which is relevant to the current study will be addressed in more detail in Chapter 5.

2.7.2   Basic Traits Inventory (BTI)

The Basic Traits Inventory (BTI) was developed by Taylor and De Bruin (2006) to assess the big five personality traits within a multicultural and multilinguistic society. It was meant to provide a measure of personality traits that can be applicable to a South African sample. Metzer et al (2014) and Nel et al (2012) maintain that internationally-based personality instruments do not take into account aspects such as culture, language and socio-economic status which could impact on the accuracy of the interpretation of individual results. Specifically, the instrument was designed to redress the limitation inherent in embracing the internationally-based personality instruments which do not take into account the multicultural and multilinguistic background of participants. The BTI was primarily developed as a result of the failure to replicate the internationally-based personality assessment instruments in the South African population (Metzer et al., 2014; Valchev et al., 2014).

The BTI was design based on extensive research and recommendation by Taylor (2004) that the NEO-PI-R was suitable for the South African population, though with some adjustment regarding the interpretation of uncommon wording among African language groups. The BTI was contextualised based on the FFM personality (Laher, 2007; McCrae & Costa, 2008a; Metzer et al., 2014) and the International Personality Item Pool (IPIP) in the South African context, and was developed as a five factor personality instrument. It uses the same labels as the FFM and/or BF, namely Extraversion, Agreeableness, Conscientiousness, Neuroticism and Opennes to experience. Each of the five factors is subdivided into five underlying facets, with the exception of neuroticism that is subsumed by four facets (Metzer et al., 2014; Taylor, 2004). It differs from the FFM and/or BF in the sense that it includes a measure of social desirability (Taylor & De Bruin, 2006; Metzer et al., 2014) which is not measured in the FFM and/or BF. This addition was deemed necessary because a measure of social desirability includes factors and facets that provide a broader view of five personality factors.

The BTI instrument consists of 193 items measuring personality on a 5-point Likert-scale with responses ranging from strongly agree to strongly disagree (Taylor & De Bruin, 2006). The instrument is assumed to take approximately 45 minutes to complete and can be completed by any person with at least grade 12 level of education. Additionally, the instrument is considered easytouse and understand since items are positively worded thereby allowing a lay person to understand and quickly recognise the wording and meaning. The strength of the inventory is its reliance on everyday language and usage in various psychometric assessments such as recruitment, selection, staff development, educational setting, counselling and research (Taylor & De Bruin, 2006).

Taylor (2004) is of the opinion that the items that combine positive and negative worded items cause methodological confusion as to whether the items worded negatively have the same meaning as those worded positively.

The BTI has been used extensively on South African samples and has received promising psychometric properties. The reliability coefficient of the BTI has been found to be satisfactory across the dimensions in the total group. It has demonstrated internal consistency, reliability coefficients and constructs validity for each of the five-factors and facets across a number of different studies (Taylor & De Bruin, 2006; Taylor, 2004, 2008). For example, Traylor and de Bruin (2006) reports a reliability coefficient of .87 for Extraversion, .92 for Neuroticism, .93 for Conscientiousness, with the exception of .44 for Openness to values and .56 for Modesty. Meiring (2007) reports that the BTI has shown acceptable construct validity among African participants as compared to other instruments, with Tucker coefficients of congruence exceeding .90 for all factors.

A shorter version of the BTI consisting of 60 items provides psychologists with brief measures of the Big Five traits. Each item is measured by 12 items selected from the full-length of the BTIshorteritem pool which are similar to the NEO-FFI.

Similar to NEO-PI-R, the BTI questionnaire takes at least 45 minutes to complete and this can be interpreted as relatively long. Another limitation of using the BTI is related to the construction of statements which are positively worded and terms such as 'never', 'not' 'no' which are excluded from the statements. Taylor, (2004) posits that negatively-worded statements can cause conceptual confusion when respondents attempt to clearly articulate the meanings.

2.8   SUMMARY OF CHAPTER

The chapter outlines the different definitions and approaches of personality perceived as a relatively enduring personal characteristic that determines traits that are unique and those that differ in behaviour (thoughts, feelings and emotions) (McCrae & Costa, 2003; Parks-Leduc et al., 2014; Valchev et al., 2011) that manifest themselves in terms of measurable traits. Moreover, the chapter provides a comprehensive overview of the discovery and development of the FFM and contributions made by Allport and Odbert (1936), Cattell (1946), Fiske (1949), Norman (1963) and Goldberg (1990) which led to

the five robustic factor model of personality known today. The contested empirical evidence in terms of generalisability and comprehensiveness as well as the various limitations of the model, including the theoretical framework and the number of factors to describe human personality is provided. The theoretical framework underpinning the FFM that led to the unsuccessful efforts to discredit the FFM are provided. The chapter concludes with an exposition of some of the available measurement instruments for the personality construct.

The next chapter will discuss the construct work-life balance.

CHAPTER 3: THE WORK-LIFE BALANCE CONSTRUCT

3.1 INTRODUCTION

This chapter aims at providing a review of the literature related to the positive side of the work-family interface (work-life balance). The chapter begins with a discussion of factors that contributed to the interest and debate on work-life balance. This is followed by a conceptual framework of work-life balance and work-home interaction which explains the nature and constructs work-life balance. The theoretical framework underpinning the work-life balance, with specific reference to work-home interaction will be provided. The antecedents and outcomes of work-life balance are also provided. The last section provides the measurement of work-home interface.

3.2 FACTORS CONTRIBUTING TO WORK-LIFE BALANCE

Work-life balance is considered the central concern in everyday human encounter (Greenhaus & Allen, 2011; Greenhaus, Collins, & Shaw, 2003; Guest, 2002) yet it is so rarely investigated. Despite the volatile labour market resulting from the macro-economic environment and a considerable number of factors such as technological advancement, global competitiveness, demographic and societal changes (Koekemoer & Mostert, 2007; Rost & Mostert, 2007), the effect of the work-life balance has remained the least studied phenomenon (Greenhaus & Allen, 2011). All the above-mentioned factors have been shown to negatively influence how employed people attain a balance between work and home/personal roles. Specifically, these factors have been identified as causing the problem of work-life imbalance, that is, those factors relating to life outside work that might be viewed as impacting on work life or vice versa.

It is well recognised that the nature and dynamics of the world of employment have changed dramatically in South Africa, following the first democratic election in 1994. Additionally, there is overwhelming evidence reporting that the workplace has become progressively diverse as a result of a promulgation of various legislations, among others, the Employment Equity Act and Affirmative Action Act (Jacobs, Mostert, &

Pienaar, 2008; Marais, Mostert, Geurts, & Taris, 2009; Rost & Mostert, 2007; van Aarde & Mostert, 2008). These legislations have provided an increasingly number of women from the previously disadvantaged and historically excluded individuals, opportunities to enter the workplace as employees. The available evidence further shows a large number of single parents and working married women competing in the workplace (Brink & De la Rey, 2001; Koekemoer & Mostert, 2007; Rost & Mostert, 2007), while at the same time continuing with other responsibilities outside the workplace (Brink & De la Ray, 2001).

Donald and Linington (2008) and Potgieter and Barnard (2010) argue that women's participation in the workplace has not only changed the traditional culture-specific family roles, but has allowed men to claim their responsibilities as fathers and home-makers. This suggests a gender shift of focus from their priority as family providers (breadwinners) to other roles such as carers of children and family or participants in other alternative lifestyles such as leisure time to devote to social relationships (Donald & Linington, 2008; Jacobs et al., 2008; Sa´nchez-Vidala, Cegarra-Leivab, & Cegarra-Navarro, 2012). This further results in disparities in the traditional values and the split in the gender roles and is likely to exacerbate difficulties in balancing work and family/personal life for many working people. That is, people's life can be considered unbalanced if the amount of time one works causes some sort of conflict or stress in other areas of life.

Koekemoer and Mostert (2007) state that demographic and structural changes in the workforce and the family have not only affected work and family roles, and their interrelations, but also impacted on individual behaviour in the organisational setting, and ultimately on organisational functioning (Allen, Herst, Bruck, & Sutton, 2000). For instance, there is a rapidly growing literature which propounds that the arrival of generational Y (those born between 1978 and 2000), a cohort of employees that give greater priority in seeking a balance between work and the rest of life (Smola & Sutton, 2002; Smith 2010) is propelling organisations to incorporate policies and practices to maintain work-life balance within the organisational culture.

Martins and Coetzee (2007) describe organisational culture in terms of elements such as assumptions, beliefs and values, whereas others have expanded the concept to include the way things are done, norms, behaviour and artefacts (p. 21). They consider organisational culture as an integrated pattern of human behaviour which is unique to a particular organisation and which originated as a research of the organisation's survival process and integration with its environment.

In similar vein, Dikkers, Geurts, Den Dulk, Peper, Taris and Kompier (2007) refer to organisational work-home culture as "the shared assumptions, beliefs, and values regarding the extent to which an organisation supports and values the integration of employees' work and private lives" (p. 156). Essentially, culture can be conceived as the beliefs, values and basic assumptions that are shared by organisational members and incorporate work activities within a particular working environment.

The use of technological advancement tools and the changing nature of work in the 21st century have further blurred the boundaries between work and home/personal lives. Technological advancement tools such as e-mails, laptops, cell-phones, Internet, iPhone, and other mobile communication devices have allowed employees to perform their work activities from anywhere and anytime (Downes & Koekemoer, 2011; Sa´nchez-Vidala et al., 2012) other than the centralised office. Sarker, Xiao, Sarker and Ahuja (2012) are of the opinion that mobile technologies are undeniably facilitating flexibility and free people from daily commuting to and from organisational offices. They argue that these devices have profound implication in terms of separating the work-time and the family/personal time.

Montgomery, Panagopoulou, Peeters, and Schaufeli (2005) also emphasise that psychological and physical boundaries between work and non-work (home and personal) are becoming more blurred as organisations become increasingly virtual and more people work from home for part of the week using information and communication technologies. Thus, it is no longer necessary for employees to commute to the offices in order to engage in their daily work activities and obligations, as meaningful work can simply take place anywhere else using electronic devices that are

connected to the organisation. This suggests that mobile devices have profoundly affected how work can be done and how people live their lives. However, the continued use of mobile devices during respite can complicate the recovery process, as employees will be drawn to their work in the evening, thereby interfering with the family or personal time.

From the preceding discussion, it is apparent that dramatic changes in the nature of employment and family composition, shifts in gender roles, technological advancement, and generational differences have directed contemporary research on work-life research. For instance, labour market changes have shown to have deepened and unsettling effects on the lives of individuals and families. This suggests that inherent changes in the labour market and family structure have affected work-family roles and their interrelation. Specifically, changes of this nature are considered to interfere with the demands of work and family/personal life. For many employees, such factors have created the potential conflict between the work roles and family (non-work) roles. Mageni and Slabbert (2005) concede that combining work and non-work has been identified as the greatest challenge faced by many employed workers.

It is imperative to explore the effect of work-life balance amongst a sample of working adult population across the industries in South Africa as it is believed that balancing a successful career with a personal or family life can be a daunting task which can impact on a person's satisfaction (engagement) in their work and personal roles. There is a need for an organisation to reassess the values and practices that define organisational culture if it is to succeed in attracting and retaining a talented as well as diverse pool of qualified job incumbents. Specifically, the organisation has to seek some ways that will assist employees to find a balance between their different roles and responsibilities.

3.3   DEFINITION OF WORK-LIFE BALANCE

Although extensive work-life research is available, that there is no universal definition and measures of work-life balance (Beauregard & Henry, 2009; McMillian, Morris, & Atchley, 2011, Rantanen, Kinnunen, Mauno, & Tement, 2013a) as well as a theoretical

framework underpinning its practice. It is further surprising that given the amount of research that has been conducted, work-family researchers have not made a significant impact in improving the lives of employees (Kossek, Baltes, & Matthews, 2011). Perhaps the lack of an agreed definition and impact thereof are complicated by the lack of key ingredients of balancing work and home, and what the balance entails. Carlson, Grzywacz and Zivnuska (2009) are of the opinion that the lack of conceptual clarity in the meaning of work-home balance, presumptions of insormorphism and distinction with other work-home constructs have created conceptual confusion and undermined the development of useful theoretical models of understanding work-home interface.

McMillian et al (2011) point out that the terms "work" "life" and "balance" are themselves complicated and difficult to define due to ambiguity, multiple interpretations and a lack of a single measurable construct that can be used to assess the existence and use of beneficial practices that can positively impact the lives of employees within organisations. Other researchers argue that the definition of work-life balance has over-generalised the roles played by the non-work domain (Grawitch, Maloney, Barber, & Yost, 2011). In other words, evidence points to the difficulty and complexity of defining the concept work-life balance and what precisely constitutes each term.

Guest (2002) proposes that the definition should be broken into separate pieces to clarify the misconception in each term. According to Guest (2002), the term work denotes paid employment and also other activities such as the time to commute to and from home and work on a daily basis. Work is conceived as a significant means of experiencing a sense of embeddedness in one's culture but it can also be a place of alienation and disconnection. Work as an aspect of embeddedness implies a state of being socially connected and involved in a particular setting, as well as being able to relate with other people. It is a focal area that attaches a significant meaning regarding why people spend a large portion of their lives at work (Rothmann & Welsh, 2013) inspite of the added value such as personal growth and development or the seniority one achieves at work.

The term life describes any activities from which individuals find enjoyment and satisfaction when outside the work environment. Demerouti (2012) expands the life domain by adding the 'self' as supplement of work and family domains. The 'self' refers to the uniqueness of the qualities of an individual such as personal interests, hobbies and time for oneself that stand apart from the work or the family roles; they are personal interests independent of any domains (Demerouti, 2012). Self is operationalised as the time spent on personal interests that are independent from home/family and work domains.

Jacobs et al (2008) maintain that work-life balance is a generally acceptable term in comparison to other positive sides of the work and non-work roles, even though the term balance has been conceived to reflect different interpretations. For instance, the use of balance has been found to ignore the possibility that both work and non-work domains may also influence each other by transferring positive attributes to each other (Donald & Linington, 2008; Jacobs et al., 2008).

In a similar vein, Guest (2002) defines work-life balance as both an objective and subjective term, whereby the former measure of work-life balance relates to the consequences of the behaviour such as time spent on the work or other domains, whereas the subjective measure relates to individual's perception about a balance between their work and the other aspects of life. Therefore, merely placing balance in the continuum of subjective and objective suggests that it varies according to the circumstances as well as across individuals.

Felstead et al (2002) define work-life balance as "the relationship between the institutional and cultural times and spaces of work and non-work in societies where income is predominantly generated and distributed through labour market" (p. 56). The aspects relating to the spatial location of work is central to their definition because they consider working from home as relevant to and conceptually part of work-life balance practice and policies. They assert that work-life balance practices are those which, whether intentionally or not, increase the flexibility and autonomy of the worker in negotiating attention and presence in employment.

Greenhaus et al (2003) define work-life balance "as the extent to which an individual is engaged in and equally satisfied with work role and family role" (p. 513). Their definition is considered comprehensive enough to include both the positive and negative balance. They furthermore propose three components which are inherent in the term balance, such as time balance (equal time devoted to work and family), involvement balance (equal psychological involvement in both roles) and satisfaction balance (equal satisfaction gained from both roles).

Chandra (2012) describes work-life balance "as responding to individual circumstances to help them fulfil their responsibilities and aspirations to lead to mutual benefit of the individual, business and society at large" (p. 1041). They maintain that employees should be allowed to work in different ways, subject to the realms of possibility and feasibility and desirability in specific organisational contexts, to enable them to achieve their aspirations inside and outside paid work. This means that people should have a measure of control over when, where and how they work.

The present study adopts the definition by Sverko, Arambasic and Galesic (2002). They view work-life balance as "… an elusive term used to describe a state of harmonious or satisfying arrangement between an individual's work obligations and his or her personal life. They define work-life balance as an appropriate arrangement of role-time commitments that allows for good functioning at work and at home, with minimum role conflict and maximum satisfaction" (p. 282). This definition is selected because it acknowledges that conflict is something which is inherently experienced daily within different roles and has substantial consequences for employees, their families and the organisations which employ them. Organisations should make an attempt to harmonise the different activities and interests in the daily lives of employees.

It should be noted that recent research has witnessed the rise of Positive Psychology that facilitates the positive side of participating in multiple roles with less conflict between work and family domains (Carlson, Kacmar, Wayne, &, Grzywacz, 2006; Wayne, Randel, & Stevens, 2006). The positive psychology is the advocacy of

experiences of happiness, enjoyment, aspiration and positive aspects in human life (Seligman & Csikszentmihalyi, 2000). The goal of positive psychology a shift from focussing on work-family conflict to include strengthening optimal functioning and human happiness as well as well-being and ideal fit for leveraging work-life balance.

The quest to harmonise the work and home environments has identified various constructs that go beyond conflict and negative consequences for participating in multiple roles. The increased acceptance of participating in multiple roles is deemed beneficial and has given rise to several variables such as positive spillover (Grzywacz & Marks, 2000), facilitation (Wayne, Grzywacz, Carlson, & Kacmar, 2007), enhancement (McMillian et al., 2011) and enrichment (Greenhause & Powell, 2006; Jaga et al., 2013; Rantanen et al., 2013a). These constructs are used to describe the theoretical relationships that enable individuals to benefit from participating in both work and family roles (Hanson, Hammer, & Colton, 2006).

- **Positive spillover** refers to the experiences an individual acquires relating to their values and behaviours, which when transferred to another domain have beneficial effects on the receiving domain (Carlson et al., 2006; McMillian et al., 2011). These experiences in one domain such as moods, skills, values, and behaviour are transferred to another domain in ways that make the two domains similar. Other terms that capture the essence of positive work-family spillover include affect, values, skills and behaviours (Edward & Rothbard, 2000) and can occur in both directions of the work-family. This means spillover is made-up of negative (interference) and/or positive (promotion) interaction between work and home.

- **Work-family facilitation** is described as the extent to which an individual's engagement in one domain (work or home) provides gains (development, affecting, capital and efficiency proposed by Greenhause & Powell, 2006) which contribute to enhanced functioning of another domain (home and work) (Wayne et al., 2007, p. 64). This suggests that participation at work (home) is

made easier by virtue of the experiences, skills, and opportunities gained or developed at home (work).

De Klerk, Nel, Hill and Koekemoer (2013) define work-family facilitation as "the extent to which participation at work or family is made easier by virtue of the experiences, skills and opportunities gained or developed at the family or work. This definition reflected the synergies between work and family life, and the potential for enhanced performance is implied" (p. 684). Others define facilitation in terms of the influence exerted to perform in one role in order to establish facilitation in another role (Wayne, Musisca, & Fleeson, 2004), or as "the extent to which participation at work (or home) is made easier by virtue of the experiences, skills and opportunities gained or developed at home (or work)" (Frone 2003, p. 145).

The work-family facilitation consists of three fundamental components, namely engagement, gains and enhances functioning. Engagement entails the degree to which individuals invest themselves in domain-related activities. It is important because individual action is considered the foundation of facilitation (McMillian et al., 2011; Wayne et al., 2007). With respect to gains, Carlson et al (2006) identify four aspects that relate to gains, namely, **developmental** (acquisition of knowledge, skills, perspectives, or values), **affective** (changes in behaviour and/or attitudes), **capital** (acquisition of assets), and **efficiency** (development of an increased focus level). Finally, enhanced functioning improves basic life functions, such as communication and problem-solving skills (McMillan et al., 2011; Wayne et al., 2007). The fundamental basis of work-family facilitation is that involvement in one domain is made positively and beneficially influences functioning of the other domain.

✦ **Work-family enrichment** is defined as "the extent to which experiences in one role improve the quality of life in the other role," and enrichment is considered "to be synonymous with positive spillover, enhancement, and facilitation" (Greenhause & Powell, 2006, p. 73). Several studies show that enrichment

occurs when resource gains generated in one role promote performance or affect in the other role (Greenhause & Powell, 2006; McMillan et al., 2011; Rantanen et al., 2013a). Greenhause and Powell (2006) define resource as "an asset that may be drawn upon when needed to solve a problem or cope with a challenging situation" (p. 80). Resources can take different forms such as skills and perspectives, psychological and physical resources, social-capital resources, flexibility and material resources. In addition, they can be applied and achieved through the instrumental path and the affective path.

The instrumental path occurs when resources such as skills and perspectives gained from one role directly improve performance in the other role. The affective path occurs when a resource in one domain produces positive affect within that domain which in turn, improves individual functioning in the other domain (Carlson et al., 2006; Greenhaus & Powell, 2006). The affective pathway is aimed at positive moods and emotions derived from experiences obtained through work and family roles.

- **Work-family enhancement** is described as attaining personal resources that can assist individuals within their daily life challenges (Carlson et al., 2006; Frone, 2003). Additionally, McMillan et al (2011) explainthat enhancement can be seen as an enabling experience that occurs when one role improves the energy and attitude of an individual and assists in the development of skills in the other role. Therefore, the individual's participation in multiple roles can improve their energy reserve by means of greater sources of self-esteem, social identity, resources and rewards, which assists the individual in managing multiple demands placed on them (McMillan et al., 2011).

One potential similarity of the positive constructs is the proclivity to view the work and home domain as bi-directional in nature. This suggests that work can provide gains that can ultimately enhance/facilitate/spillover the functioning of the home/family domain on the one hand, and that home/family can also provide gains that can positively influence/enhance/facilitate/spillover functioning of the work domain on the other hand

(Grzywacz & Butler, 2005, Wayne et al., 2007, Wayne et al., 2006). Put differently, McMillian et al (2011) posit that the similarities of the constructs can also be illustrated in what is called a "cross-domain effect" that exists in the relationship between work and life. A cross-domain effect is defined as those experiences and decisions that occur in one domain and are capable of influencing outcomes in the other domains.

Conceptually, there appears to be quite a remarkable overlap within the positive work-home interfaces, with the main distinction being the nature of the positive experience that is being transferred between domains. From the review of relevant literature, it is evident that work-family enrichment is totally different from the other constructs representing the positive side of work-family interface. It is different in the sense that the transferable experience cannot be converted to improve the quality of life or individual performance in the other domain (Carlson et al., 2006, Greenhaus & Powell, 2006). Accordingly, the consctruct work-family enrichment is considered as the most inclusive and comprehensive definition of positive side of work-home domains. It actually makes sure that the experience, positive mood and skills are not only transfer, but they are often applied to better improve performance of the other domains.

In addition, the positive aspects of work-family domains are grounded in the principles of role expansion-enhancement perspectives which focus on the net positive gains to be obtained from involvement in multiple roles. This perspective posits that instead of depleting an individual's psychological and physiological resources, involvement in multiple roles provides a number of benefits that may outweigh the costs, leading to net gratification rather than strain (Carlson et al., 2006; Wayne et al., 2007). This suggests that resources, learning, opportunities and support in the work (home) domain can be used to enhance one's psychological functioning in the home (work) domain.

Taken together, the positive side of work and home takes into cognisance that both domains influence each other positively in order to better perform respective duties. Furthermore, the various definitions are primarily aligned with the overall approach of the work-life balance which focuses on individuals' general assessment of their entire life situation as compared to the components of approach which view work-life balance

as constituting different measurable dimensions such as time, engagement and satisfaction (Greenhaus et al., 2003).

Therefore, when employees cannot find balance for their work and non-working life, they experience an inter-role conflict. This conflict is defined in the work-life balance literature as an interference of work and family/personal roles that create tension or problems for the individuals or as the direct result of incompatible pressures from the individual's work and family/personal roles. The section that follows gives an overview of the work-family conflict as the contrasting image of work-life balance.

3.3.1 Definition of work-family conflict

Numerous studies have demonstrated how work-family conflict has dominated empirical research within the work-family domain (Demerouti, Shimazu, Bakker, Shimada, & Kawakami, 2013; Innstrand, Langballe, Espres, Aasland, & Falkum, 2010; Jacobs et al., 2008; Rost & Mostert, 2007) based upon structural-functionalist role theory (Grzywacz & Marks, 2000). Kahn, Wolfe, Quinin, Snoek, and Rosenthal (1964) identify a significant source of strain that arises as result of inter-role conflict, and define it as the "simultaneous occurrence of two (or more) sets of pressures such that compliance with one would make more difficult compliance with the other" (p. 19). For instance, responsibility from both work and home competing for the limited amount of time and energy of an individual, eventually causes conflict between these two domains (Greenhaus & Beutell, 1985; Jacobs et al., 2008; Mostert & Oldfield, 2009; Rost & Mostert, 2007).

Rantanen, Kinnunen and Pulkkinen (2013b) describe work-family conflict as perceived difficulty to fulfil simultaneous and/or conflicting work and family demands due to insufficiency of time- and energy-related individual resources. This notion is based on the role-stress theories which state that if a given set of social roles imposes conflicting role expectations and pressures on people, it can create psychological conflict and role overload for that person because individual resources are finite and scarce (Greenhaus & Beutell, 1985; Kahn et al., 1964, Rantanen et al., 2013a). Work-family conflict can

take two directions, that is, those conflict arising from work-related demands hindering well-being and performance in the family domain (work-to-family conflict) and conflicts arising from family-related demands hindering well-being and performance in the work domain (family-to-work conflict) (Demerouti, Peeters & van der Heijden, 2012; Peeters, Montgomery, Bakker & Schaufeli, 2005).

Much of the debates on conflict revolve around the work of Greenhaus and Beutell (1985) who created a theoretical framework for research on work-family conflict. They define work-family conflict as "friction in which role pressures from the work and family domains are mutually incompatible" (Greenhaus & Beutell, 1985, p. 77). Therefore, because of incompatibility, participation in one role is made more difficult by virtue of participation in the other role. They contend that work-family conflict is intensified when either work or family roles are salient and central to the person's self-concept.

There is general agreement that the work-family conflict can also be considered as bi-directional in nature. This suggests that work demands can interfere with the quality of family life (work-family conflict) and at the same time family pressures can interfere with responsibilities of the work domain (family-work conflict) (McMillian et al., 2011; Oosthuizen, Mostert, & Koekemoer, 2011). There is growing support for claims that work-family conflict occurs as a result of time-based conflict, strain-based conflict, and behaviour-based conflict (Jacobs et al., 2008; McMillian et al., 2011). According to such studies, any role characteristic that affects a person's time involvement, strain, or behaviour within a role can produce conflict between that role and another role.

It is postulated that **time-based conflict** can take two different forms. Firstly, time-based conflict occurs as a result of limited time available to fulfil expected roles in the other domain. Secondly, time-based conflict occurs when pressure from one role creates preoccupation with the role, making it more difficult to meet the demands of other roles, despite the individual's physical presence (Demerouti et al., 2012; McMillian et al., 2011; Mostert, 2008). For example, time pressure associated with one role can make it physically impossible to comply with expectations arising from another role.

Strain-based conflict occurs when strain from one domain makes it difficult to meet the demands of another domain. Greenhaus and Beutell (1985) did not explicitly state why strain makes demands difficult to meet, but, presumably, strain reduces personal resources (energy and physical or mental capacity) needed for role performance (Demerouti et al., 2012; McMillian et al., 2011; Mostert, 2008). According to McMillian et al. (2011) strain-based conflict is a reflection of the person-environment (P-E) fit theory which is based on conflicting role demands, where fit is defined as the match between an individual's knowledge, skills and abilities (KSA) and the role she/he is required to perform.

Behaviour-based conflict occurs when behaviour developed in one domain is incompatible with role demands in the other domain, and the person is unable to adjust behaviour when moving between domains (Demerouti et al., 2012; McMillian et al., 2011; Mostert, 2008). The behaviour-based conflict is reflected in the spillover in which behaviour developed from the work domain influences behaviour in the other domain with the added condition that the transferred behaviour inhibits role performance in the latter domain. In support of this view, (McMillian et al., 2011) maintain that "behaviours that are expected or appropriate in the family role are viewed as inappropriate or dysfunctional when used in the work role" (p. 10).

Taken together, balance and conflict are two distinct constructs which coexist; an individual can experience high levels of both concurrently (Wayne et al., 2004). Work-life balance is the degree to which an individual can simultaneously balance the emotional, behavioural and time demands of paid work, family and personal duties. In contrast, work-life conflict occurs when involvement in one domain, for example work, family or personal life, interferes with involvement in the other domain.

3.3.2 Work-home interaction

Studies define the work-home interaction in relation to the Effort-Recovery (E-R) model because the model is theoretically grounded to understand the effect of work and

home domains. In addition, the model describes how work and private life can interact, and which mechanisms can affect well-being during these processes (Geurts, Kompier, Roxburgh, & Houtman, 2003). Work-home interaction is defined as "an interactive process in which a worker's functioning in one domain such as the home is influenced by negative or positive load reactions that have built up in the other domains such as the work" (Demerouti & Geurts, 2004; Geurts, et al., 2005. p. 322; Pieterse & Mostert, 2005). This suggests that one's functioning is dependent on both one's ability and motivation to invest time and effort into the work and the home domain.

The definition of the work-home interaction differentiates between the direction of influence (influence from work on private life, and vice versa) and the quality of influence (negative versus positive influence). Four dimensions are inherent in the work-home interaction:

- Negative work-home interaction (NWHI) refers to a situation in which negative load effects built up at work hamper one's functioning at home. This component is similar to the well-known work-home interference or negative spillover (De Klerk & Mostert, 2010; Geurts et al., 2005). It is defined as a form of inter-role conflict in which the demands of the work role and the demands of the home role are mutually incompatible. In this instance, participation in one role (work) can influence the other role (family) negatively due to time pressure and incompatibility between the domains. Studies have established that negative influence from work (NWHI) is more prevalent than influence from home (NHWI) (Demerouti et al., 2012; Geurts et al., 2005; Rost & Mostert, 2007). Negative work-home interaction has been associated with various outcomes relating to health and well-being.

- The PWHI is defined as positive load reaction built up at work that facilitates functioning at home (De Klerk & Mostert, 2010; Geurts et al., 2005). Positive mood, experience, knowledge and skills acquired in the work environment are transferred to improve performance in the home environment.

- The negative home-work interaction (NHWI) refers to those negative load

reactions which develop at home that fetter a person's functioning at work (De Klerk & Mostert, 2010; Geurts et al., 2005). Negative home-work interaction occurs when activities of both domains interfere with each other. Based on the extent of the review of the literature, there is limited research investigating how home activities and work-related activities impact on each other.

★ The positive home-work interaction (PHWI) occurs when positive load reactions developed at home facilitate functioning at work. (De Klerk & Mostert, 2010; Geurts et al., 2005). Some studies have reported that individuals who experience positive interaction between work and family are more satisfied, committed and engaged workers (Geurts et al., 2005; Mostert, Cronjé, & Pienaar, 2006).

Existing literature has shown that there is limited empirical research based on the positive WHI and HWI as well as negative HWI as compared to an abundance of research studies that have been tested on negative WHI (Geurts et al., 2005). In light of the recent rise of the positive psychology movement which endorses strength and human optimal functioning, several researchers have begun to acknowledge the existence of the positive interaction between work and home life and that employees could actually benefit from combining both the work and home domains. Empirical evidence shows that work can influence functioning of the home environment in both positive and negative ways

3.4   THEORETICAL   FRAMEWORK   UNDERLYINING   WORK-LIFE BALANCE

The review of the literature provides a number of theoretical models underpinning the understanding of the work-home/family interface. These theories include the likes of compensation, resources drain, enrichment, congruence, work-family conflict, spillover, segmentation, facilitation, integration and ecology theories (Clark, 2000; Frone, 2003; Greehaus & Powell, 2006). This section discusses several theoretical models underpinning both the positive and negative consequences in the work-home

interaction. These are the Border theory, developed theoretically by Clark (2000) to demonstrate the daily transition of the employed people from work to home) and the Effort-Recovery Model by Meijman and Mulder (1998). The section that follows presents the theoretical framework underpinning the work-life balance.

3.4.1 Work-family border theory

The work-family border theory was theoretically developed by Clark (2000) to address how boundaries associated with work and family are divided in terms of times, places, and people. The theory incorporates diverse functions such as border permeability and flexibility, central and peripheral as well as the blending of roles in an attempt to explain the nature of the border between work and home domains. More importantly, the theory is useful for exploring "how border-crossers (people) manage and negotiate between the work and family domains and the borders between them in order to attain balance" (Clark, 2000, p. 750, Donald & Linington, 2008) and lower levels of work-to-home conflict. The theory is particularly useful in understanding how people accomplish work-life balance. It addresses the integration and blurring of boundaries in work and family life.

As already mentioned, border permeability and flexibility, central and peripheral, are key concepts in the work-family border theory. For instance, work-family balance is viewed as a function of the central participation in the home and work domains, where role centrality is indicative of the relationship between the domains (Clark, 2000). Accordingly, the work-family border theory (Clark, 2000) clearly identifies role centrality as a key factor influencing experiences of work-family balance or conflict.

Clark (2000) contextualises the work-family border theory in terms of the harmonious relationship between work and home domains. This relationship could result in too much work-family integration that can lead to blurring boundaries between these domains, and ultimately instigate work-family conflict. Desrochers, Hilton and Larwood (2005) describe blurring of boundaries as "the perception of uncertainty or difficulty in distinguishing one's work role from one's family role that occurs when

these roles are seen as highly integrated" (p. 443). This implies that blurring of boundaries is failure to make a distinction between activities that relate to the work and those which relate to the home domains to such an extent that activities do not spillover to other domains.

Studies indicate that the work-family border theory has been developed as a result of the inherent weaknesses in the spillover and compensation theories (Clark, 2000; Schultz, Hoffman, Fredman, & Bainbridge, 2012). Edwards and Rothbard (2000) use the linking mechanism to describe the spillover and/or compensation between the work and the home/non-work domains. They describe the spillover as the effects of work and family on one another that generate similarities between the domains, whereas the compensation represents the efforts of offsetting dissatisfaction in one domain by seeking satisfaction in another domain.

Clark (2000) argues that "most work-family studies, specifically, the spillover and compensation theories are limited in the sense that they do not adequately explain, predict and help solve problems the individuals experience when balancing home and work responsibilities" (p.749). Concomitantly, Desrochers et al. (2005) argue that studies based on spillover or compensation theory hypothesis regarding how people feel about one role can have implications for how they feel about the other role. It was along such an understanding that Clark (2000) sought to address the inconsistencies in the spillover and compensation theories. Her work gave rise to developing the work-family border theory which taps into how individuals balance their work and home responsibilities through grounded theory from a variety of disciplines.

Clark (2000) developed the work-family border theory in response to the limitation of the previous work-family research that failed to distinguish between the occurrence of the spillover and the compensation between the work and family domains. Therefore, the relationship between work and family can be viewed on a continuum between integration and segmentation; any position on this continuum may result in a sense of balance for an individual (Clark, 2000; Lourel, Ford, Gamassou, Guégeun, & Hartmann, 2009; Schultz et al., 2012). Psychologists using the border theory consider

work and home as either integrated or segmented. The theory contributes to the study of work-family linkages by describing the conditions under which varying degrees of work-family integration are likely to improve or diminish individual well-being.

The central tenet of the work-family border theory is that work and family are separate psychological entities of a human being and that the interaction between them is dependent upon the strength of the borders between them (Clark, 2000; Donald & Linington, 2008 Lourel et al., 2009; Schultz et al., 2012). People are considered as border crossers because they frequently cross between the work and home domains, while at the same time, actively shaping their goals, behaviours and even aspects of the borders to fulfil the demands of each domain.

Clark (2000) defines work-family balance as "satisfaction and good functioning at work and at home, with minimum of role conflict", adding that "although many aspects of work and home are difficult to alter, individuals can shape to some degree the nature of the work and home domains, and the borders and bridges between them in order to create a desired balance" (p.751). The work-family balance, according to Desrochers et al (2005) can be achieved from a number of ways depending on the similarities of the work and family domains, the strength of the boundaries between these domains and a variety of other factors. Work-family balance is a condition in which both work and family responsibilities function alongside each other with limited conflict and disruption.

According to Clark (2000), the work-family border theory is an attempt to provide an understanding of the "complex interaction between border-crossers and their work and family lives, to predict when conflict will occur, and give a framework for attaining balance" (p.748). She describes border as the delineation between domains defining two directions where domain-relevant behaviour begins and ends. In particular, the border theory focuses on physical, temporal and psychological parameters that separate work from non-work (Clark, 2000; Schieman, Milkie, & Glavin, 2009).

The concept of border crossers is central to the work-family border theory, particularly because it considers individuals as border crossers who are partially able to shape the environments in which they exist and negotiate the borders between their families and home domains. Specifically, border crossers have a high degree of influence in each domain, based on their competence, affiliation with the domain's central members and internalisation of the relevant culture and values (Clark, 2002; Donald & Linington, 2008). This however, has the proclivity to allow people the greatest power to negotiate the domain and border characteristics and to achieve balance between the domains thereby enabling them to control their lives.

Figure 3.1 below represents the pictorial graph of the work-family border theory, its central concept and characteristics, namely the work-home domains, the borders between work and home, the border-crosser and the border-keepers.

Work   Family

Border-keepers/ domain members   Borderland (area of blending)   Border-keepers/ domain members

Permeations

Family pictures   Insights from home family

Phone call from home

Permeable, flexible borders

Border-crosser

Permeations

Client phones   Insights from work

Work brought home

Domains

extent of segmentation and integration
overlap of valued means and ends
overlap of cultures

Borders

border strength
permeability
flexibility
blending

Border-crossers

peripheral vs. central domain membership
identification
influence

Border-keepers & other domain members

other-domain awareness
commitment to border-crossers

Figure 3.1.   Pictorial Representation of Work-Family Border Theory *(Clark, 2000, p.754)*

The diagram above shows that there are two central components that guide and serve to determine the border's strength, namely permeability and flexibility. On the one hand, permeability refers to the "degree to which elements from other domains may enter" (Clark, 2002, p. 756; Schieman et al., 2009; Schultz et al., 2012). Permeability can be conceived as actual interruptions or intrusions from one domain into the other, over which the employee may have little control. For example, a work boundary is permeable if the employee is contacted by family while at work. Schieman et al (2009) argue that high permeability is linked with greater role blurring, which can result in increased work-nonwork interference. Moreover, boundary permeability can occur as a result of the spillover of negative emotions and attitudes from work to home. For

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example, the states of worrying about work while at home can be considered as psychologically permeable.

On the other hand, flexibility refers to the "degree to which a border may contract or expand depending on demands of one domain or another" (Clark, 2002, p. 757). For example, a work boundary is flexible if individual employees perceive that they could leave work to attend to a family matter. Flexibility is a key resource strategy which involves the extent to which work responsibility may be conducted beyond the usual spatial and temporal parameters of the workplace (Schieman et al., 2009). For example, the fact that technological devices make it possible for job tasks to be performed in a variety of locations apart from the centralised organisational office is an outcome of flexibility.

Therefore, when a great deal of permeability and flexibility occurs around the border, blending occurs. The area around the presupposed border is no longer exclusive of one domain or the other, but blends both work and family, creating a borderland which cannot be exclusively called either domain. Under these circumstances, borderlands are places where border-crossers awkwardly juggle conflicting demands and conflict arises. They are places where individuals easily slip into a sort of schizophrenia about their identity and purpose (Clark, 2000). The combination of permeability, flexibility and blending determine the strength of the border. Borders that are very impermeable, inflexible and do not allow blending are strong. Conversely, borders that allow permeations, are flexible and facilitate blending are weak (Clark, 2000).

A reasonable number of shortcomings have been identified in the work-family border theory. The theory has been silent on factors that contribute to border permeability. Clark (2000) failed to incorporate work-family culture within the organisational structure as an aspect of border permeability. The permeability refers to a situation where the border between the home and work domains allows elements from one domain to enter the other (Clark, 2000).

The work-family border theory has also been critised for the lack of clarity on the term 'comparable'. Accordingly, the theory is too vague on whether comparability refers to the roles which the border crosser plays since work and family are independent spheres which influence each other. In instances where a person is allowed to work from home, it can become difficult for one to detach from family responsibility that can easily intercept the physical and temporal border demarcating work and home. In this case, Clark (2000) argues that less defined borders are easily commendable and also comparable. It is difficult to comprehensively find comparable domains because work and family are two distinctive aspects that influence each other. According to Clark (2000) a border can be differentially strong depending on the ability of the border to prohibit the flow of permeations from one direction but not from the other, or the ability of the border to bend one direction but not the other.

3.4.2   Effort-recovery theory

The Effort-Recovery (E-R) model was theoretically developed by Meijman and Mulder (1998) to explain the psychological aspect of workload. The effort-recovery model is rooted in the framework of exercise physiology (Mostert et al., 2006; Taris, Beckers, Verhoeven, Geurts, Kompier, & Van der Linden, 2006) and elaborates its prevailing concepts on the insights from workload in relation to a person's capacity. The model is considered as the most frequently used illustration of the mechanism underlying work-home interaction which describes how work and private life may interact (Demerouti, Bakker, Geurts, & Taris, 2009). Furthermore, the model acknowledges that workload is a robustic predictor of the work-home interaction.

The model was presented by Meijman and Mulder (1998), and focused on the consequences inherent in the workload. Workload is considered by Van Aarde and Mostert (2008) as the physiological, behavioural and subjective responses that interfere with the balance of certain physiological systems due to task performance and environmental influences. The point of departure in that the load reactions are generally reversible (Van Aarde & Moster, 2008, Mostert & Rost, 2008), particularly if employees have enough recovery time to energise prior to effectively performing the

required functional tasks the next working day (Van Aarde & Moster, 2008, Mostert & Rost, 2008). Accordingly, high demands from the one domain will not have unfavourable health consequences on the other domain, as long as adequate recovery takes place during or after exposure to load reactions (Van Aarde & Mostert, 2008). The high demands accumulated at either the home or work will not have any negative impact on the employee due to the fact that recovery during and after work does take place.

The 'need for recovery' is at the center of the E-R model because it refers to the reduction or elimination of negative consequences arising from both work and home domains, thereby restoring the energy levels that have been depleted. In addition, the need for recovery is considered as the key process linking job demand and job control/decision latitudes (Bakker et al., 2010; De Jonge, van Vegchel, Shimazu, Schaufeli, & Dorman, 2010). Based on the ERT, need for recovery entails as the process by which an employee replenishes from the used personal resources such as physical energy and attentive focus (Sonnentag & Zijlstra, 2006; Ten Brummelhuis & Bakker, 2012). This recovery process prevents exhaustion and enables an employee to reload for the next working day (Meijman & Mulder, 1998).

Sonnentag and Natter (2004) maintain that recovery occurs when no further demands are put on those aspects of an individual's functioning on which demands have been put during the work process. That is, recovery is concerned with the process of psycho-physiological unwinding which is the opposite of the activation of the psycho-biological system during effort expenditure, particularly under stressful conditions.

In similar vein, Demerouti, Taris and Bakker (2007) assert that recovery is the process of replenishing depleted resources or rebalancing suboptimal psycho-physiological systems. They consider the need for recovery as a sense of urgency that people feel to take a break from their demands, when fatigue builds up. A typical example inherent in the need for recovery experience is when employees find it easy to relax at the end of a working day, thereby well-being improves and the resources drawn upon during strain process restored.

It is hypothesised that a combination of persisting (high) demands and insufficient recovery can, in the long-term, result in negative load reactions that can be manifest and irreversible (Demerouti, Bakker, & Butler, 2004; Geurts et al., 2005; Taris et al., 2006) and causes serious negative effect to health and well-being (Geurts et al., 2005). This can result in an increased intensity of the load reactions, which, in turn, will make higher demands on the recovery process. Thus, an accumulative process may yield a draining of one's energy and a state of breakdown or exhaustion (Demerouti et al., 2004; Geurts et al., 2005).

The point that is highlighted by Meijman and Mulder (1998), is that the workload are not static, but subjected to reversible consequences resulting from the recovery during a short respite or after work. This will however, allow employees to effectively engage in their work responsibility in both the work and home environment. Alternatively, if employees are unable to fully recover from the demanding work or home environment, this can lead to irreversible consequences where the negative effect can spillover from the work to the home or from home to the work environments.

The same principles of the E-R model can also be applicable to positive work-home interaction, since effort expenditure may be accompanied by positive load reactions. For example, if job resources are sufficient to deal with high job demands, energy may be replenished and mobilised rather than depleted. Positive spillover may stimulate people to learn and grow in that specific domain, and therefore challenge the assumption that fulfilling multiple roles is associated with the depletion of fixed amounts of energy and strain (Geurts et al., 2005; Montgomery, Peeters, Schaufeli, & Den Ouden, 2003).

The model is further based on the notion that meeting work procedures requires efforts that often occur in two distinctive forms, the product itself (the tangible result of work activities) and the short-term physiological and psychological reactions (the costs and benefits for the individual) (Geurts et al., 2005; Mostert et al., 2006). It is assumed that work demand which consists of all the task demands and psychological factors in the

working environment, is often located within short-term physiological and psychological reactions that are generally unstable and inflexible and can easily be adaptive and reversible (Geurts et al., 2005; Mostert et al., 2006). When the exposure to workload ceases, the psycho-biological (functional) systems that were activated stabilise within a certain period of time during the non-working period (Demerouti et al., 2004) allowing individuals to recover from negative load effects that have built up at work.

Ideally, an individual can recover from the negative load effects that were built up at work (Demerouti et al., 2004; Taris et al., 2006). Thus, with enough opportunity for relaxation during breaks and/or at home, an individual will be actively involved in his/her work the next day, without the actual need for recovery. Off-job time is an important resource because it temporarily relieves employees of their work-related efforts and further offers them an opportunity to engage in other different activities outside the work environment (Hobfoll, 2002).

However, when individuals cannot fully recover at home after exposure to a high workload (recovery is too short or an individual unwinds slowly and remains active), the psycho-biological (functional) systems will be activated again before they have had a chance to be stabilised at a baseline level (Demerouti et al., 2004; Geurts et al., 205; Mostert et al., 2006; Taris et al., 2006). Thus, while in the sub-optimal state, individuals will be required to invest additional (compensatory) effort to perform adequately when confronted with new work demands. Figure 3.2 outlines an operationalisation of the effort-recovery model.
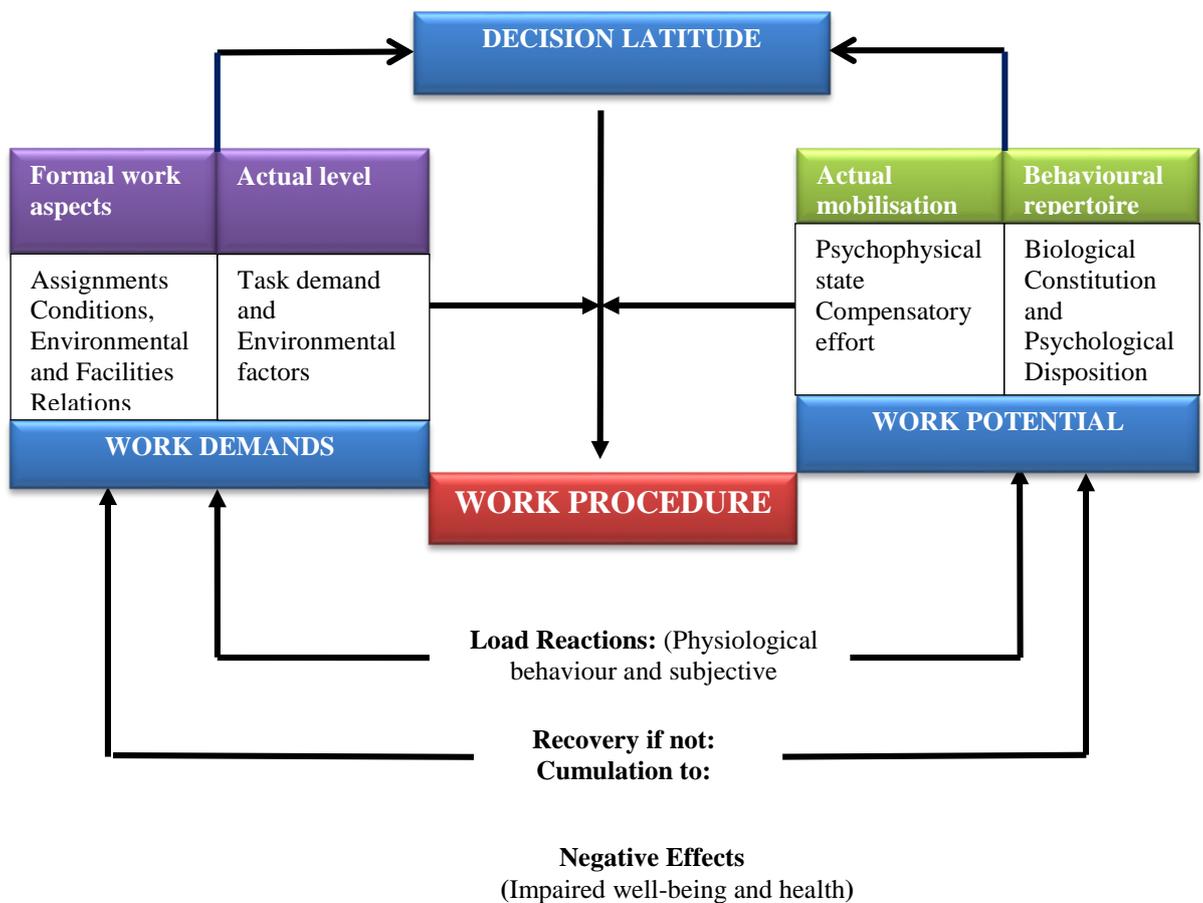
Figure 3.2. Psychological aspects of workload *(Meijman & Mulder, 1998, p.9)*

As shown in figure 3.2, the central tenet of the effort-recovery model is encapsulated in the work procedure defined by three interrelated determinants, namely work demands, work potential and decision latitude, that prescribe how work should be done on the basis of situational and personal characteristics (Van Veldhoven, 2008). The work procedure comprises two types of outcomes, namely the end product or service and short-term physiological and psychological reactions (load effects) (Meijman & Mulder, 1998).

As already mentioned, the work demands constitute all task demands and psychological factors in the working environment located often within the short-term physiological and psychological reactions (Geurts et al., 2005; Mostert et al., 2006). The work demands are referred to as the load effects concerned with an array of emotional, cognitive and behavioural symptoms that are reversed when work stops (workload

ceases) (Geurts et al., 2005; Mostert et al., 2006; Van Veldhoven, 2008) allowing the psycho-biological (functional) systems to stabilise during the nonworking. In other words, the short-term physiological and psychological reactions give rise to need for recovery after exposure to the workload to allow the employees to recuperate before the next working day. Sonnentag and Zijlstra (2006) assert that employee's need for recovery substantially increases as a result of high work demands in combination with low job control or decision latitude.

The work potential involves the actual mobilisation of ability and effort that employees are required to exert towards organisational effectiveness. Basically, the mobilisation is referred to as the work characteristics (van Veldhoven, 2008) and includes the skills and knowledge as well as willingness to meet the demands and to exercise control or decision latitude (Bakker et al., 2010; De Jonge, et al., 2010). The job control characteritics are concerned with opportunities for recovery such as taking work breaks, holidays, beginning and ending times of the work day (Van Veldhoven, 2008). The job control echoes the demand-control model (DCM Karesek, 1979) which uses the decision latitudes and social support as the buffering elements.

Consistent with the work-family border theory, the psychological study of workload as presented by Meijman and Mulder (1998) is based on the assumption that people are prone to interfering actively in their work situation and environment when confronted with certain demands. Ideally, individuals recover from the negative load effects that were built up at work (Demerouti et al., 2004; Taris et al., 2006; Ten Brummelhuis & Bakker, 2012). Thus, with enough opportunity for relaxation during breaks and/or at home, an individual will be actively involved in his/her work the next day, without the actual need for recovery. Off-job time is an important resource because it temporarily relieves employees from their work-related efforts and offers opportunity to engage in other activities outside the work environment (Ten Brummelhuis & Bakker, 2012). Consistent with the COR, off-job time also offers the opportunity to collect resources (Hobfoll, 2002). As mentioned by Hobfoll and Shirom (2000), individuals strive to gather and maintain various resources in order to compensate for the loss of resources

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and also as a personal resource reservoir and boost motivation for work (Ten Brummelhuis & Bakker, 2012).

Therefore, when employees cannot fully recover at home after exposure to a high workload (recovery is too short or the individual unwinds slowly and remains active), the psycho-biological (functional) systems will be activated again before they have had a chance to be stabilised at a baseline level (Demerouti et al., 2004; Geurts et al., 2005; Mostert et al., 2006; Taris et al., 2006). Therefore, while in the sub-optimal state, employees will be required to invest additional (compensatory) effort to perform adequately when confronted with new work demands.

It is hypothesised that a combination of high demands and insufficient recovery can, in the long term, result in negative load reactions that can be irreversible (Demerouti et al., 2004; Geurts et al., 2005; Taris et al., 2006), and can seriously affect health and well-being (Geurts et al., 2005). This can result in an increased intensity of the load reactions, which, in turn, will make higher demands on the recovery process. The cumulative process may yield a draining of one's energy and a state of breakdown or exhaustion (Demerouti et al., 2004; Geurts et al., 2005).

The central idea of negative load effects that build up in an unfavourable work situation (characterised by high job demands, low job control and support) and can spillover to the home situation, makes the theoretical perspective offered by the E-R model relevant for studying negative work-home interaction (Demerouti et al., 2004). From this perspective, a similar process can be expected in a home situation that is characterised by high home demands and low control and support possibilities at the work environment. It is therefore clear that effort investments at home should be used within acceptable limits, just as in the case of effort expenditure at work. Work and home settings that enable individuals to self-regulate their effort investment offer the prospect of gaining positive experiences, yielding positive load reactions that spillover to the other domain (home or work) (Geurts et al., 2005; Mostert et al., 2006).

The theoretical framework offered by the E-R model may not only enhance the understanding of negative work-home interaction, but can also contribute to the understanding of the positive work-home interaction, since effort expenditure may also be accompanied by positive load reactions (Demerouti et al., 2004; Geurts et al., 2005; Mostert et al., 2006). The existence of job control and support that enable individuals to deal with the demanding aspects of their job and simultaneously increase the willingness to do so, are likely be associated with positive load effects that build up during working periods and spillover to the home domain. For example, employees who are able to take work breaks, control work speed and decide on work demands have a better chance of recuperating than waste-off all resources.

For instance, Taris et al (2006) conducted a study to determine, among other things, whether the effects of recovery differ for positive outcomes (enjoyment and negative (exhaustion) among 117 males and 82 female managers. Their study revealed unusual results indicating a proportion of explained variance which was quite low for both exhaustion and enjoyment, although the variance was higher for exhaustion (21%) than enjoyment (14%). This is in line with the conception that people who generally work hard tend to feel more exhausted at the end of the day.

In addition, Volman, Bakker and Xanthopoulou (2013) conducted a study which combined the work-family (specifically self-family facilitation) and recovery to determine the extent of the relationship and the circumstances in which such a relationship transpires. Their results show that people find it difficult to detach themselves from work, particularly when they are engaged in other activities outside the work environment. Their study suggests that employees' personal interests have to be integrated into the work-family literature for a better understanding of life-work interaction.

At a different level, Sanz-Vergel, Demerouti and Moreno-Jiménez (2010) conducted a study to determine the importance of role salience for the relationship between daily detachment from work and home and their outcomes. Data was collected three times per day, to allow participates to report their immediate feelings and experiences which

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in actual fact reduces retrospective bias. Their study found that daily detachment from home increases daily work performance and reduced daily home-work interference. That is, daily detachment from work was found to be beneficial for individuals with a low level of trait work-role salience, so that they can increase their daily work performance and decrease home-work interference.

3.5   ANTECEDENTS OF WORK-LIFE BALANCE

There are vast arrays of factors that influence the work-life balance. For instance, De Klerk and Mostert (2010) identify seven socio-demographic variables that most likely would predict the work-life balance: occupation, age, marital status, parental status, education, gender and language. Apart from the personal charcateristics, the work and home charateritics are also considered as antecedents of the work-life balance. Geurts and Demerouti (2003) indicate that personality traits and engagement can also to some degree influence the interaction between work and home domains. Other studies suggest that work and home characteristics also play a role in negative and positive work-home interaction (Geurts & Demerouti, 2003; Marais et al., 2009; Mostert & Oldfield, 2009; van Aarde & Mostert, 2008). Based on the available literature, the section that follows outlines predictors of work-life balance which include personal characteristics, work and home characteristics, personality and engagement.

3.5.1   Personal characteristics

Personal characteristics have been identified as the most common antecedent of work-home interaction. Such characteristics include age, gender, educational level, marital status, parental status, number of children in the household, tenure and occupational level (Marais & Mostert, 2008; Mostert & Oldfield, 2009; van Aarde & Mostert, 2008). The following section presents the antecedents of the work-home interaction deemed important for personal characteristics such as age, gender, educational level, marital status, parental status, number of children in the household, tenure and occupational level.

3.5.1.1   Age dimension

The effect of age as impacting on the work-home interaction has been taken for granted with limited empirical studies available (Mostert & Oldfieds, 2009), most probably because prior studies find it difficult to separate the age and gender dimensions in their analysis. Very few studies have been conducted in this area. In the study targeting a subsample of employed adults in Midlife Development in the United States (MIDUS), Grzywacz and Marks (2000) report that younger men were more inclined to higher negative spillover between work and home (in both directions) and less positive spillover from home to work than older men. They also found that younger women reported more positive spillover from work to home and more negative spillover from home to work, than older women did.

While most studies have found no significant relationship between age groups and the work-life balance (Pieterse & Mostert, 2005), it is suggested that the relationship between work and non-work may be even more important to younger employees than it is to other groups of workers (Sturges & Guest, 2004). This is because the former groups are seeking achievement of balance between the work and non-work aspects of their lives (Smola & Sutton, 2002) while at the same time pursuing their own career individualism. Therefore, with the older employees nearing retirement, the study hypothesises totally different effects on the age dimension, with younger workers altering the world of work in favour of a more flexible and manageable work routine and family responsibilities, with less interference between the domains.

3.5.1.2   Gender roles

Powell and Greenhaus (2010) explain the importance of understanding the effect gender has on the work-family interface as literature has reported inconsistent findings. Donald and Linington (2008) and Marias and Mostert (2008) explain that much research has focused mainly on female employees due to the increase of women in the workplace. However, because of changes in gender role orientations of male employees, researchers have begun to include men in the studies of work-family balance. In other

words, previous studies were mainly interetested in understanding how employed women integrate and deal with the demands of having both work and family responsibilities.

Evidence regarding gender differences in positive interdependencies such as work-family enrichment has been found to be mixed (Demerouti & Guerts, 2004; Pieterse & Mostert, 2005). In particular, the role of gender has largely been ignored in research on the interaction between work and home domains. Some studies have found no difference between males and females, whilst others found females to experience either higher or lower levels of enrichment than males (Geurts & Demerouti, 2003; Greenhaus & Powell, 2006).

On the contrary, South African researchers have consistently shown that men experience higher level levels of negative WHI (Mostert & Oldfield, 2009; Pieterse & Mostert, 2005) compare to women. The study suggests that male participants find it difficult to separate their work life from their personal life. Pieterse and Mostert (2005) indicate that no practically significant differences exist between negative WHI and positive HWI and the demographic characteristics of participants.

3.5.1.3   Educational level

There are inconsistencies in the literature as far as the relationship between educational level and the effects of work-home interaction is concerned. For instance, Frone (2003) found no significant relationships between educational level and work-home interference. On the contrary, Mostert and Oldfield (2009) report that there is a significant difference between individuals with secondary education who score higher on negative WHI and HWI, and further experience more positive HWI than individuals who attained tertiary education. In a similar vein, Pieterse and Mostert (2005) report that individuals with a Technikon diploma experienced a significantly higher negative WHI as compared to individuals with a grade 10 or grade 11.

3.5.1.4   Marital status

The impact of marital status on the work-home interaction has not been so clearly investigated, since studies often include only married employees in their study sample (Geurts & Demerouti, 2003; Pieterse & Mostert, 2005). The relationship between marital status and work-home interaction is therefore not clear. However, as Grzywacz and Marks (2000) report, being unmarried was associated with negative WHI. In this respect, Mostert and Oldfield (2009) report that unmarried employees indicated higher levels of both negative and positive WHI.

3.5.1.5   Parental status

Parental status seems to play a vital role in the experience of work-home interaction, more so for women than for men (Demerouti & Geurts, 2004; Pieterse & Mostert, 2005), particularly because women were initially tasked with the responsibility of parenting children. Women with young children have been reported to experience more conflict between work and family as compared to women without any children, as well as compared to men (Demerouti et al., 2004; Grzywacz & Marks, 2000). Moreover, there is evidence that living alone is associated with less negative spillover from work to family, but also with less positive spillover from family to work (Grzywacz & Marks, 2000).

3.5.1.6   Number of children in the household

It has been establidhed that having children in a household can positively influence the relationship between work and home environment. Previous studies have alluded to the fact that the age as well as the number of children living at home has an influence on work-home interaction in both directions. For example, Grzywacz and Marks (2000) report that men who have children are believed to experience more positive spillover from work to home than men without children

3.5.2 Work characteristics

Work characteristics are considered best at clarifying and understanding the job demand-resources model. The model is based on the assumption that in every organisation, there are two central categories that are eminent in any work tasks/activities, namely job demand and job resources. Although they contain both the job demand and job resources, the characteristics of the work are not the same; they differ in terms of the nature of the work to be performed and the working environment.

Job demands refer to those physical, psycho-social, or organisational aspects of the job that require (sustained) physical and/or mental effort and are, therefore, associated with certain physiological and/or psychological costs (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; van Aarde & Mostert, 2008). The construct job demands is defined as the degree to which the working environment contains stimuli that require some effort and that encapsulates the ideas that demands from work have negative consequences if they require additional effort beyond the usual to achieve work (Demerouti et al., 2001; Mostert, 2009). Some of the examples are high work pressure (high work pace and tight deadlines), high physical and/or emotional demands, working long hours as well as role conflicts. Geurts et al (2003) posit that work pressure is the most robust indicator of the relationship with work-home interference.

Job resources refers to those physical, psychological or organisational aspects of the job that may be functional in meeting task requirements (job demands) and may reduce the associated physical and or psychological costs thereby stimulating personal growth and development (Demerouti et al., 2001; van Aarde & Mostert, 2008). Job resources are perceived as aspects located in the task itself (performance feedback, skill variety, autonomy) as well as in the context of the task such as organisational resources (career opportunities, job security) and social resources (supervisor and colleague support) (Oosthuizen et al., 2011; van Aarde & Mostert, 2008).

The work characteristics are aligned with the job demand-control-support model (JDCS) theoretically developed by Karasek and Theorell (1990, Mostert et al., 2006; Mostert & Oosthuizen, 2006; van Aarde & Mostert, 2008). The model is based on the assumption that control over and support in one's environmental situation are crucial in determining psychological health, on the one hand, and active behaviour and learning on the other hand (Demerouti et al., 2004).

Oosthuizen et al (2011) conducted a study among married employees with children working at a Tertiary Education Institution to determine which of the job demands and resources are significant predictors of the W-NWI. Their study revealed that job demands with respect to work pressure and emotional demands were found to significantly predict all the work-nonwork role interference dimensions. This implies that employees who experience high work pressure and high levels of emotional demands will have difficulties in combining the work and nonwork roles.

Similarly, van Aarde and Mostert (2008) conducted a study to determine the relationship between job and home characteristics and positive and negative work-home interaction among employed females in six provinces in SA. Their results indicate that both job demands and resources were significant predictors of negative WHI and explained 46% of the variance. More specifically, pressures, overload and time demands, lack of autonomy, lack of supervisor support, instrumental support and low clarity predicted negative WHI. This study suggests that only those females who experience high levels of home pressure and a lack of autonomy at home have a tendency to experience negative feelings at home that can spillover to their work domain.

3.5.3 Home characteristics

It is clear from the available literature that work-to-home/family conflict dominated previous research as compared to home/family-to-work conflict (van Aarde & Mostert, 2008). This is evident from the limited empirical studies that have investigated the effects of home-to-work interactions (Demerouti et al., 2004) in relation to the

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characteristics of the home, which can positively influence the work domains. This means home resources as facilitating work performance through social support from spouse or family members have been rarely investigated.

However, home characteristics are viewed as home demands and home resources that influence an individual in one way or another (Nel, Koekemoer & Nel, 2012). They include characteristics such as family role conflict, family role ambiguity and time pressure (home demands) and social support, home resources, family structure. The quality of relationship with spouse, support from family members, and rewarding aspects of the household are seen as resourceful characteristics (Geurts & Demerouti, 2003, van Aarde & Mostert, 2008). Frone (2003) also maintains that factors that promote the home characteristics and its outcomes are derived specifically from the home domain, hence the work charateristucs are referred to as aspects of the work that interefere with aspects of the home and vice versa. For instance, Montgomery et al (2003) found that home demands in the form of quantitative, emotional and mental demands were significantly related to home-work interaction.

In line with the Job Demand-Resource Model and consistent with Frone's (2003) views, Nel et al (2012) describe home demands as those physical, psychological, social or organisational aspects of home that encompass on-going physical and/or psychological (cognitive and emotional) effort or skills, and are thus connected to some physiological and/or psychological consequences. In addition, they consider home resources as those aspects of the home that are instrumental in minimising home demands and the related physiological and psychological consequences in order to enhance personal growth, learning and development.

Van Aarde and Mostert (2008) report that positive HWI were found to be significantly predicted by home demands and resources which explained 10% of the variance in positive HWI. They report that home pressure such as having lots of work to do at home, finding it difficult to complete tasks at home and home support were found to predict positive HWI.

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3.5.4 Personality traits

A relatively small proportion of studies have investigated the role of personality in predicting interference between work and home. The literature has revealed a variety of personality characteristics that have an effect on the work-home interaction experienced by individuals. Personality traits, especially the Big Five, have been shown to influence behaviour and patterns as well as interpretations of objective situations in a variety of life domains (Wayne et al., 2007). For instance, Michel, Clark and Jaramillo (2011) conducted a meta-analysis view of the role of the five factors model of personality and its impact on the negative and positive forms of work-nonwork spillover. They found that FFM is a predictor of work-nonwork spillover. More specifically, their study indicated that extraversion ($\beta = -.08$), agreeableness ($\beta = -.06$), conscientiousness ($\beta = -.13$) and neuroticism ($\beta = .29$) were related to negative work-nonwork spillover, while extraversion ($\beta = .27$), agreeableness ($\beta = .11$), conscientiousness ($\beta = .12$), openness to experience ($\beta = .20$) were related to positive work-nonwork spillover. Thus, the FFM were equally predictive of both the negative and positive work-nonwork spillover. Similar results have been reported by other studies. For instance, Wayne et al. (2004) found that extraversion was related to both direction (positive and negative) of work-family facilitation and family-work facilitation.

In another study, Bruck and Allen (2003) found that conscientious individuals experienced less family interferences with work. Bruck and Allen (2003) speculated that the planning and organizing skills associated with conscientious employees helps them prevent demands from one domain interfering with the other. Individuals scoring high on neuroticism, in contrast, have been shown to experience increased levels of both work interference with home, and home interference with work (Wayne et al., 2004). Individuals high in agreeableness have also been found to report lower levels of work interference with home (Wayne et al., 2004) and time-based non-directional work-home interference (Bruck & Allen, 2003).

3.6 OUTCOMES OF WORK-LIFE BALANCE

The outcomes of work-life balance for both organisations and individuals have been well- documented in literature. Previous research has found that work-life balance practices are positively related to both organisational and individual outcomes such as an organisational effectiveness and significant business performance, employee productivity (Beauregard and Henry, 2009). On the contrary, both the individual and organisational consequences of overwork and occupational stress have been identified and include high levels of employee absenteeism and a decrease in job performance (Brough & O'Driscoll, 2011).

Several other studies have established that the mismatch between family and work roles can be considered as disadvantageous for both the individual and organisation and have negative consequences such as high levels of stress, reduced job satisfaction, decline in organisational commitment and more absenteeism (Lourel et al., 2009; Sańchez-Vidala et al., 2012). Other benefits reflected in the review of the literature are indicative of motivation, job satisfaction, organisational commitment, talent retention, performance, organisational citizenship behaviour and reduced turnover intention (Carlson et al., 2009; Downes & Koekemoer, 2011; Kossek et al., 2011). These studies have found that these positive behavioural outcomes for individuals occur even when employees do not use the work-life initiative programs in their workplace.

Therefore, in order to facilitate work-life initiatives, it is imperative that organisations across the globe become increasingly aware of the potential benefits inherent in work-life initiative programs, thereby creating a need for increased research in the work-life field. Work-life balance is one initiative that can provide employees with alterantive work arrangements aimed at motivating and maintaining a higher level of productivity. Therefore, the section that follows focuses on the individual and organisational outcomes of work-life balance.

3.6.1 Individual outcomes of work-life balance

Work-life balance at the individual level is associated with the maintenance of balance between responsibilities at work and home. As with the organisational outcomes, most studies have operationalised work-family balance in terms of low work-family conflict and high enrichment or used poorly defined measures to understand the individual's outcome of positive side of work-family research. For instance, Stoddard and Madsen (2007) posit that understanding the benefits of combining work and family should give both men and women greater satisfaction in their quest for quality of life. It should also help employers understand how to cultivate greater job satisfaction among their employees and improve individual and organisational performance. Clark (2000) believes that a good WLB and well-being can be achieved when there is no role conflict, and when people are satisfied with their work and family roles.

The idea that work-family balance has important implications for employee attitudes, behaviour, well-being as well as organisational effectiveness has been well documented in the literature. There is general consensus among scholars that work-life balance is highly valued by nearly all employees (Kossek et al., 2011) and it has important implications on people's well-being and work productivity all over the world (Lyness & Judiesch, 2014). Literature has shown that people who perceive balance between their work and life roles tend to be more satisfied with their job and life in general and report better physical and mental well-being (Carlson et al., 2009; Downes & Koekemoer, 2011; Greenhaus et al., 2003). In addition, work-life balance has been associated with improved productivity, attraction of new talent, organisational commitment and organisational citizenship behaviour (Casper & Harris, 2008).

Prior studies have also shown that work-life balance can be used to attract new talent. That is, the best way for the organisation to attract and retain quality employees is to adopt work-life initiatives and practices. Beauregard and Henry (2009) found that people are more attached to organisations that offer work-family policies than to traditional organisations, regardless of the extent to which they benefit themselves. In the study done by Downes and Koekemoer (2011), it is cited that 38% of the sample of

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employees indicaterd that they are considering leaving their current employer in order to gain a better work-life balance even if this means accepting a lower salary.

Other frequently demonstrated outcomes of work-home interface include a reduced degree of organisational commitment among employees (Lyness & Thompson, 1997). Research has established that work-life balance enhances attachment when employees find it personally useful. That is, employees who stand to benefit from work-life intiatives will view such practices more favourably than those who do not. On the contrary, low organizational commitment has been found to have a strong relationship with other organizational outcomes such as turnover, absenteeism, and decreased work effort (Joiner & Bakalis, 2006). The study conducted by Lyness and Thompson (1997) found that WFC was negatively related to affective commitment, positively related to continuance commitment, and not related to normative commitment.

Ten Brummelhuis and van der Lippe (2010) conducted a study comparing the effectiveness of work-life balance support among three groups: singles married and married employees with children. The results indicate that singles appeared to take advantage of several types of support. The availability and the use of flexible work arrangements were related to higher levels of helping behaviour among single employees. This finding is aligned with the assumption of the work-family enrichment which states that employees with fewer resources at home benefit the most from additional support at work. In addition, Hakanen, Peeters, and Perhoniemi (2011) argue that employees with resource reservoirs have a tendency towards resource caravans. Theoretically, work-life balance practices create a sense of assurance for employees that their organisation is supportive of employee well-being and non-work needs.

3.6.2   Organisational outcomes of work-life balance

The difficulty of trying to maintain a positive and balanced interaction between work and personal life often puts strain on the individual. This, in turn, can have negative implications for the organisation in terms of turnover, absenteeism, reduced performance and regarding the employees own personal life (poor physical and

psychological health, diminished life, marital and family satisfaction and dissatisfaction with leisure activities) (Geurts & Demerouti, 2003; Jacobs et al., 2008). Moreover, individuals with a salient family identity were more attracted to organisations that offer flexible options whereas those with comparable family and career identities were attracted to organisations offering either flexible options or dual-career paths and policies (Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005).

The world of employment is continuously changing, and if organisations are to survive, they need to understand the changing needs of their employees and implement different ways to foster their engagement in the workplace. In support of this view, De Cieri et al (2002) as well as Ten Brummelhuis and van der Lippe (2010) emphasise that in order for an organisation to successfully increase competitive advantage, it needs to develop strategies to attract, motivate and retain a highly skilled, flexible and adaptive workforce. Therefore, in order for an organisation to successfully attract and retain the most qualified job incumbents, it is imperative that work-life balance arrangements and initiatives be incorporated into the organisational policies and practices to assist employees in managing their multiple demands.

Allen et al (2000) established an association between work-family balance, higher job satisfaction and higher employee affective commitment. The literature also shows an association between work-family balance and organisational citizenship behaviour (Bragger, Rodriguez-Srednicki, Kutcher, Indovino, & Rosner, 2005). Prior studies have revealed that there is a consistent relationship between access to or use of work-life policies and job satisfaction. Moreover, job satisfaction has been associated with reduced job stress, lower emotional exhaustion, fewer health related symptoms, and increased productivity (Downes & Koekemoer, 2011). Job satisfaction is generally measured by different facets which relate to an employee's satisfaction with work, pay, rewards, promotion, and co-workers that contribute to an overall measure of employee job satisfaction. It reflects how contented employees are with their jobs. Greenhaus et al (2003) believe that individuals experiencing work-life balance may be more satisfied of their job and life "because they are participating in role activities that are salient to them" (p. 515).

Studies have emphasised that work-life balance essentially describes organisational initiatives aimed at assisting employees to manage the work and nonwork responsibility (de Cieri et al., 2002; Ten Brummelhuis & van der Lippe, 2010). In addition, work-life balance has been identify as being able to facilitate organisational policies such as flexible hours, telecommuting, childcare responsibility, job sharing, supportive organisational culture and family responsibility (Beauregards & Henry, 2009; Ten Brummelhuis & van der Lippe, 2010).

The basic principle in work-life balance policy is that future employees have the proclivity to perceive work-life balance options as desirable attributes during the recruitment and selection of a new job. It is assumed that the availability of work-life balance policies will influence an applicant's decision to seek employment with an organisation. Organisations can enhance their ability to recruit and retain a top-quality workforce if they provide employees with flexibility and resources to help them combine work and family more easily (Greenhaus and Parasuraman, 1999). It is argued that the availability of work-life balance influences the new entrants to join and fully contribute to work organisations (Carlson et al., 2009; Sánchez-Vidal et al., 2012). In addition, work-life balance policies symbolise a concern for the employees and their families, thereby creating a sense that the organisation is supportive of their needs. Moreover, the organisation can further benefit through work-life balance policies in the sense that it could improve its image in the market as part of its socially responsible strategy (Sánchez-Vidal et al., 2012).

However, there are other more tangible benefits accruing from work-life policies such as the reduction of absenteeism, lower stress levels, higher levels of productivity and performance, and greater quality of life, satisfaction and commitment among employees. For instance, Casper and Harris (2008) assert work-life balance policies enhance attachment by increasing organisational commitment and lowering intentions to turnover, particularly, when employees find them personally useful. Employees who stand to gain from work-life balance policies view them more favourably as compared to those who do not.

Findings from previous studies have shown that work-life balance policies should largely be implemented and managed by the line managers and supervisors. The implementation and practice regarding work-life balance policies operates quite differently across different organisations and countries, implying that there are no generic patterns regarding what such policies should contain. As stated by Ten Brummelhuis and van der Lippe (2010) supportive supervisors are considered relevant in promoting and assisting employees to boost their energy levels by discussing family-related problems. More importantly, supervisors should reinforce employee positive self-image by giving feedback, thereby reducing stress by showing understanding for the employee's family life.

More specifically, organisational culture has been singled out as the preferred site of inquiry in work-life balance, as it has been shown that culture is of great importance for employees. Accordingly, supportive organisational culture is required to ensure that the intent of work-life balance policies is realised in practice (Dikkers et al., 2007; Sánchez-Vidal et al., 2012). Work-life culture is a particular aspect of an organisation's culture as it reflects the attitudes and values in the organisation thereby enabling individuals to balance their work and nonwork lives.

Peeters, Wattez, Demerouti and de Regt (2009) argue that work-family culture within the organisation is very important for stimulating employees' optimal balance of their work and family life. Along same lines, Dikkers et al (2007) contend that there are two characteristics of the work-home culture, namely, support and hindrance. They describe support as the extent to which the organisation, direct supervisors and colleagues are perceived to be supportive of the integration of employees' work and family/personal life and the utilisation of work-family arrangements. They describe hindrance as the extent to which organisational norms and expectations are perceived to impede employees' work-family balance and the use of the work-family arrangements. This implies that the two characteristics of work-home culture act as two opposite ends of the continuum, with the one showing support for the existence of work-life balance, whilst the other is indicative of how the work interferes with the family domains. There are few studies that have examined the impact of work-home culture on individuals'

indictors of well-being such as burnout and engagement. For instance, in an empirical study, Peeters et al (2009) found that supportive work-family culture is associated with work-family enrichment, which in turn is related to engagement.

3.7   MEASUREMENT OF WORK-LIFE BALANCE

The review of related literature identified a considerable number of measuring instruments that capture the interface between work and home. However, much of the research has paid attention to role scarcity or negative work-home/family interference as compared to the positive side of work-home domains. In other words, much of the research has been focused on the work-family conflict, which fails to consider that the home domain can also influence the work environment. Previous studies have almost exclusively focused on the negative interaction between work and home without taking into cognisance that both work and home can also influence each other in a positive way.

A number of studies relied on general single items to capture the positive side of work-home interface (Greenhaus et al., 2003; Keene & Quadagno, 2004). Carlson et al (2006) argue that such items suffer from a lack of theoretical understanding of the work-home interface and are limited to construct validity. The absence of a conceptually-based measurement provides researchers and practitioners with little opportunity to document employees' level of work-home interface, and results in impaired ability to identify and evaluate viable organisational strategies for promoting work-life balance (Carlson et al., 2006).

Nonetheless, there appears to be two comprehensive and validated instruments that capture the work-home interface in both directions (negative and positive), namely the work-family enrichment and the work-home interaction instruments (Rost & Mostert, 2007). They measure the extent to which certain resources gained from an individual's work life can improve home/family life, as well as the extent to which resources gained from the home/family life can in turn improve the work life (De Klerk et al., 2013). Such instruments have been developed from a more rigorous theoretically and

empirically informed understanding of work-home/family interface. The following section outlines the measuring instruments that capture the negative and positive work-home interface.

3.7.1 Work-life enrichment scale

Work-family enrichment was measured by the Work-Family Enrichment Scale (WFES) that was developed and validated by Carlson et al (2006). Enrichment is a process by which one role strengthens or improves the quality of life in another role (Greenhaus & Powell, 2006). In other words, enrichment occurs when resources generated in one role improve the quality of life in another. The concept of resources is used widely to include personal, social capital and material assets and also consist of instrumental path (when a resource generated in one role, such as a skill, is transferred directly from one role to another) and affective path (when a resource generated in one role promotes positive affect in that role, which in turn produces high performance and leads to a positive affect in a second domain) (Greenhaus & Powell 2006).

The instrument consists of 18 self-reported items and measures work-family enrichment in both directions namely, work-to-family enrichment and family-to-work enrichment. The WFES captures the extent to which resource gains that are experienced in one domain are transferred to the other domain in ways that lead to improved quality of life for the individual in one role (Carlson et al., 2006). Specifically, enrichment occurs when resources (skill and perspectives, flexibility, psychological, physical, social-capital and material resources) gained from one role either directly improve performance in the other role referred to as the instrumental path, or indirectly through their influence on positive affect, that is the affective path (Carlson et al., 2006).

These items were generated to capture the true essence of the definition of enrichment by including the transfer of resource gains and enhanced functioning of the individual. Respondents indicated their level of agreement to each statement on a five-point scale ranging from "1" (strongly disagree) to "5" (strongly agree). Higher scores indicated that the participants perceived higher enrichment (Carlson et al., 2006).

Besides taking the direction of work-family enrichment (WFE) into account, Carlson et al (2006) identified three dimensions associated with each direction namely, (1) development, (2) affect and (3) capital; the three dimensions from family to work which are (1) development, (2) affect and (3) efficiency.

Other advantages of using work-family enrichment scale are outlined by De Klerk et al (2013).

- It was developed systematically to take into account multiple dimensions of potential enrichment.
- It includes both work-to-family and family-to-work directions.
- It uses established methodological procedures to develop the scale.
- The scale was tested across five samples.
- It was validated in various ways.
- It has been assessed in relation to potential antecedents and consequences as suggested in the existing literature.

Additionally, Hanson et al (2006) also highlighted that the work-family enrichment have been identified in various ways: gaining knowledge and/or skills usable in another role; providing a broader frame of references from which to relate to others; creating a buffer in one role against failure in another; increasing the complexity of one's self-image; increasing the availability of social support, generating energy and positive affect.

Carlson et al (2006) tested the item validation of the measure by using a six factor confirmatory model. The researchers identified items which had completely standardised factor loadings greater than .50. The results obtained prove that all items met the criterion with the lowest factor loading being .61, thus indicating it had item validity. Carlson et al (2006) reported a coefficient alpha of .92 for the full scale. In their study, Jaga et al (2013) conducted a reliability analysis on the scales and reported coefficient alphas that ranged between .89 and .95 which exceeded the acceptable level of .70.

Some of the limitations of the WFES identified in the literature involve items with double-barrelled questions (Carlson & Grzywacz, 2008), items that conveyed different elements and not structured in a singular idea and items that excluded all five categories of resources (skills and perspectives, psychological and physiological resources, as well as social-capital resources, flexibility and material resources) as proposed by Greenhaus and Powell's (2006) work-family enrichment model.

3.7.2   Survey Work-Home Interaction (SWING)

The Survey Work-Home Interaction (SWING) developed and validated by Geurts et al (2005) is the instrument that measures work and home interaction in both directions (interaction between the work domain and the home domain) and quality (positive and negative interaction) (Marais et al., 2009; Mostert & Oldfield, 2009). There is a growing interest amongst researchers to use the SWING as the measuring instrument for work-life balance in South Africa because of its psychometric properties and also for measuring the direction and quality of the work-home interaction.

The SWING is a 22-item scale that measures four types of work-home interaction, namely, negative WHI, positive WHI, negative HWI and positive HWI. All items are scored on a four-point frequency rating scale, ranging from "0" (never) to "3" (always). The four factor structures have been confirmed and validated across various studies and countries, including South African samples (Mostert & Oldfield, 2008; Pieterse & Mostert, 2005; Rost & Mostert, 2007). In addition, previous studies have also found acceptable reliabilities (Cronbach's alpha) for the four scales of the SWING that varied from .85 to .90; for positive WHI, alpha ranged from .67 to .79; for negative WHI, alpha varied from .78 to .79; and for positive WHI, alpha ranged from .76 to .88 (Van Aarde & Mostert, 2008).

There are several limitations levelled against the scales. Geurts et al (2005) state that one of the weaknesses of the SWING is that the mean scores and standard deviations are relatively low. Another limitation relates to the limited explanatory of the positive

WHI as compared to the negative WHI which is evident in the numerous studies conducted on negative WHI.

A detailed discussion of the SWING is presented in the research methodology chapter.

3.8   SUMMARY OF CHAPTER

This chapter provided an overview of contributing factors to the positive side of the work-family interface, specifically exploring the concept of work-life balance. The increased interest in the beneficial outcomes of work-life balance has been consistent with the emerging trends in psychology, organisational behaviour and family studies (Greenhaus & Powell, 2006). Subsequently, the chapter defines the concept work-life balance and its related constructs and briefly describes its contrasting image (WFC). Literature reveals that work-life balance remains empirically and conceptually underdeveloped relative to its constrasting image (work family conflict). The theoretical framework guiding the work-home interaction was presented. The chapter includes personal, home and work characteristics as the antecedents of work-life balance as well as the outcomes. The review of the literature propounds that work-life balance can be related to improved psychological health and enhanced wellbeing. The chapter concludes with brief synosis of the measurement of the work-home interface.

The next chapter discusses the construct employee engagement.

CHAPTER 4:   EMPLOYEE ENGAGEMENT CONSTRUCT

4.1   INTRODUCTION

The purpose of the literature review is to examine key concepts and related research relevant to employee engagement. Employee engagement is at the core of this research study, hence it warrants thorough discussion. This chapter presents the third part of the literature review which aims to give a comprehensive account of the construct employee engagement by situating the concept within the emerging positive psychology perspective. The chapter also presents approaches inherent in engagement and the theoretical frameworks underpinning the construct. The relevant literature and empirical evidence examining the antecedents and outcomes of engagement are explored. The chapter concludes with a brief summary and an overview of the next chapter.

4.2   PARADIGMATIC AND CONCEPTUAL FOUNDATION

The term paradigm refers to the worldview, together with the various philosophical assumptions associated with its point of view. Morgan (2007) conceptualises paradigm as a worldview which encompasses ways of experiencing and thinking about the world, including beliefs about morals, values and aesthetics. For the purpose of this study, the concept employee engagement is interpreted within the positive psychology paradigm.

4.2.1   Paradigmatic foundation: Positive psychology paradigm

Positive psychology is associated with enhancing optimal human functioning which is distinct from the weakness and malfunctioning envisaged in the burnout studies (Seligman & Csikszentmihalyi, 2000). Specifically, it focuses on the positive aspects of human behaviour which have been ignored by traditional psychology which emphasises mental illness and dysfunctional models (Jeung, 2011; Schaufeli & Salanova, 2008) as well as the wrongness of people and ignores human strength and optimal functioning. From the literature review, various studies unequivocally confirm

the overwhelming empirical research conducted on mental illness, especially burnout (Bakker et al., 2008; Nienaber & Martins, 2015). In search of a proportion of research conducted on employee engagement, Nienaber and Martins (2015) reveal that from over 921 possible articles from various databases, a fairly small portion (n=53) of articles investigated engagement at the individual and/or organisational levels. This reflects that few studies have been done by academics; the bulk have been conducted practitioners (Saks, 2006). Additionally, Macey and Schnieder (2008) have also attested to relative scarcity of employee engagement research being undertaken by academic researchers.

Nevertheless, it was the burnout research that has generated interest and attention of most contemporary researchers intent on to shifting and redirecting their interest towards the positive aspects of positive psychology. Positive psychology aims at redefining the psychological research towards helping healthy people achieve happiness, satisfaction, optimism, flow and productive lives and most importantly realise their full potential. The focus on the positive aspects eventually provides individuals with the opportunity to thrive and have fun during work-related activities, instead concentrating on fixing and repairing (Moshoeu, 2016). In particular, Seligman and Csikszentmihalyi (2000) describe positive psychology as "the beginning of catalyse a change in the focus of psychology from preoccupation only with repairing the worst things in life to also building positive qualities" (p. 5). Positive psychology pays particular interest in the study on strengths and virtue that enable individuals and communities to thrive, instead of merely survive.

Luthans, Youssef and Avolio (2007) maintain that interest in engagement comes as a result of mounting popularity of the positive psychology movement in organisational behaviour that emphasises positive aspects as opposed to negative psychological states. The concept of engagement resonates with the emphasis on positive organisational behaviour (POB) which aims at enhancing well-being at work (Bakker & Schaufeli, 2008; Ouweneel, LeBlanc & Schaufeli, 2012). Positive occupational behaviour can be defined as '…the study and application of positively orientated human resource strengths and psychological capacities that can be measured, developed, and effectively

managed for performance improvement in today's workplace' (Luthans & Youssef, 2007, p. 327). In addition, employee engagement emerges as a result of an organisation's need to strive to achieve exceptional performance to outperform its competitors brought by globalisation and increasing competitive business environments (Moshoeu, 2016).

Nienaber (2016) asserts that employee engagement is important and significant for enabling competitive advantage to enhance organisational effectiveness. The search for human capital is a crucial strategy for any organisation to gain its competitive advantage (Botha & Mostert, 2014; Moshoeu, 2016, Nienaber, 2016) in the rapidly changing business environment, purely because the knowledge, skills and abilities possessed by individual employees (Moshoeu, 2016) are the main sources of creativity as well as innovation in organisations. Therefore, having engaged employees is vitally important for the organisation as previous studies have shown that engaged employees help organisations reap benefits such as increased job satisfaction, organisational commitment, motivation and low turnover intention while simultaneously improving the health and well-being of employees (Bakker, Demerouti, & Schaufeli, 2003; Saks, 2006; Schaufeli & Bakker, 2004b).

The construct engagement has been the focus of theoretical debate for decades, given its association with positive organisational behaviour (Bakker, Albrecht, & Leiter, 2011; Bakker & Schaufeli, 2008; Luthans & Youssef, 2007). It has also attracted a great deal of attention from both academic researchers and practitioners since 1990 (Albrecht, 2010; Poon, 2013; Rothmann & Rothmann, 2010; Shuck & Reio, 2011), but differs in interpretations. Its appeal is linked to the notion that engaged employees are better performers, energetic, enthusiastic, fully immersed and therefore more likely to drive organisational success. The section that follows provides the conceptual foundation of the construct employee engagement.

4.2.2 Conceptual foundation of employee engagement

There are many different definitions and interpretations attached to the construct engagement (Albrecht, Bakker, Gruman, Macey, & Saks, 2015; Shuck & Wollard, 2010). However, no consensus has been reached regarding a single definition (Bakker et al., 2011; Saks, 2006). Notwithstanding, remarkable progress has been made towards clarifying the construct (Albrecht et al., 2015) but this seems futile given the overwhelming interpretations of employee engagement within the literature. This has led to what Gibbons (2006) calls "conceptual bleed", implying competing definitions that create significant confusion regarding what employee engagement really is.

For instance, employee engagement is viewed as a 'slippery slope' (Schaufeli & Salanova, 2011), a broad concept that includes passion, engrossment and excitement in work, and many other employee attitudes and behaviours, which further contribute towards the confusion surrounding the meaning of engagement (Macey & Schneider, 2008). It is also viewed as the repackaging of the well-known constructs of work-related attitudes such as job satisfaction, organisational commitment, organisational citizenship behaviour and job involvement (Bakker et al., 2011; Cole, Walter, Bedeian, & O'Boyle, 2012), productivity and customer loyalty (Harter et al., 2002; Shuck, Reio, & Rocco, 2011b). Other studies advocate its uniqueness which is totally different from some previous studies (Bakker, 2011; Bakker & Leiter, 2010; Macey & Schneider, 2008). There are therefore differing views on the definition of employee engagement created among competing practitioners.

Each of these extensive studies represents unique perspectives of the time, context and field resulting in incoherent approaches to defining employee engagement which in turn have resulted in misinterpretation (Shuck & Wollard, 2010). For instance, different reasons were advanced for its elusiveness and somewhat abstract concept (Nienaber & Martins, 2014). In other words, these different views created substantial confusion on the precise meaning, with researchers questioning whether employee engagement is conceptually and empirically different from other constructs. Nienaber and Martins (2014) also mention that the lack of consensus on employee engagement, its meaning

and measures as well as intervention strategy to its improvement, ultimately renders comparison impossible.

However, Macey and Schneider (2008) attempt to resolve the conceptual confusion by proposing employee engagement as an all-inclusive umbrella term that includes all different types of engagement (i.e., trait engagement, state engagement and behavioural engagement), each of which entails various conceptualisations such as proactive personality (trait engagement), involvement (state engagement), and organisational citizenship behaviour (behavioural engagement) (Bakker et al., 2008; Macey & Schneider, 2008). Furthermore, to add to the confusion, Gibbons (2006) presents a definition of employee engagement as a heighted emotional and intellectual connection that an employee has for their organisation, managers, colleagues that, in turn, influences them to apply discretionary effort to their work (p. 5).

Perhaps, this confusion is complicated by the misuse of the words 'work engagement' or 'employee engagement', which seem to be used interchangeably (Cole et al., 2012) even though the meanings are totally different. Employee engagement is a concept most often applicable among practitioners and is coined by the Gallup Research Group (Harter et al., 2002; Macey & Schneider, 2008; Zigarmi, Nimon, Wouson, Witt, & Diehl, 2009) with a possible link to individual and organisational outcomes. It has also been a subjected to criticism as a result of, among others, the numerous interpretations and applications mentioned earlier. In addition, the Gallup has been criticised for its lack conceptualisation and definitionas well as validation of the engagement construct.

It is for this reason that Macey and Schneider (2008) articulate that the concept is relatively new in academia. In similar vein, Nienaber and Martins (2014) also note that the concept and its measurement have not been fully developed resulting in the generation of a divergence of meanings of employee engagement relative to work engagement. The academic approach of engagement is primarily focused on defining and validating the psychological concept at a micro or individual level (Macey & Schneider 2008; Zigarmi et al., 2009) to better understand factors that promote engagement and disengagement.

The Gallup Research Group describes engaged employees as 'emotionally invested and focused on creating value for their organisation on a regular day basis' (Towers Perrin, 2003). Robinson, Perryman and Hayday (2004) define employee engagement as "a positive attitude held by the employee towards the organisation and its value. An engaged employee is aware of business context, and works with colleagues to improve performance within the job for the benefit of the organisation. The organisation must work to develop and nurture engagement, which requires a two-way relationship between employer and employee" (p. 9).

Harter et al (2002) define employee engagement as an "individual's involvement and satisfaction as well as enthusiasm for work" (p. 269), while Saks (2006) describes the same construct as "the degree which an individual is attentive and absorbed in the performance of their roles" (p. 600-619). Employee engagement is also defined as a distinct and unique construct that consists of cognitive, emotional, and behavioural components that are associated with individual role performance (Shuck et al., 2011b). Other researchers describe it in terms of the connection between employee's occupational roles and their workplace (Gibbons, 2006; Schaufeli, 2013).

Bakker and Demerouti (2008) as well as Schaufeli and Bakker (2004a) present an all-encompassing and holistic definition of employee engagement as individuals who are highly energised and resilient in performing their work, persistent and willing to invest extra effort, who exhibit strong work involvement along with experiencing feelings of significance, enthusiasm, passion, pride, inspiration, excitement and challenge from their work, and who fully concentrate and immerse themselves in their work without noticing the passing of time. This definition considers engagement in terms of how employees experience their work and their organisations as stimulating and energetic and something to which they really want to devote time and effort (**vigour**); as a significant and meaningful pursuit (**dedication**); and as engrossing and interesting (**absorption**).

Employee engagement reflects a positive, fulfilling, affective-cognitive, work-related state of mind that is persistent and pervasive (Schaufeli et al., 2002) and is measured with the Utrecht Work Engagement Scale (UWES). The instrument is mostly used in defining and validating the psychological concept towards the micro or individual level (Macey & Schneider, 2008; Zigarmi et al., 2009) to better understand factors that promote engagement and disengagement in the workplace.

Much of what has been reported about employee engagement in the practitioners is based on opinion and perception and empirical studies suggesting that it is atheoretical (Poon, 2013) and rooted in practice which lacks valid measurement (Christian, Garza, & Slaughter, 2011; Jeung, 2011; Macey & Schneider, 2008) than on constructed on theoretical framework (Saks, 2006). Employee engagement primarily focuses on the macro issues such as productivity, profit and loyalty for the organisation as opposed to individual micro issues with aspects such as happy, satisfaction, fun, enjoyment and hardworking (Demerouti & Bakker, 2011). Engaged employees are more likely to be happy in their workplace; they stay longer and are therefore less likely to look for work elsewhere.

At a different level, work engagement is the most preferred concept among academics and involves the connection between the employee and their work activities (Nienaber & Martins, 2014; Schaufeli, 2013; Schaufeli & Salanova, 2011). Work engagement is characterised by a high level of energy and strong identification with one's work (Bakker et al., 2008). Moshoeu (2012) maintains that engaged employees are aware of their business context and perform their work in a competent manner, with their colleagues, to improve performance and productivity for the benefit of the organisation.

Taken all together, the term employee engagement is apparently as attractive for organisations as it is for the professional societies and consulting groups who promote it. It is the connection shared by employees towards their organisation in terms of mission and values and willingness to commit the necessary emotional and personal energies to excel in their work. The outcomes of employee engagement are purpoted to be exactly what most organisations are seeking, such as employees who are more

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productive, profitable, safer, healthier, less likely to turnover, less likely to be absent, and more willing to engage in discretionary efforts. In the context of the literature available, work engagement refers to the relationship of the employee with his or her work, whilst employee engagement also includes the relationship with the employee's professional or occupational role and with his or her organisation.

In the context of this study, employee engagement is defined within a positivist framework as a malleable state that is solely measurable through quantitative techniques and reported via the positivist lens. It thus builds on a range of debates within the psychological engagement paradigm. The study adopts the definition by Nienaber and Martins (2015) which refers to engaged employees at both the individual and organisational levels as employees who are fully absorbed/immersed by and enthusiastic and energetic about their work, and who are willing to take initiative and positive action to further advance the organisation's reputation and interests (p. 405). The definition presented by Nienaber and Martins (2014) acknowledges the complexity of the construct and presents a definition which could be applicable for both academic and practitioner researchers.

4.3   Approaches to employee engagement

As already mentioned, the academic researchers were slow in their adoption of the engagement constructs. Although their interpretation of engagement focuses on the psychological states as compared to behavioural outcomes, there is no agreement on its exact meaning. It is this confusion that precludes clear intervention programmes meant to enhance initiatives that foster engagement in the workplace. This section provides a variety of approaches from the academic perspective that portray the states of employee engagement.

4.3.1   Need-satisfying approach

Kahn (1990) was the first researcher to actually present a conceptual foundation of employee engagement in the workplace (Kim et al., 2009; Rich, LePine, & Crawford,

2010; Shuck & Wollard, 2010), in his article: "Psychological Conditions of Personal Engagement and Disengagement at Work" which is most widely cited. He conceptualised personal engagement as the "… harnessing of organisation members' selves to their work roles by which they employ and express themselves physically, cognitively, and emotionally during role performances'' (Kahn, 1990, p. 694). For him, engagement involves a dialectic relationship between the person's preferred self in task behaviours that promote connections to work and the work role that allows this person to express him or herself.

Essentially, engagement is the preferred self and the connection with others at group levels with colleagues, supervisors and the organisation. It is proven that engaged employees are physically, cognitively and emotionally connected to their work and to others (Kahn, 1990; Rich et al., 2010), and that these states of being are affected significantly by three psychological conditions, namely meaningfulness, safety and availability (Kahn, 1990; Shuck, 2011). Therefore, the more engaged people are in each dimension, the higher their overall personal engagement in their work activities.

May, Gilson and Harter (2004) were the first researchers to actually expand the theoretical framework of Kahn (1990) and also to test the three psychological conditions. They define engagement by emphasising the importance of people bringing their physical, emotional and cognitive resources which sustain role-related tasks when they engage themselves in work (May et al., 2004, p. 13) and furthermore by differentiating it from job involvement (how a job is tied to one's self-image) and flow (focus on one's cognitive state during a job activity) which are conceptually similar to Macey and Schneider's (2008) framework of engagement. Using a sample of 203 employees from a large insurance company, their results indicated that engagement had a positive relationship to meaningfulness (r=.63), safety (r=.45) and availability (r=.29).

Recently the study by Rich et al (2010) confirmed that the concept engagement should be understood in relation to the framework outline by Kahn's (1990) foundation. They indicate that engagement involves investing one's hand, head and heart (physical, cognitive and emotional energy respectively) during a role performance. For them, job

engagement is considered a "multidimensional motivational concept which reflects the simultaneous investment of an individual's physical, cognitive and emotional energy in active work performance" (Rich et al., 2010, p. 619). In addition, the study conducted by Shuck (2011) among a sample of 283 employees in multiple fields of industry was the first research to empirically suggest that engagement is a positive predictor of intention to turnover and discretionary effort.

4.3.2   Burnout-antithesis approach

Engagement has been long been defined as the positive antithesis of burnout. Maslach, Schaufeli and Leiter (2001) maintain that focusing on engagement is like focusing on the energy, involvement and efficacy, which are presumably the direct opposites of the three burnout dimensions, namely, exhaustion, cynicism and inefficacy. Maslach and Leiter (1997) propose that the opposite scoring pattern on three aspects of burnout (as measured by the Maslach Burnout Inventory (MBI)) implies engagement. This suggests that the lower scores on emotional exhaustion and cynicism scales and the higher scores on the professional efficacy scale of the MBI are indicative of higher levels of engagement. Hence engagement is defined as the erosion which can be measured by the opposite instruments of burnout. In this way, engagement constitutes the positive pole while burnout the negative pole. Maslach et al (2001) define engagement as "a persistent, positive affective-motivational state of fulfilment in employees that is characterised by high levels of activation and pleasure" (p. 417).

An alternative perspective operationalises engagement differently and independent from the Maslach and Leiter (1997) viewpoint. Schaufeli et al (2002) reports a slightly different definition of engagement, having tested the MBI-GS. In principle, they partially agree with the burnout researchers that indeed burnout is the negative antithesis of engagement, but argue that engagement should be operationalised in its own right and independent of other different instruments.

Instead of using a single instrument such as MBI-GS, Schaufeli et al (2002) consider burnout and engagement to be opposite concepts that should be measured

independently using different instruments. To them, engagement cannot be measured by the opposite profile of MBI scores. Specifically, Schaufeli et al (2002) define engagement as "… a positive fulfilling, work-related state of mind that is characterised by vigour, dedication and absorption. Rather than a momentary and specific state, engagement refers to a more persistent and pervasive affective-cognitive state that is not focused on any particular object, event, individual, or behaviour." (p. 74).

Studies using a similar framework as that by Schaufeli et al (2002) provide additional empirical support for the approach by Maslach et al (2001). For instance, Schaufeli, Bakker and Salanova (2006) developed and psychometrically evaluated a shorter self-report questionnaire to measure engagement. The questionnaire was distributed in 10 different countries with realise sample size of N=14 521. Their results indicate that the original 17 item Utrecht Work Engagement Scale (UWES) can be administered using the shorter 9 items (UWES 9). This means that the shortened versions of the scales correlated highly with their original longer (17 item) scale, sharing more than 80% of their variance. Furthermore, the internal consistencies of the scores from the three short scales were sufficient in almost all 10 countries.

Despite these results, researchers have criticised Schaufeli's conceptualisation of engagement. For example, Shirom (2003) has argued that the three dimensions of engagement were not developed theoretically, but are merely representations of the opposite of burnout. Shirom (2003) additionally criticises the UWES because its dimensions overlap considerably with other psychological concepts. For example, vigour includes motivational elements (e.g., willingness to invest effort) and mental resilience (e.g. persistence in the face of difficulties); dedication overlaps with the major dimensions of job involvement and absorption overlaps with psychological presence at work (Kahn, 1990).

4.3.3 Satisfaction-engagement approach

Based on the Gallup Research Group's extensive research on engagement, Harter et al (2002) define engagement as an "individual's involvement and satisfaction with as well

as enthusiasm for work activities" (p. 269). They consider people as emotionally and cognitively engaged when they know what is expected of them, have what they need to do their work, have opportunities to feel an impact and fulfilment in their work, perceive that they are part of something significant with colleagues whom they trust and have chances to improve and develop. For them, engagement does not occur once, but rather occurs on a regular day-to-day basis, and is actively applied in employee's work behaviour.

In a meta-analysis among 7 900 business-units across different industries, Harter et al (2002) provide evidence that the relationships for all items were generalised to multiple outcomes across different industries. Their study was the first to actually examine the business unit level between the employee engagement-satisfaction and productivity and profitability. In other words, they were the first researchers to link employee engagement and performance-based outcomes.

4.3.4   Multidimensional approach

Consistent with other previous studies (Harter et al., 2002; Kahn, 1990; Maslach et al., 2001), Saks (2006) defines engagement as "a distinct and unique construct consisting of cognitive, emotional and behavioural components that are associated with individual role performance" (p. 602). This definition does not only relate to the conceptual framework of Kahn (1990), but also assimilates the mechanism of engagement in the workplace through the social exchange theory, and was the first to separate job engagement and organisational engagement into separate types of employee engagement. Literature posits that Saks (2006) was also the first researcher to empirically testcomprehensive antecedents and consequences of employee engagement within the academic literature.

For instance, Saks (2006) conducted a study to test a model of the antecedents and consequences of job and organisational engagements based on the social exchange theory. The study was conducted on a small sample of employees working in a variety of organisations. Their study provides one of the first empirical tests of the antecedents

and consequences of employee engagement and makes a number of contributions to this emerging construct. The results of their study show that job and organisational engagement are related but distinct constructs, as the antecedents and organisations are different. This implies that the psychological conditions leading to job and organisation engagement as well as the consequences are not the same. They suggest that the survey participants rated the job engagement significantly higher than organisational engagement

Recently, Shuck and Wollard (2010) proposed a definition of employee engagement for the Human Resources Development (HRD) as "an individual employees' cognitive, emotional and behavioural state directed toward desired organisational outcomes" (p. 103). Their definition is also consistent and similar to that postulated by Kahn (1990), Macey and Schneider (2008) and Saks (2006) who have considered engagement along the three components namely, cognitive, emotional and behavioural. Therefore, their contribution which was built significantly on the work of Saks (2006), helped to clear the cluttered, scattered, and unfocused conceptual state of employee engagement by breaking the engagement construct into distinct parts. They further contributed immensely to the understanding of engagement in showing its distinctiveness.

Taken together, clear divergences on the concept of engagement are apparent among both the practitioners and academics perspective. There is no agreement on what engagement entails as reflected by the academic strands. The definitions presented are rather too vague, and do not clarify whether the focus of engagement is at the individual or organisational level. The term employee engagement is sometimes used interchangeably with work engagement, yet the interpretations are vastly distinct. Guest (2013) refers to the concept of engagement as a catchall that captures a range of work-related attitudes, including job satisfaction, alongside perceptions of various organisational behaviours such as leadership, voice and involvement, while Gibbons (2006) calls it "conceptual bleed". In addition, the different measuring instruments of the constructs make it extremely difficult to grasp the essence of engagement. Conceptually, it seems that there is plausible explanation that engagement is a psychological state of mind and a motivational construct. Remarkably, the positive

outcomes shared by different approaches are compelling and universally accepted that engagement is the key driver of business performance, productivity, loyalty and profit margins.

4.4 THEORETICAL FRAMEWORKS UNDERPINNING EMPLOYEE ENGAGEMENT

There is an abundance of theoretical frameworks contextualising employee engagement that cannot be compressed into one overarching framework in the literature. However, it should be noted that no effort has been made yet to consolidate the entire theoretical framework to achieve an acceptable theory of employee engagement discourse. Two predominant theoretical frameworks have captured most interest. They have been debated and are widely used to contextualise engagement, the ethnographic study of engagement by Kahn (1990) and the burnout-engagement continuum by Schaufeli and Bakker (2004a). Both theories contextualise engagement in terms of three dimensions and empirical evidence does exist, that shows how engagement is correlated with the dimensions. Other frameworks used parsimoniously include the social exchange theory by Saks (2006) and psychological state engagement by Macey and Schneider (2008). This section of the chapter summarises the frameworks underpinning engagement.

4.4.1 Kahn's (1990) psychological conditions

Kahn (1990) has been recognised as the father of the engagement construct based on the work of Gottman's (1961) social role which is defined as activities governed by certain societal normative demands (p. 88). Social roles include a number of aspects such as the tasks that have to be completed, societal expectations and constraints governing those tasks (cited in Kahn, 1990). It is this social role that motivated Kahn (1990) to begin applying engagement theory in the workplace based on his article entitled: *"Psychological Conditions of Personal Engagement and Disengagement at Work"* which is most widely cited. This theoretical framework is grounded in the role theory which suggests that people vary in terms of their attachments to and absorption in their roles.

In his grounded theory, Kahn (1990) considers personal engagement as "the simultaneous employment and expression of a person's 'preferred self' in task behaviours that promote connections to work and to others, personal presence, and active full role performance" (p. 700). Consistent with the role theory, an engaged employee is considered as someone who is able to keep him/her preferred self within the role, thereby infusing personal energy into role behaviour and expressing the self through role performance.

Kahn (1990) conducted an ethnographic study among employees in the summer camps and architecture firms as an observer and outside researcher respectively, where he was able to tell apart employees who were personally engagement (or disengagement) in their daily task performances. Kahn (1990) defines personal engagement as "the harnessing of organisation members' selves to their work roles by which they employ and express themselves physically, cognitively and emotionally during role performances" (p. 694). Likewise, personal engagement is also defined by Simpson (2009) and Schaufeli et al (2006) as physically, cognitively, and emotionally employing oneself during work role performances. Therefore, when employees are personally engaged, they are able to keep their preferred self within their roles, thereby driving personal energy into role behaviours and expressing the self through role performance. Thus, personal engagement focuses on how the psychological experiences of work and work contexts shape the process of people presenting and absenting themselves during task performances.

Kahn (1990) states that "People use varying degrees of their selves, physically, cognitively and emotionally, in the roles they perform, even as they maintain the integrity of the boundaries between who they are and the roles they occupy" (p. 692). He argues that an engaged employee should be cognitively vigilant, physically involved and empathically connected to others when they display their creativity, values, beliefs and feelings. These attributes suggest that employees who know what is expected and required of them and form a strong relation with others in a group is considered engaged.

The physical component of engagement refers to having high levels of energy and mental flexibility while working, being willing to invest extra effort into one's work and persisting in the face of difficulties (this resonates with the dimensions of **vigour**). The emotional component of engagement entails a strong involvement with one's work and also when one experiences a sense of worth, interest, self-importance and challenge (**dedication**). The cognitive components of engagement refer to being completely focused and contently immersed in one's work (**absorption**), but experiencing difficulty to disconnect from the work as time draws nearer to leave one' work until the next day (Simpson, 2009; Rothmann & Rothmann, 2010).

On the contrary, Kahn (1990) defines personal disengagement as the decoupling of the self from the work. It involves people withdrawing and defending themselves physically, cognitively and emotionally during role performance (p. 694). In similar vein, Olivier and Rothmann (2007) describe disengaged individuals as people who are estranged from their work and who hide their true identity, thoughts and feelings when performing their role activities. Therefore, when an individual is personally disengaged, he or she withdraws and defends the self through behaviours that block connections, physical, cognitive and emotional presence, and generates incomplete role performances. The disengaged employees normally remove their self from others and display behaviour that suppresses their self in role activities. Essentially, Kahn's (1990) definition highlights the importance of being psychologically present (head, body and heart) when occupying and performing an organisational role.

In addition, Kahn (1990) proposes that such connectivity could only be accomplished through three fundamental conditions that could determine the extent to which an individual employee expresses his or her preferred self in a performance. These conditions are meaningfulness, safety and availability and could be used to determine the level of being engaged, not engaged and actively disengaged people. Meaningfulness refers to those elements of work life that generate incentives or disincentives to engage. The condition of safety characterises the components of social systems that produce variable levels of threat, consistency and predictability in the work

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environment in which individuals choose to engage. Availability is associated with individual distractions that require the attention of people and leave them with more or fewer resources with which to engage in role activities. A comprehensive description of each condition will be presented in the next section.

According to Kahn (1990) work relationships can deepen a person's experiences of purpose, heighten their sense of belonging, affirm their identity, enable trust, alleviate anxieties, build and sustain energy, and provide emotional relief. Hence, meaningful work is considered determinant factor of whether employees will be engaged in their work activities or not. Undeniably, success depends on how employees perceive and experience the psychological conditions when performing their work activities (Shuck et al., 2011b). Consequently, failure to exhibit any of the three conditions would suggest that employees are disengaged.

Taken all together, Kahn's (1990) definition of engagement takes into consideration a person's physical, emotional and cognitive aspects as relevant, and further provides specific conditions aligned to either being engaged or disengaged at work. Furthermore, his framework of engagement is based on the degree to which employees find meaning and fulfilment and the extent to which they are energised and inspired in their work tasks, how well they work with significant others (colleagues, supervisors, line manager) and how they relate to organisational culture in general. As a psychological state, engaged employees are connected to their work on a personal level that goes beyond merely showing up and performing work tasks for the duration of their working hours.

4.4.1.1 *Psychological meaningfulness*

Psychological meaningfulness is viewed as the most important psychological state of work condition because it captures the fundamental reasons behind why people seek employment (Moshoeu, 2016). It is a focal area which attaches significant meaning on why people spend a large portion of their lives at work (Rothmann & Welsh, 2013) inspite of the added value such as personal growth and development or seniority one

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achieves at work. It answers questions relating to how meaningful it is to bring the authentic self to the workplace in view of the return receive to do so (Nienaber, 2016), which includes feeling valued by the organisation, having a job that provides challenges and varieties, and good interpersonal relationships with colleagues on professional and personal levels.

Kahn (1990) asserts that individuals will experience more psychological meaningfulness and invest more of themselves in achieving organisational goals when they experience greater congruence between the self and the requirement of their work role. This is consistent with the Social Exchange Theory (SET) which postulates that duties and responsibilities are generated through a series of interactions between employers and employees who are in a state of reciprocal interdependence. The basic assumption of the SET is that the relationship between employers and employees evolves over time into trusting, loyal, and mutual commitments as long as both the employers and employees abide by certain rules of exchange (Saks, 2006), suggesting that employees are required to sell their knowledge, skills, expertise and time (as level of engagement) in return of certain rewards and incentives (similar to the economic law of supply and demand). For instance, when employees receive compensation and socioemotional resources from their organisation, employee feel obliged to bring themselves into the role performance as repayment for the resources received from their organisation. Therefore, when the organisation fails to provide these resources, employees are more likely to disengage themselves from their roles.

For instance, apart from the common job characteristics and autonomy, job involvement and flow, motivation and organisational commitment (May et al., 2004), work-role fit has also been identified as one of the factors which is relevant in the correlation between meaningfulness and engagement (Kahn, 1990; May et al., 2004; Olivier & Rothmann, 2007; Rothmann & Rothmann, 2010). That is, the alignment the **self-concepts** and their roles within the organisation results in the experience of meaningfulness. In similar vein, Shuck et al (2011a) maintain that good fit between an individual's self-concept and organisational roles provides opportunities for employees to be involved in individually meaningful work that ultimately influences their work-

related attitudes. Basically, good fit promotes strong professional congruence with organisational experiences and, based on such experiences, employees develop job-related attitudes which affect the overall performance. Therefore, individuals experiencing high levels of work-role fit will perceive their jobs to be challenging and will go beyond occupational restrains to accomplish tasks.

Jeung (2011) considers the work of Kahn (1990) as meaningful in the sense that he gave meaning to the understanding of engagement applicable to the workplace context through three conditions considered as the theoretical foundations of engagement in the positive organisational behaviour movement. Meaningfulness is derived from three elements of work life including task characteristics, role characteristics and work interaction.

On the contrary, meaningful work can often be associated with apathy and detachment from work due to a number of factors (May et al., 2004, Moshoeu & Geldenhuys, 2015; Public Display Technologies, 2015). The lacks of meaningful and repetitive work as well as poor person-job fit are aspects that could manifest in psychological distress leading to disengagement. Nienaber and Martins (2014) state that actively disengaged employees are not only less productive, but have the tendency to engage in acts of hostility towards the employer. As a result, employees have to seek out ways to restore meaningfulness in order to foster motivation and attachment to their work. It is pointed that employees experience meaningfulness when they feel worthwhile, useful and valuable (Kahn, 1990; May et al., 2004, Rothmann & Welsh, 2013), and furthermore, when they recognise that they are making a significant difference and are not being taken for granted by their organisation.

4.4.1.2 *Psychological availability*

Psychological availability is conceived as the sense of possessing the physical, emotional and psychological resources that are needed to engage one self in work (Jeung, 2011; Kahn, 1990; Rothmann & Welsh, 2013; Shuck et al., 2011a). In other words, availability relates to the level of competency, skills, expertise and knowledge

as well as readiness to bring the authentic self to the workplace, in line with the available resources to execute a specific task. There are basically four factors that influence psychological the availability, namely, depletion of physical and emotional energy, individual insecurities and outside lives.

According to Hakanen, Schaufeli and Ahola (2008a) job-related resources are the major determinants of psychological availability. That is, the availability of resources increases employees' confidence to engage in the assigned tasks. Bakker and Demerouti (2007) maintain that resources are necessary to deal with demands at work so that employees can become engaged; they also promote psychological availability. Kahn (1990) points out that issue in people's lives outside of work "leave them more or less available for investments of self during role performances" (p. 705). Factors that may influence psychological availability include the individual's resources in terms of physical and emotional energy, work-role security and outside activities (May et al., 2004; Rothmann & Rothmann, 2010).

4.4.1.3 *Psychological safety*

Psychological safety is conceived as the ability to safely engage in work-related activities without fear of negative consequences to self-image, status and career at work (Jeung, 2011; Rothmann & Welsh, 2013). Psychological safety is described as feelings of being able to safely engage one self without fear of negative consequences to self-image, status and career at work (Jeung, 2011; Kahn, 1990; Rothmann & Welsh, 2013; Shuck et al., 2011a). Generally speaking, people feel safer in situations they perceive that they will not suffer or become disconcerted for expressing their true selves at work. For instance, supportive and trust-worthy supervisor and colleagues relationships are most likely to promote feelings of psychological safety at work.

According to May et al (2004) unsafe conditions exist when individual employees find themselves in situations that are ambiguous, unpredictable and threatening. Kahn (1990) states that "situations promoting trust are predictable, consistent, clear, and none-threatening, people were able to understand the boundaries between what was

allowed and disallowed and the potential consequences of their behaviours" (p, 708). Interpersonal relationships, general group and intergroup dynamics, management styles, and organisational norms are some of the extraneous factors influencing feelings of safety (Kahn, 1990).

On the basis of the aforementioned discussion, when the work role is meaningful, the general environment is safe, and enough resources are available, individuals tend to demonstrate "active, full performances" (Kahn, 1990, p. 700) of their work roles. These performances include physical, cognitive, and emotional components. The four dimensions of psychological safety include interpersonal relationships, group and intergroup dynamics, management style and process and organisational norms.

The next section presents empirical evidence of the psychological conditions and engagement.

4.4.1.4   Empirical Validation of Psychological Conditions

There is growing empirical evidence that points to the relationship among the three psychological conditions, namely meaningfulness, safety and availability and engagement. For instance, the study conducted by May et al (2004) developed a twenty-four item scale to assess Kahn's (1990) three dimensions of engagement (i.e., physical, emotional, and cognitive). Their factor analysis failed to achieve the three conditions and reliable dimensions; instead, it extracted four factors. One possible explanation could be that the twenty-four items did not concisely capture Kahn's (1990) theoretical conceptualisation of engagement. In addition, their measure of the emotional dimension of engagement overlaps with the major dimensions of job involvement as indicated by the item: "My own feelings are affected by how well I perform my job." Taken together, these methodological problems may have prevented, May et al (2004) from identifying the three distinct dimensions of engagement. In light of these findings, a construct valid scale of engagement based on Kahn's (1990) work was not validated.

Subsequently, Olivier and Rothmann (2007) undertook a study among employees in a multinational oil company to investigate the antecedents of engagement. Quite similar to May et al (2004), their study also reported that psychological meaningfulness and availability mediated the relationship between antecedents of work engagement and psychological conditions, with meaningfulness as the strongest predictor of engagement.

In another study based on two samples from various organisations in South Africa, Rothmann and Rothmann (2010) sought to determine the association of employee engagement and three psychological conditions. Using the cross-sectional design method, it was hypothesised that meaningfulness, safety and availability is positively and significantly related to employee engagement. Consistent with Olivier and Rothmann (2007), their results confirmed a statistically positively association of meaningfulness and availability with employee engagement. In addition, their result also reported that meaning and availability explained approximately 20% of the total variance of employee engagement, implying that the remaining variance were beyond the scope of the study. Their study reported that psychological safety yielded poor reliability and as a result, it was discarded from further analyses.

Van Zyl, Deacon and Rothmann (2010) explored the relations between the experience of work-role fit, meaningfulness and employee engagement among industrial and organisational psychologists in South Africa. Their study intended to examine how industrial and organisational psychologists experience the meaning of work and to investigate the relationships between the experiences of work-role fit, meaning of work as well as psychological meaningfulness and engagement, using the happiness framework proposed by Seligman and Csikszentmihalyi (2000). Their results show that work-role fit mediated the relations between a calling orientation to work and meaningfulness; work-role fit also partially mediated the relationship between a calling orientation to work and engagement. These findings suggest that the majority of the survey participants view work as a calling and therefore experienced more meaningfulness and work engagement. This perspective should be fostered because of its contribution to experiences of work-role fit, meaningfulness and engagement.

Rothmann and Welsh (2013) conducted a study to examine the antecedents of engagement among a sample of 309 employees in an organisation in Namibia. It was hypothesised that the psychological conditions are significantly positively related to employee engagement. As expected, the results showed that psychological meaningfulness (strongly) and psychological availability (moderately) was statistically significantly related to employee engagement. The effect size of meaningfulness (F = 24.69, p ≤ 0.01) was almost double the size of availability (F = 5.24, p ≤ 0.01). This suggests that employees, who perceive a good fit between their work roles and the workplace as conducive to living out their beliefs and values tend to invest greater personal effort in their jobs (Olivier & Rothmann, 2007). Surprisingly, the availability of resources and support from colleagues were found to indirectly relate to employee engagement.

Taken all together it is clear that only two of the three conditions identified by Kahn (1990) were found to be significant predictors of engagement, with safety receiving the least reliability in the majority of the studies. In addition, clear evidence emerged that employees who have good working interactions (work role-fit) with their colleagues and others have the proclivity to increase engagement, a finding which aligns with some of the definitions of engagement. Accordingly, Kahn (1990) concludes that meaningful interactions promote dignity, self-appreciation and a sense of being worthwhile as the outcomes of interacting with others in meaningful ways. Subsequently, individuals in turn, derive meaning from the social identities they receive from salient group members. Thus, work interactions produce invaluable sources of meaning in people's lives because they allow people to feel known and appreciated (May et al., 2004) whereas loss of social identity relates to meaninglessness.

4.4.2   Schaufeli and Bakker (2004) burnout and engagement

The second theoretical approach to engagement was advanced by Maslach and Leiter (1997), Maslach et al (2001), Schaufeli et al (2002) and Schaufeli and Bakker (2004a). These researchers view engagement and burnout as two opposite constructs that are related. In actual fact, they view engagement as the positive counterpart of the very

negative concept of burnout. Burnout is described as a prolonged response to chronic emotional and interpersonal stressors on a job characterised by dimensions of exhaustion, cynicism and a lack of efficacy (Cole et al., 2012; Mäkikangas, Kinnunen, Rantanen, Mauno, Tolvanen, & Bakker, 2014). Specifically, burnout is the result of high job demands and a lack of job resources and can lead to negative outcome such as staff turnover and absenteeism (Rothmann & Joubert, 2007) or health impairment.

Exhaustion is considered the most central quality of the syndrome. It includes feelings of overextension and is characterised by the experience of being drained of emotional energy and feelings of chronic fatigue. Cynicism entails a sense of generalised negativity and the distancing of one's self from others and various aspects of the job. The third dimension, inefficacy, refers to feelings of incompetence, lack of achievement and diminished productivity (Maslach et al., 2001, Mäkikangas, et al., 2014).

Empirical evidence has shown that some people do not experience burnout, regardless of high job demands and long working hours, because they seem to find pleasure in working hard and dealing with job demands (Schaufeli & Bakker, 2004b; Rothmann & Joubert, 2007). Such people may be so engrossed in their work activity to such an extent that external circumstance cannot influence them otherwise; they can be seen as workaholics. Moshoeu and Geldenhuys, (2015) conducted a study among a sample of University staff to determine the relationship between job insecurity and two work-related attitudes, organisational commitment and engagement. Their study indicated higher perception of job insecurity, which simultaneously manifested in higher levels of organisational commitment and engagement towards work roles. In addition, the study conducted by Public Display Technologies (2015) reported that approximately 58% of employees surveyed felt demotivated to make significant contribution to their organisation; they remained with their organisation due to lack of alternative employment opportunities.

Although Maslach and Leiter (1997), and Schaufeli et al (2002) each ground their conceptualisations of engagement in the literature on burnout, these researchers differ with respect to their definition and measurement. Specifically, Maslach and Leiter

(1997) define engagement as the positive antipode of the three dimensions of burnout, namely, exhaustion, cynicism and inefficacy. They believe that just as burnout is measured by Maslach Burnout Inventory (MBI), so can engagement be measured by its opposite scoring pattern of the three dimensions of burnout.

This denotes a transition or shift towards a more positive psychology that states that engagement consists of energy, involvement and efficacy that are considered as the direct opposite of the three dimensions of burnout, namely, exhaustion, cynicism and inefficacy (González-Romá, Schaufeli, Bakker, & Lloret, 2006; Shuck, 2011), whereby energy turns into exhaustion, involvement turns into cynicism and efficacy turns into ineffectiveness. This implies that a similar measure applicable for burnout could be used for engagement with opposite scoring patterns of the three dimensions of burnout.

Conversely, having considered the burnout and engagement antithesis, Schaufeli et al (2002) and Schaufeli and Bakker (2004b) conceptually agree that the constructs were indeed opposites of each other, but should be measured with two different instruments. They viewed the constructs as two independent strands that explain two different make-ups of people. Accordingly, they cannot be simply measured by the reversal of the scores on the MBI. The researchers however, conceptualise engagement in its own right as a positive, fulfilling and consistent psychological state of mind that is characterised by vigour, dedication and absorption and that can be measured by the Utrecht Work Engagement Scales (UWES) (Bakker et al., 2008; Mäkikangas, et al., 2014; Schaufeli & Bakker, 2004a; 2010). In other words, they viewed engagement from the positive psychology principle of human optimal functioning and consider an engaged employee as someone who often shows excellent performance and is more creative in his/her work. Moreover, engaged employees are often willing to help their colleagues and in this way exhibit organisational citizenship behaviours, instead of trying to fix and repair things. Engaged employees, even though they are passionate, energised and mentally resilient in their work roles also enjoy doing things outside of work, such as home duties, sports, exercise, reading, and social contact with others.

More specifically, engagement is an active, affective, motivational, independent and pervasive psychological state, which is an important indicator of various employee behaviour and performance-related outcomes (Halbesleben, Harvey, & Bolino, 2009; Macey & Schneider, 2008). In other words, employee engagement is the extent to which employees are motivated to contribute to organisational success, and are willing to apply discretionary effort to accomplishing tasks important to the achievement of organisational goals.

Therefore, the underline definition of engagement is that it is a state-like construct that is fairly stable over time, although there are those studies that argue that a person's day-specific level of engagement can also fluctuate substantially (Macey & Schneider, 2008; Sonnentag, Dormann, & Demerouti, 2010) particularly in response to situational changes. They maintain that there are, however, days when an engaged employee experiences a lower level of engagement and also days where disengaged employees feel energetic and enthusiasticabout their work activity. Accordingly, Sonnentag, Mojza, Demerouti and Bakker (2012) assert that the morning recovery (the experience of being refreshed and replenished) is an important indicator of whether a person will be engrossed throughout the day following a period of respite. Their study sought to demonstrate causality between employee engagement and the need for recovery (evidence of their study is presented in page 48).

Employee engagement has three dimensions, namely vigour, dedication and absorption (Schaufeli et al., 2002; Schaufeli & Bakker, 2004a; 2010). Vigour refers to high levels of energy and mental resilience while working. Dedication signals strong involvement in one's work and experiencing a sense of significance, enthusiasm and challenge. Absorption is characterised by being fully concentrated and happily engrossed in work, whereby time passes quickly (Bakker et al., 2008; Schaufeli & Bakker, 2004a). Accordingly, engaged employees are enthusiastic, dedicated and fully involved in their work (Bakker et al., 2008). These three dimensions of employee engagement seem to provide the most precise, valid and comprehensive conceptualisation thus far. Essentially, engaged employees have high levels of energy and enthusiasm about their work and work in teams.

Employee engagement consists of the following dimensions:

4.4.2.1   Vigour

Vigour refers to high levels of energy and mental resilience at work and the willingness to invest high effort in one's work activities, investing effort in one's work and persistence in difficult circumstances (Schaufeli et al., 2002; Schaufeli & Bakker, 2004a). Employees who feel great vigour at work are highly motivated by their work role and also likely to remain active even when encountering unpleasant challenges at work. Chughtai and Buckley (2008) also describe vigour as the readiness to devote effort in one's work and exhibit high levels of energy while working and the tendency to remain resolute in the face of difficulty.

Shirom (2010) define vigour as an affective state characterised by feelings of high physical strength, emotional energy and cognitive liveliness. Shirom (2010) maintains that vigour as a reflection of individuals' feelings is expected to predict job performance and organisational effectiveness because vigour is closely related to motivational processes at work. It is assumed that several emotions are associated with certain affective states that possess specific action tendencies.

For instance, Fredrickson (2001), in the theory of broaden-and-build of positive emotions, argued that positive emotions are accompanied by augmented thought-action repertoires, or an urge to think or act in a certain direction. Therefore, feeling vigorous may generate a particular thought-action repertoire that expands activity, broaden the range of options and promote creative solutions for work-related problems. Work motivation, especially intrinsic motivation, is often viewed as a set of energetic forces that originate within individuals andundermine the form, direction and intensity of work-related behaviour (Mauno, Kinnunen, & Ruokolainen, 2007; Schaufeli & Salanova, 2007). Intrinsic motivation refers to an individual's need to perform a certain activity at work because this activity gives inherent pleasure and satisfaction and does not contain extrinsic good such as better salary and/or promotion (Mauno et al., 2007).

Rothmann and Jordaan (2006), in the study conducted among academics in selected South African Higher Education Institutions (HEI), reported that vigour was strongly related to growth opportunities in a job and moderately related to organisational support. Although their study reported that job resources (such as growth opportunities, organisational support and advancement) predicted employee engagement (vigour and dedication), the study also found that vigour of academics was strongly related to growth opportunities (variety, learning opportunities and autonomy) in the job and moderately related to organisational support (the relations with the manager, participation, communication, role clarity and information). In other words, the growth opportunities and organisational support predicted 26 % of the total variance in vigour of academics.

4.4.2.2   Dedication

Dedication is characterised by a sense of significance, enthusiasm, pride, inspiration and challenges in relation to one's work (Schaufeli et al., 2002; Schaufeli & Bakker, 2004a). This dimension has been conceptually linked to the concept of job involvement (or commitment) which is defined as the degree to which an employee psychologically relates to his or her job and to the work performed therein (Bakker & Demerouti, 2007; González-Romá et al., 2006; Mauno et al., 2007). Job involvement, on the other hand, is considered a function of how far the job can satisfy an employee's present needs (Mauno et al., 2007).

According to Mauno et al (2007), both dedication and job involvement are considered as stable phenomena. However, the difference between them has not yet been reported. Dedication appears to be a broader phenomenon with respect to its operationalisation than job involvement in the sense that dedication includes feelings of enthusiasm, inspiration, pride and challenges, while involvement focuses on the psychological importance of the job in an employee's life.

4.4.2.3   Absorption

Absorption refers to feeling of being concentrated in one's work and finding detaching oneself from work activities difficult (Schaufeli et al., 2002; Schaufeli & Bakker, 2004a). It entails a pleasant state in which employees are totally immersed in their work, forgetting about everything else. This dimension is conceptually similar to the concept flow developed by Csikszentmihalyi (1990).

As noted by Csikszentmihalyi (1990, p. 4) the concept flow experience can be defined as a state of mind in which people are so intensely involved in their activities, that nothing else seems to matter, because the experience itself is so enjoyable, they would even do it at greater cost, purely for the sake of doing it. Csikszentmihalyi (1990) describes as 'flow', a phenomenon that occurs when people have a sense of control over what they are doing, and where they feel competent and efficacious in their ability to do their work. On the same issue, Schaufeli and Bakker (2004a) maintain that the concept flow is more complex and includes many aspects that refer in particular to short-term peak experiences, instead of a more pervasive and persistent state of mind, as is the case with engagement.

Bakker, Demerouti and Euwema (2005) also apply the concept of flow to the work situation, and describe it as a short-term peak experience at work that is characterised by absorption, work enjoyment and intrinsic work motivation. That is, employees who enjoy their work and feel happy make a very positive judgement about the quality of their working life. They demonstrated that employees who feel intrinsic motivation need to perform a certain work-related activity with the aim of experiencing the inherent pleasure and satisfaction in the activity. However, Csikszentmihalyi (1990) asserts that employees who are motivated by the intrinsic aspects of their work tasks want to continue their work because they are fascinated by the tasks they perform.

Several studies have repeatedly shown that the dimensions of vigour and dedication represent the core function of employee engagement (Brand-Labuschagne et al., 2012; Coetzee & de Villiers, 2010; González-Romá et al., 2006; Mäkikangas et al., 2014).

More specifically, vigour and dedication are considered as the opposite poles of burnout dimensions, namely exhaustion and cynicism respectively. That is, vigour and exhaustion are classified as the energy continuum and dedication and cynicism as the identification continuum (Coetzee & de Villiers, 2010; González-Romá et al., 2006; Mäkikangas et al., 2014; Mostert & Rothmann, 2006; Schaufeli & Bakker, 2004a).

In addition, Rothmann and Joubert (2007) conducted a study to determine the relationships between job demands, job resources, burnout, and engagement among managers at platinum mine in the North West Province in South Africa. In support of the Comprehensive Burnout Engagement (COBE) model (Schaufeli & Bakker, 2004a), the Pearson correlation analysis confirmed that burnout, which consists of exhaustion and cynicism, was negatively related to engagement, which consists of vigour and dedication. The lower levels of burnout were related to higher levels of engagement (high levels of energy related to high levels of identification), confirming the findings by Schaufeli et al (2002).

Recent studies have reported that exhaustion and vigour are only weakly or moderately related, implying that the represent independent constructs that nonetheless could manifest themselves simultaneously (Demerouti, Mostert, & Bakker, 2010; Mäkikangas et al., 2014). In the study conducted by Demerouti et al (2010) among a sample of South African employees in the construction industry, results confirm the association between the identification dimensions of burnout (cynicism and disengagement) and engagement (dedication) as each other's opposite, while the energy dimensions (exhaustion and vigour) seem to represent two separate but highly related constructs.

Although absorption was considered a component of engagement, recent developments have excluded the component as a latent dimension of engagement (Bakker et al., 2008; Brand-Labuschagne et al., 2012; Demerouti et al., 2010; González-Romá et al., 2006;), implying that absorption does not form part of engagement. Moreover, recent developments have also found that professional efficacy and absorption were not considered opposites of each other's endpoints (Demerouti et al., 2010; González-

Romá et al., 2006). Specifically, professional efficacy has been considered as a dimension of employee engagement as compared to burnout because its items are all worded positively as compared to the other dimensions of burnout.

Burnout is described as a prolonged response to chronic emotional and interpersonal stressors on the job. It is the result of high job demands coupled with inadequate resources which could prompt a negative outcome such as staff turnover and absenteeism (Rothmann & Joubert, 2007). Empirical evidence has shown that some people do not experience burnout, regardless of high job demands and long working hours, because they seem to find pleasure in working hard and dealing with job demands (Schaufeli & Bakker, 2004b; Rothmann & Joubert, 2007). A number of explanations could be given. Firstly, when people are immensely engrossed in their work, they forget about the outside world and concentrate on their tasks. Secondly, the labour market is volatile and the lack of job opportunities constrains employees to remain in their organisation even when dissatisfied and/or less committed to the successes of the organisation.

4.4.3   Integrative model of employee engagement

Common to the above approaches is that employee engagement is a desirable condition that has an organisational purpose, and connotes involvement, commitment, passion, enthusiasm, focused effort, and energy, which are indicative of both attitudinal and behavioural components. The common thread is that employee engagement is observable through behaviour to an extent that employees decide to either engage or disengage themselves in work activity. Specifically, employee engagement is about being proactive; it is adaptive behaviour directed towards the achievement of organisational outcomes. Accordingly, results of several studies have shown that employee engagement is a positive psychological state that connects people in cognitive, affective and behavioural ways to their work and job performance (Bakker et al., 2008; Kahn, 1990, Macey & Schneide, 2008; Schaufeli & Bakker, 2004a, Shuck & Wollards, 2010).

Schaufeli (2013) argue that despite having slightly different perspectives, there is common ground between the Kahn's (1990) and Schaufeli's et al (2002) conceptualisations and measures of engagement. Schaufeli found that both share similarity in terms of physical-energetic (vigour), emotional (dedication) and cognitive (absorption) components. Though it is unlikely there will ever be a universal agreement on a single definition and measure of engagement, factors such as energy, involvement and a willingness to contribute to organisational success are nevertheless core to the construct (Bakker et al., 2011).

As compared to others, this study adopts the definition and measurement of employee engagement developed by Schaufeli et al (2002) for a number of reasons. Firstly, their definition and measurement of employee engagement has been cited and used most frequently in the engagement literature (Bakker & Schaufeli, 2008; Schaufeli & Bakker, 2004a; 2010). Secondly, the model and instrument have been tested and validated across a spectrum of occupational settings in different countries, including South Africa (Demerouti et al., 2010), suggesting that the model has proven its psychometrical validity. Thirdly, the UWES captures the robustness of the vigour (energy), enthusiasm (dedication) and involvement (absorption), which are regarded as central features of the construct of employee engagement. Furthermore, the definition separates engagement from the related concept of burnout and thus considers engagement as a "specific, well-defined and properly operationalised psychological state that is open to empirical research and practical application" (Bakker et al., 2008, p.187).

Most importantly, the instrument is based on four criteria proposed by Luthans et al (2007). These criteria echoe the positive organisational behaviour (POB) model and include the following features: (1) must be grounded in theory and research; (2) must have valid measures; (3) should be state like and therefore open to development and be manageable for performance improvement; (4) should be researched, measured, developed and managed at the individual micro level.

In summary, Kahn's (1990) model of engagement has been tested and validated in a number of studies (May et al., 2004; Olivier & Rothmann, 2007; Rothmann &

Rothmann, 2010; Rothmann & Welsh, 2013). However, it has neither provided an operationalised instrument of engagement nor produced satisfactory psychometric properties for the psychological safety. The following section provides a review of the antecedents of employee engagement.

Noticeable in the literature review is that Macey and Schneider (2008) developed a comprehensive theoretical framework which includes both the attitudinal and behavioural outcomes of engagement. The model takes into account the personality traits, psychological states and behavioural outcomes. However, the framework serves only as an exploratory tool as no empirical test on the correlation between all variables has been established yet.

4.5   ANTECEDENTS OF EMPLOYEE ENGAGEMENT

There are several antecedents of employee engagement that have been identified and statistically confirmed that indeed, they are key drivers that enhance initiatives of employee engagement to improve performance. These factors, among others, are categories such as the Job Demand and Resources Model (JD-R) which are said to be found in any working organisation and the Conservation of Resources (COR) model. The JD-R model is particularly relevant to include in this study due to its flexibility and rigorous coverage that incorporates job demands and job resources. The model does not restrict itself to specific job demands or job resources, but assumes that any demand or resources which could result from the imbalances (positive or negative) in job characteristics may affect employee health and well-being (Schaufeli & Taris, 2014). According to Schaufeli & Taris (2014) the model has the capability to integrate a wide variety of possible job demands and resources.

The model proposes that burnout or engagement arises as a result of two superfluous processes, job demand and job resources. McEwen (2011) maintains that engagement emanates from how employees perceive and evaluate their work experience, including their employer, leadership, work itself and the organisational environment. On the same

topic, Bakker and Demerouti (2008) state that job resources, salience of job resources and personal resources as key drivers of employee engagement.

The COR is based on the assumption that various resources are salient factors in gaining new resources and in enhancing wellbeing. COR theory emphasises objective elements of threat and loss, and common appraisals held jointly by people who share a biology and culture, or in the case of work and organisational settings, who share a workplace (Hobfoll, 2011). For to the COR theory, resources has been define as those objects, personal characteristics, condictions or energies that are valued in their own right (Hobfoll, 2001). As such, employees are constatnting striving to obtain, retain and protect those resources that are valued to prevent a state of resources loss. This means that people employ key resources in order to conduct the regulation of the self, their operation of social relations, and how they organise, behave, and fit in to the greater context of organisations and culture itself (Hobfoll, 2011). Therefore, when employees are provided with job resources, they could become more engaged over time.

As previously mentioned, current organisational settings require employees that are proactive and show initiative, collaborate with others, take responsibility for their own professional development, and commit to higher job quality performance (Bakker & Schaufeli, 2008). It is imperative for organisations to explore some of the well-known antecedents that boost and enhance employees's engagement and persistence, while maintaining engagement status (Kim et al., 2013).

The next section discusses the antecedents of engagement as confined in the JD-R model. It should be noted that there is an abundance of empirical research which has tested the antecedents of engagement with specific to work-related resources (Halbesleben 2011), but then adds the personal resources (Scahufeli & Taris, 2014).

4.5.1 Overview of job demand-resources model

The job demand-resources (JD-R) model is considered useful parsimonious, but yet comprehensive to contextualise occupational well-being within the domain of burnout

and engagement (Boyd, Bakker, Pignata, Winefield, Gillespie, & Stough, 2011; Balducci, Schaufeli, & Fraccaroli, 2011; Crawford, LePine, & Rich, 2010; Demerouti & Bakker, 2011) within different occupational settings and different sets of job demands and job resources. It is the model which represents an attempt to synthesise the theoretical insights and empirical findings of several prior models such as the Demand-Control-Support Model (DCS Karasek & Theorell, 1990) and the Effort-Reward Imbalance (ERI Siegrist, 1996) which focus on control and support as well as rewards respectively (cited in Bakker & Demerouti, 2007; Boyd et al., 2011; Demerouti & Bakker, 2011; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007). In other words, it incorporates the principles of the DCM and ERT models which makes it to be considerably rigorous and flexible (Bakker & Demerouti, 2007) and can be tailored to a wider variety of work settings. The model does not restrict itself in terms of specific job demands and job resources (Schaufeli & Taris, 2014) as compared to the DCS and ERI models.

The overview of the JD-R model is structured and guided in terms of a number of assumptions. The first assumption is based on the notion that the JD-R model is contextualised from the work characteristics which emphasise that in every occupation, there exist two broad theoretical categories which are associated with job-related stress. These categories are classified in terms of job demand and job resources (Balducci et al., 2011; Demerouti & Bakker, 2011; Opie & Henn, 2013; Rothmann & Rothmann, 2010; Schaufeli et al., 2009). Accordingly, the job demand and resources model constitutes an overarching model that applies to various occupational settings, irrespective of particular demands and resources available in such work environments.

On the one hand, job demands are the things that have to be done or activities that an employee has to perform in their working environment. They are the "physical, psychological, social, or organisational aspects of the job that require sustained physical or mental effort and are therefore associated with certain psychological and/or psychological cost such as exhaustion" (Bakker & Demerouti, 2007, p. 275). Job demands are associated with strain reaction, particularly if they exceed the employee's adaptive capacity. That is, when demands are high and employees find it difficult to

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recover between meeting these high demands, the job demands may turn into job stressors. Typical examples of the job demands include aspects such as workload, time pressure, work pressure, emotional exhaustion and difficult physical environment (Crawford et al., 2010; De Braine & Roodt, 2011) and qualitative job demands include emotional demands, role ambiguity, role conflict and an unfavourable physical working environment (De Braine & Roodt, 2011).

Job demands are not necessarily seen as a negative experience, but could turn into job stressors when meeting those demands that require high effort associated with high costs that elicit negative responses such as depression, anxiety or burnout (Moshoeu, 2016). Additionally, job demands could turn into job stressors as a result of insufficient resources (lack of time management, and energy; lack of personal growth and development) to perform the work tasks. Job demands could result in job stressors due to a lack of recuperation to mobilise extra energy during break time or after work or performing less demanding activities.

On the other hand, job resources are those physical, psychological, social, or organisational aspects (social support, organisational justice, career opportunities) of the job that are functional in achieving work goals, stimulating personal growth, learning and development and reducing job demands and their associated psychological and psychological cost (Bakker & Demerouti, 2007; 2008; Balducci et al., 2011; Mauno, Kinnunen, Mäkikangas, & Feldt, 2010; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). Specifically, job resources are the working conditions that offer employees with resources to complete a specific work activity. Typical examples of job resources include job-specific resources (variety of tasks, autonomy, performance feedback adequate job information), organisational resources (opportunity for advancing in career) and social resources (social support from colleagues and supervisory support) (Bakker, 2011; Brand-Labuschagne et al., 2012; Crawford et al., 2010; de Braine & Roodt, 2011; Demerouti & Bakker, 2011; Xanthopoulou et al., 2009), which to a large extent, relate positively to engagement.

In general, job demands and job resources are negatively related in the sense that job demands, such as high workloads and time pressure as well as emotionally demanding interactions with colleagues, impede the mobilisation of job resources (Bakker & Demerouti, 2007; 2008). It implies that higher job resources such as social support and feedback have the propensity to reduce the effects of job demands. However, when employees perceive that the demands of their jobs are exceeding the levels of resources available at their disposal, they experience strain. Accordingly, Maslach et al (2001) argue that prolonged exposure to unpleasant demands may exhaust a person' coping abilities which could intensify feelings of exhaustion, cynicism and reduced self-efficacy, the three dimensions of burnout. It is apparent that an absence of sufficient job resources to perform the job effectively can cause an increase in the amount of stress employees experience during their work activity.

4.5.1.1 *Dual psychological process*

Job demands are assumed to activate energy-depletion processes that lead to burnout, due to the increase in sustained effort to meet perceived job demands that are met with an increase in compensatory psychological and physiological costs that drain the employee's energy. Job demands stimulate a health impairment process caused by excessive demands when resources are inadequate or there is a lack of recovery after work, which leads to stress-related negative outcomes such as burnout (Bakker et al., 2008; Boyd et al., 2011; Crawford et al., 2010; de Braine & Roodt, 2011; Demerouti et al., 2012). Accordingly, Schaufeli and Taris (2014) maintain that long-term excessive job demands coupled with inadequate recover could lead to sustained activation and overtaxing, which could eventually result in exhaustion. In a way job demands are expected to have a direct positive relationship with all three burnout dimensions, namely, exhaustion, cynicism and lack of efficacy (Bakker & Demerouti, 2007; Cole et al., 2011; Demerouti & Bakker, 2011, Hakanen et al., 2008a).

Job resources are presumed to activate a motivational process whereby available resources that are instrumental in achieving work goals could foster employee's growth, learning and development, satisfy needs for autonomy and competence, and increase

willingness to dedicate one's efforts and abilities to the work task. Availability of resources are necessary for a direct positive relationship with the motivational process through engagement, and could lead to positive outcomes such as engagement and commitment and reduced turnover (Bakker & Demerouti, 2008; Bakker et al., 2008; Boyd et al., 2011; Crawford et al., 2010; de Braine & Roodt, 2011; Demerouti et al., 2012). In other words, the JD-R model states that the presence of job resources predicts engagement among employees through a motivational process.

In addition, job resources are undertaken to potentially play an intrinsic and extrinsic motivational role (Bakker & Demerouti, 2007; 2008; Bakker et al., 2008; Bakker, 2011; Demerouti & Bakker, 2011). As as an initiator, job resources lead to engagement and positive organisational outcomes and enhanced performance. This assertion is consistent with the job characteristics theory of Hackman and Oldham (1980) and self-determination theory of Ryan and Deci (2000). For instance, the job characteristics theory includes aspects such as skill variety, autonomy, and feedback which perform as motivational potential and indirectly predict outcomes such as intrinsic motivation through the activation of positive psychological states (Christian et al., 2011). The prime responsibility for resources is to provide individual employees with the necessary tools to achieve the desired goals, which will ultimately stimulate or foster commitment and engagement because employees can relate to the fulfilment from it.

A considerable body of studies has repeatedly shown that job resources such as social support and autonomy are positively related to the three dimensions of engagement, namely, vigour, dedication and absorption (Bakker & Demerouti, 2008; Christian et al., 2011; Cole et al., 2011; Halbesbelen, 2010). For instance, Schaufeli and Bakker (2004b) have found evidence for a positive relationship between job resources (performance feedback, social support and supervisory coaching) and engagement (vigour, dedication and absorption) among four different samples of Dutch employees.

Complementary studies have found that, apart from social support and autonomy, there are other resources such as job results and feedback, social support from both colleagues and supervisors, daily communication, organisational climate and job

control that have also been found to be positively associated with engagement (Bakker et al., 2007; Mauno et al., 2007). Although, support from colleagues and employee-organisation relationships have been construed as the least studied types of social support, individual employees and the organisation could benefit from such relationship. Specifically, previous research examining the relationship between support from colleagues and engagement has predominately operationalised support from colleagues as social support. For instance, such studies have shown a moderately strong relationship between support from colleagues as social support and employee engagement ($r = 0.32$) (Christian et al., 2011; Halbesleben, 2010; Schaufeli et al., 2009).

The Self-determination theory (SDT) is based on the notion that job resources are motivating because they are responsible for satisfying basic human needs such as needs for autonomy, competence and relatedness (Ouweneel et al., 2012; Salanova, Schaufeli, Xanthopoulou, & Bakker, 2010; Van den Broeck, Vansteenkiste, De Witte & Lens, 2008). Furthermore, the SDT provides strong support for the motivational process and postulates that if the need for competence, relatedness and autonomy is met in any social context, well-being and an increase in commitments will be enhanced (de Braine & Roodt, 2011). This is because the SDT is based on the notion that people can be motivated to engage in certain behaviours due to intrinsic interest and enjoyment, rather than merely extrinsic rewards or reinforcement (Deci & Ryan, 1985 cited in de Braine & Roodt, 2011; Salanova et al., 2010).

Thus, when a social environment supports satisfaction of the three basic psychological needs (relatedness, autonomy, and competence), such as through high quality relationships, SDT proposes that people are likely to experience intrinsic motivation. Additionally, when behaviours are viewed as voluntary (rather than controlled), individuals are also more likely to experience intrinsic motivation. Though not identical, employee engagement is similar to intrinsic motivation and therefore SDT is an appropriate theory for use in engagement research.

Conversely, the lack of job resources could in turn, have an adverse effect on motivation which could ultimately result in disengagement. The dual psychological process of the JDR model is based on the notion that a lack of resources precludes that job demands are met and that work goals are reached, which leads to withdrawal behaviour/disengagement. This is consistent with empirical evidence which has established that job demands are associated with exhaustion and a lack of resources is linked to disengagement (Schaufeli & Taris, 2014; Xanthopoulou et al., 2007).

4.5.1.2 *Interaction between job demands and resources*

This assumption reflects the interaction between job demands and job resources in the form of strain and motivation (Bakker & Demerouti, 2007; De Braine & Roodt, 2011; Demerouti & Bakker, 2011; Tremblay & Messervey, 2011; van den Broeck, van Ruysseveldt, Vanbelle, & De Witte, 2013). The model proposes that job resources could safeguard the negative effects of job demands on stress reactions, particularly when job demands are high (Bakker & Demerouti, 2007; Demerouti & Bakker, 2011; Van den Broeck et al., 2013). This means that employees who are confronted with high levels of job demands are generally assumed to feel burned-out due to depleted energy. However, such employees could actually mitigate the negative effect of job demands and its associate exhaustion provided the employees possess sufficient resources. In other words, the availability of sufficient resources could actually mitigate the effect of job demands on exhaustion because job resources are assumed to reduce job demands and the associated exhaustion.

Conceptually, mitigation/buffering are an act that moderates the direction or strength of the interaction between the two variables, job demands and job resources. Accordingly, under demanding work conditions, employees who are provided with sufficient job resources are assumed to be more capable of dealing with the job-related demands and as such experience lower levels of exhaustion, as compared to employees with insufficient resources. In addition, (Brand-Labuschagne et al., 2012) maintain that the motivational process, where a lack of resources prevents employees from

effectively dealing with high job demands, can foster mental withdrawal and disengagement, causing the gradual lossof employment.

Consistent with the Job Demand-Control (JDC) model of Karasek (1979), the buffering hypothesis role of job resources can also echoe the 'active job' in which employees become motivated to actively learn and develop their skills (cited in Bakker & Demerouti, 2007; Bakker et al., 2011; Demerouti & Bakker, 2011; Xanthopoulou et al., 2007; van den Broeck et al., 2013). One of the principles of the JDC model pertains to the degree of control possessed by employees over the work-related tasks (autonomy) which could buffer the impact of work overload on job stress. The model further assumes that several different job resources can also play a significant buffering role for several job demands.

Furthermore, based on the conservation of resources (COR) theory (Hobfoll, 2001), people seek to obtain, retain, and protect that which they value, such as material, social, personal, or energetic resources. The theory proposes that stress experienced by individuals can be understood in relation to potential or actual loss of resources. More specifically, Hobfoll and Shirom (2000) further explain through the COR that individuals must strive to gather and maintain various resources in order to compensate for the loss of resources. Thus, individuals with the greatest pool of resources find themselves less susceptible to resource loss.

Alternatively, employees could also mitigate the effect of high job demands and its associated exhaustion by merely redesigning their work activities to such an extent that they feel less burned-out. The term job crafting was coined by Wrzesniewski and Dutton (2001) and is defined as self-initiated change behaviours that employees engage in with the aim of aligning their jobs with their own preferences, motives and passions (cited in Bakker, 2011; Bakker et al., 2011; Tims, Bakker, & Derks, 2012). Therefore, with the overwhelming job demands and insufficient resources, employees could simply redesign their activities in a proportion equivalent to the available resources.

Furthermore, Bakker et al (2011) propose that engaged employees may be more prone to change certain aspects of their jobs in such a way that it leads to greater resources and challenges. Therefore, these self-initiated changes may lead to a work environment that is so much in line with the specific characteristics of the employees. This, in turn, will craft more autonomy that may lead the employee to feel more responsible for his/her performance and as a consequence s/he may be motivated to invest more effort in the work task (Tims et al., 2012). Because engaged employees are not passive actors in a working environment, they instead continuously and actively change their environment when required. That is, employees may change the nature of their job content in such a way that they choose tasks and/or negotiate different job content and assign meaning to their tasks or jobs. For instance, employees may decide to work from home instead of commuting to the organisational central environment.

4.5.1.3   *Job demands to boost the motivational effect of job resources*

The most recent assumptions of the JD-R model postulates that job resources influence motivation or engagement, particularly when job demands are high (Bakker & Demerouti, 2007). This assumption can also be referred to as the copying hypothesis (Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007; Bakker, Van Veldhoven, & Xanthopoulou, 2010), and is consistent with the conservation of resources (COR) theory (Hobfoll, 2011).

The COR theory states that individuals strive to protect, maintain and increase their resources. These resources then become particularly salient under demanding conditions, boosting individuals' wellbeing, for example, in terms of engagement. This implies that job resources gain their motivational potential, particularly when employees are confronted with high job demands. In other words, the coping hypothesis suggests that under stressful conditions, individuals will be more likely to use resources as a coping mechanism or stress-reducing action. The COR theory proposes that stress experienced by individual employees can be understood in relation to potential or actual loss of resources. This suggests that job resources are likely to acquire their motivational potential particularly when employees have to deal with high job demands

(Bakker, 2011). It goes with saying that employees who possess a greater pool of resources are less susceptible to greater resources (gain resources) as compared to those employees with limited resources who are more likely to experience increased loss (loss spiral). Hobfoll (2001) has also argued that resource gain, in turn and in itself, has only a modest effect, but instead acquires its saliency in the context of resource loss. This implies that job resources gain their motivational potential particularly when employees are confronted with high job demands.

Bakker et al (2010) tested the copying hypothesis of the proposition among a large heterogeneous sample of employees. They sought to determine whether work attitudes (task enjoyment and organisational commitment) are most positive when job demands and job resources are both high. Results of the moderated structural equation modelling analyses provided strong support for the hypothesis. That is, job resources (skill utilisation, learning opportunities, autonomy, colleague support, leader support, performance feedback, participation in decision-making, and career opportunities) predicted task enjoyment and organisational commitment particularly under conditions of high job demands (workload and emotional demands). This suggests that resources become most salient under demanding conditions. In other words, there is a need for a challenge (a demanding condition) in order for job resources to be translated into task enjoyment and engagement.

4.5.1.4 *Evidence for the dual process of employee well-being*

Several studies have provided evidence for the propositions put forward by the JD-R model. Specifically, a large body of empirical studies has supported the dual pathways to employee well-being proposed by the JD-R model, and shown that it can predict important organisational outcomes (Bakker & Demerouti, 2007; Demerouti & Bakker, 2011). These studies are reviewed in this section in terms of cross-sectional and longitudinal evidence.

Previous studies have consistently shown that job resources such as social support from colleagues and supervisors, performance feedback, skill variety, autonomy, and

learning opportunities, are positively associated with engagement (Albrecht, 2010; Bakker & Demerouti, 2008; Halbesleben, 2011; Mauno et al., 2010; Schaufeli & Salanova, 2008). On the contrary, Hobfoll (2001) argues that not all job resources are necessary to deal with the strain exacerbated by job demands, that resources can be located at various levels and performing various activities. According to Van den Broeck et al (2008) proper feedback could foster learning, thereby increasing job competence, whereas decision latitude and social support can satisfy the need for autonomy and belongingrespectively.

In the study conducted among academic staff, Barkhuizen, Roodt and Schutte (2014) explored the job demands and resources in South African HEI. Specifically, their research intended to determine whether a significant difference between the job demands and resources of academics does exist in terms of demographic characteristics. Consistent with the finding of Barkhuizen and Rothmann (2008) and Bezuidenhout and Cilliers (2010), their result reveal a high prevalence of job demands experienced by academics in comparison to the availability of job resources. In addition, their results also show that demographic characteristics such as ethnicity, associate professors, older academics and academics working for longer hours a week, experienced significant higher job demand than their counterparts. This implies that academic staff is still experiencing job demands in relation to the available job resources, and that high job demands were experienced mostly by older academics.

Similar results were also reported by Bezuidenhout and Cilliers (2010) who conducted a study among female academics to find ways to avoid the negative consequences of burnout (exhaustion and cynicism) and contribute towards the positive experience of engagement. Their study indicates that female academics experience average levels of physical, exhaustion, coupled with a strong indication of increased cynicism and moderate indications of a decrease in a sense of professional efficacy. It was reported that female academics experience average levels of physical, emotional and mental exhaustion associated with average feelings of being tired, 'drained' and 'used up'. Reduced professional efficacy was also reported to develop as a result of the limited available job resources. This study suggests that the high level of job demands and

limited available job resources are the contributing factors towards burnout among female academics.

In another study, Van den Broeck et al (2008) conducted a study among 745 employees of the Dutch-speaking part of Belguim recruited in 17 organisations. Their study intended to determine the role of basic need satisfaction in the relationship between job demands, job resources, and employees' exhaustion and vigour which are the main components of burnout and engagement respectively. Their findings provide evidence that satisfaction of needs fully accounted for the relationship between job resources and exhaustion and partially explained the relationship between job demands and exhaustion and between job resources and vigour. Their study suggests that employees who are surrounded by resourceful job characteristics are more likely to experience a general feeling of psychological freedom, interpersonal connectedness and effectiveness, which in turn explains why they feel exhausted and more vigorous in their jobs.

Boyd et al (2010) conducted a longitudinal study to test both causal and reversed caused effects from a sample of Australian university academic staff. The survey was conducted on two separate occasions within a three-year interval, to determine the impact of selected job demands and resources on psychological strain and organisational commitment. Their results provide robust longitudinal support for the motivational pathway proposed by the JD-R model with Time 1 resources predicting Time 2 organisational commitment, even after controlling for Time 1 levels of organisational commitment. As expected, Time 1 job demands predicted Time 2 strain, but unexpectedly, its effects were wholly mediated by Time 1 resources. However, no evidence was reported for the reverse causation effects.

In similar vein, Mauno et al (2007) used a 2-year longitudinal research design to investigate the experiences of engagement (vigour, dedication, absorption) and multiple psychosocial job demands and resources as antecedents of engagement among Finnish health care personnel. More specifically, their study focuses on the job and organisational-related demands and resources as predictors of engagement. Similar to

other studies, their results confirm an association of the overall engagement and the job resources.

De Braine and Roodt (2011) explore the possible differences in the JD-R model as predictors of overall engagement, dedication and work-based identity, through comparative predictive analyses. Their results show that the JD-R model explains a greater amount of variance in dedication than in engagement. This suggests that managing job resources and demands can improve identification and engagement levels. The study builds on the literature of the JD-R model by showing that job demands can be used to predict work-based identity, though the magnitude of the association was relatively weak. According to Bakker and Demerouti (2007) the result is not unexpected in situations where there is an abundance of resources.

Kinnunen, Feldt, Siltaloppi and Sonnentag (2011) conducted a study among a sample of employees from a variety of different jobs to expand the original JDR model. Their study intends to expand the JD-R model by taking into account recovery as an important mediation mechanism between work characteristics and well-being/ill-health. The recovery mechanisms include psychological detachment, relaxation, mastery and control. These mechanisms can be seen as personal strategies by which individuals try to restore their energy resources and maintain well-being despite stressful situations.

The need for recovery is conceived as the sense of urgency that people feel to take a break from their demanding work and also when fatigue builds up. Kinnunen's et al (2011) study found that recovery is a relevant mediating process in the health impairment and motivational processes included in the original JD-R model. More specifically, their study revealed two significant mediation paths. First, in the health impairing process, psychological detachment fully mediated the effects of job demands on fatigue at work. Second, in the motivational process, mastery partially mediated the effects of job resources on engagement.

Sonnentag et al (2012) conducted a diary study over a workweek to examine the within-person relations between morning recovery level (feeling refreshed and replenished)

and engagement throughout the day, and between engagement throughout the day and the subsequent recovery level at the end of the workday. They hypothesised that job stressors (situational constraints, job demands) moderate these relations. As expected, their study showed that morning recovery level predicted engagement during the workday and that engagement, in turn, predicted the recovery level at the end of the workday. Their findings further depict that the reciprocal relations between recovery level and engagement as anticipated did not occur under all circumstances. This suggest that the more recovered an employee is in the morning, the more engagement they will experience at work, which limits the decrease in the employee's recovery level over the course of the day.

Taken together, it is apparent that employee engagement is driven by whether the available resources are enough to mitigate/buffer the negative effects of job demands on exhaustion arising from the work characteristics. Hobfoll (2011) and Sonnentag et al (2012) maintain that not only sufficient resources could foster engagement, but that sufficient recovery after excessive job demands is required to predict engagement.

4.5.1.5 *Expansion of the job demand-resources model*

Several recent studies have advocated the extension of JD-R model by merely adding the personal resources (Demerouti & Bakker, 2011; Xanthopoulou et al., 2007), because levels of employee engagement are to certain extent dependent on their individual characteristics (Bakker & Demerouti, 2008; Ouweneel et al., 2012). A personal resource as described by Hobfoll, Johnson, Ennis and Jackson (2003) is a positive self-evaluation that is linked to resilience and refers to the individual's sense of their ability to control and impact upon the environment successfully (cited in Bakker & Demerouti, 2008; Ouweneel et al., 2012; Xanthopoulou et al., 2007). Similar to job resources, personal resources are also functional in accomplishing work goals and stimulating personal growth and dvelopmnent (Scahufeli & Taris, 2014).

Other studies define personal resources as malleable lower-order, cognitive-affective personal aspects reflecting a positive belief in oneself or the world (van den Heuvel,

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Demerouti, Schaufeli, & Bakker, 2010; van den Broeck et al., 2013). In other words, personal resources are characteristics of the individual that are valued and could serve as a means to attain other positive personal characteristics, objects, energies or work conditions. In terms of the COR theory, personal resources are considered as highly valued aspects, relating to resilience and contributing to individual's potential to successfully control and influence the environment (cited in van den Broeck et al., 2013).

Personal resources are modelled as the antecedents of job demands and job resources as well as drivers of engagement. They are shown as mediators through which job resources prevent burnout and enhance engagement (Scahufeli & Taris, 2014; Salanova et al., 2010; Xanthopoulou et al., 2007). These personal resources are assumed to stimulate personal growth and development, achieve goals and protect the individual from threats, which will ultimately result in positive personal outcomes like engagement. For instance, positive perception towards personal growth, learning and development tends to empower employees in that they tend to feel capable of succeeding in their job roles, leading to a feeling of self-efficacy, intrinsic motivation and engagement (Moshoeu, 2016).

Xanthopoulou et al (2007) maintain that personal resources are an important part of the JD-R model because they help to explain variance of exhaustion and engagement. Job and personal resources are connected to how well employees cope with the stress arising from job demands and their level of engagement in the daily tasks of meeting these demands (Xanthopoulou et al., 2009). In addition, personal resources are further conceived as a moderator in the relationship between environmental factors and organisational outcomes (Mäkikangas, Feldt, Kinnunen, & Mauno, 2013).

The review of the literature indicates that personal resources indeed could be used to promote psychological well-being (Scahufeli & Taris, 2014), because they are defined in terms of resilience and control. In a study conducted on a large sample of managers in Finnish, Salminen, Mäkikangas and Feldt (2014) found that both job resources and optimism exerted a positive effect on engagement, and its three dimensions of vigour,

dedication and absorption. The moderation results showed that optimism can diminish the negative impact of low job resources on engagement. Accordingly, their findings provided the impetus to include personal resources when conducting motivational process in future research.

Similarly, Ouweneel et al (2012) found that the relationships between positive emotions, personal resources, job resources and engagement are best interpreted when all effects are taken into account simultaneously. That is, a reciprocal relationship was attainable between positive emotions and personal resources. Furthermore, they found a casual effect of personal resources on engagement and a reversed causal effect of engagement on positive emotions. This suggests that employees experience positive emotions at work; they are prone to feel more hopeful, optimistic and self-efficacious. Put differently, employees who experience positive emotions are likely to feel more positive about their work-related abilities.

Xanthopoulou et al (2009) investigated the relationship between job resources, personal resources and engagement among a sample of 163 employees who were monitored over a period of almost 2 years. In their longitudinal research design, they proposed that Time 1 job and personal resources is positively associated with Time 2 engagement. Their study supported their proposition, and specifically found that at Time 1 job and personal resources were positively related to Time 2 engagement. They also tested for the reciprocal relationship between job and personal resources and engagement. Interestingly, their empirical evidence regarding the reciprocity suggests that job and personal resources are mutually related to engagement.

On the contrary, there were those studies that did not find personal resources as the mediator/buffer of the relationship between job demands and organisational and health-related outcomes. For instance, Xanthopoulou et al (2007) examined the role of personal resources which consists of self-efficacy, organisation-based self-esteem and optimism in predicting exhaustion and engagement. Results of the structural equation modelling analyses showed that personal resources did not mediate the relationship between job demands and exhaustion, but instead, partially mediated the relationship

between job resources (autonomy, social support and opportunity for career advancement) and engagement. This suggests that job resources foster the development of personal resources, which subsequently may lead to greater engagement. It implies that employees who possess some leverage of job resources are more likely to experience more vigour in their work activities.

Hakanen, Perhoniemi and Toppinen-Tanners (2008b) conducted a longitudinal research design on a large sample of Finnish dentists to determine positive resources caravans (availability of collective pool of resources such as organisational support, stability, safety) and gain spirals at work. Their study intends to investigate the reciprocal cross-lagged effects (positive resource caravans and gain spirals at work) between the task-level of job resources, engagement, personal initiatives, work-unit and innovativeness using a two wave 3 year follow-up data among Finish dentists. The results of the SEM confirms the hypotheses tha positive and reciprocal cross-lagged associations were found between job resources and work engagement as well as between work engagement and personal initiative. In other words, individual gain spirals were found as task-level job resources predicted engagement and engagement predicted personal initiatives over time. In addition, personal initiatives positive influence engagement and engagement had a positive impact on future job resources. Furthermore, personal initiatives predicted perception of work-unit innovativeness, suggesting that individual resources at work can be contagious and transmit to the wider context of the work-unit.

Interestingly, personal resources were found to moderate the relationship between job characteristics and well-being. For instance, the definition of personal resources emphasises that personal resources may buffer the negative effect of job demands on burnout and exacerbate positive effects of job resources on engagement (Scahufeli & Taris, 2014). In a study conducted by Van den Broeck, van Ruysseveldt, Smulders and De Witte (2011), it was found that predominantly intrinsic work orientation strengthened the negative association of learning opportunities with emotional exhaustion, as well as the buffering role of autonomy for the health-impairing impact of workload.

Consistent with the COR (Hobfoll, 2002), personal resources are assumed to mediate the relationship between job characteristics and well-being. As has been established, employees working in a resourceful environment are most likely to develop feelings of self-confidence and optimism about their work activities (Scahufeli & Taris, 2014) through the accumulation of resources. The COR emphasises that employees strive to obtain, retain and protect their resources such as personal energies and characteristics, objects and conditions, which are valued and serve as a means to attain other resources (Hobfoll, 2002). Similarly, Mauno et al (2007) also view resources as likely to accumulate in order to create a positive spiral of resources, which in turn is likely to have positive health-promoting effects.

In essence, job resources and personal resources are assumed to influence engagement, but not the reverse. This means that there is no reciprocity between jobs and personal resources and engagement. It suggests that the relationship between resources and engagement is unidirectional. At a different level, personal resources are assumed to play an instrumental role in the interplay between job resources and engagement while at the same time acting as a direct link with engagement, based on resilience and control.

4.5.1.6 Evidence for the buffering effect and salient of job resources in the context of high job demand

Job characteristics have been extensively found to impact on employee well-being (job strain, burnout and engagement). Research has revealed that job demands such as high work pressure, emotional demands and role ambiguity may lead to sleeping problems, exhaustion and impaired health. However, job resources such as social support, performance feedback and autonomy, may instigate a motivational process leading to job-related learning, engagement and organisational commitment (Bakker & Demerouti, 2007).

In addition to the main effects of job demands and resources, the JD-R model proposes that job resources can interact with job demands to effect engagement. Specifically, it

has been found that job resources might buffer the impact of job demands on engagement. In other words, the buffering hypothesis suggests that the negative relationship between job demands and engagement will be weaker for those who have access to more job resources (Bakker et al., 2008; Balducci et al., 2011). This buffering hypothesis echoes the demand-control model (DCM Karesek, 1979), which uses the decision latitudes and social support as the buffering elements. The JD-R model expands the JDC model by "claiming that several different job resources can play the role of buffer for several different job demands" (Bakker & Demerouti, 2007, p. 314).

There are several reasons why job resources can have a buffering impact on engagement in the wake of high job demands (Bakker & Demerouti, 2007; Balducci et al., 2011). For example, social support from one's immediate supervisor and co-workers can facilitate task completion. Thus, it may be reasonable to suggest that instrumental support from colleagues and immediate supervisor might help to get the work done in time and as result, may mitigate the impact of work overload on engagement. Furthermore, job autonomy may have a buffering effect because greater autonomy allows employees to decide for themselves when and how to respond to their demands. Finally, constructive feedback is likely to decrease stress because it can reduce role ambiguity and can enable employees to attain their performance-related goals.

Tremblay and Messervey (2011) conducted a study to examine the role of compassion satisfaction, conceptualised as a personal resource, in buffering the relationship between job demands and job strain. Compassion satisfaction is defined as the fulfilment professional caregivers (ie. feeling from helping those who have experienced a traumatic event). Therefore, the study by Tremblay and Messervey (2011) intends to expand the JD-R by providing evidence that personal resources can moderate the relationship between job demands and job strain. In particular, they argue that compassion satisfaction, a personal resource that has received insufficient theoretical and empirical attention, buffers the relationship between job demands (role stressors) and indicators of job strain (anxiety and depression). Their findings provide partial support for the model's basic moderating assumption in that compassion satisfaction buffers the relationship between job demands and job strain. Consistent with the central

hypothesis, it was found that role overload was associated with higher levels of job strain when compassion satisfaction was high. Figure 4.1 represents the overall perspectives of the JD-R model as presented by Bakker and Demerouti (2007; 2008).
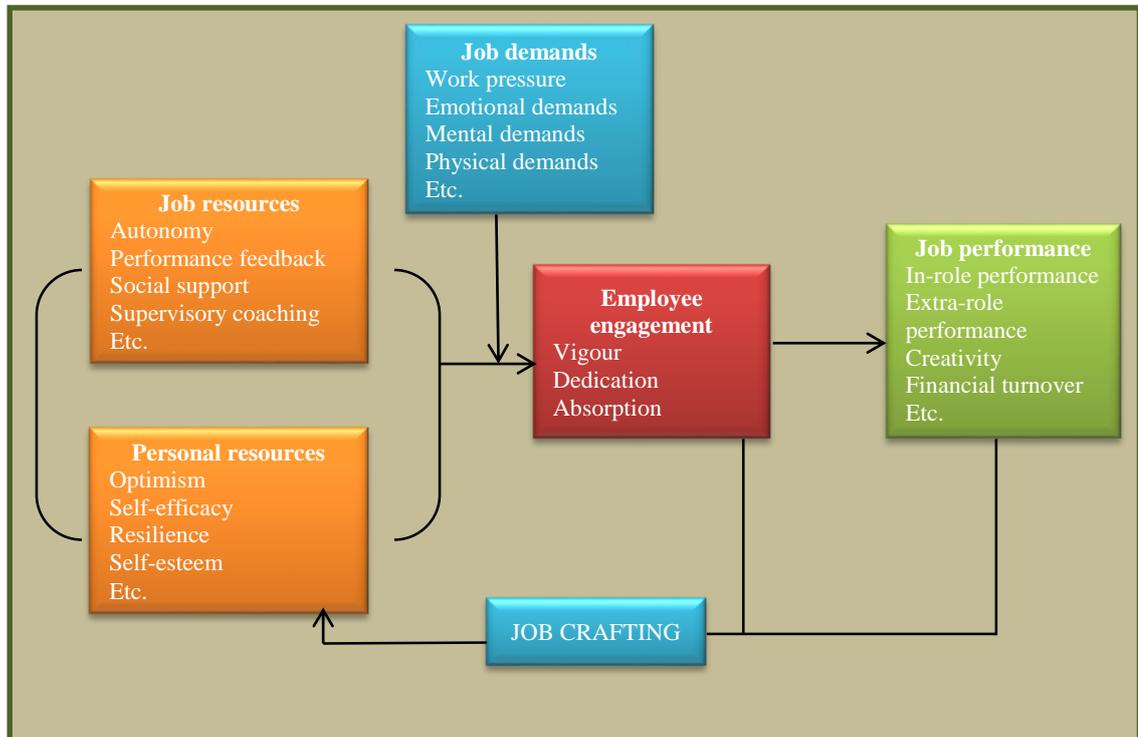
Figure 4.1. Job demands-resources model of engagement *by Bakker and Demerouti (2007; 2008)*

As shown in Figure 4.1, the model depicts the different interrelated aspects that contribute to the employee engagement and the resulted performance. The JD-R model presented by Bakker and Demerouti (2007; 2008) depicts the various relationships between job demands, job resources, personal resources, job crafting and employee engagement as well as performance. In other words, job resources and personal resources lead to engagement and consequently to higher performance.

The model portrays that all aspects of job characteristics and personal resources are instrumental in promoting engagement. That is, employees who are highly engaged and perform well are most likely to mobilise more personal resources or psychological capital and more job resources such as autonomy, social support and career opportunity. Furthermore, it proposes that the impact of job and personal resources on engagement

is particularly strong when job demands are high. In terms of the model, the high impact of engagement can manifest in better performance.

Finally, the model postulates that a combination of high engagement and improved performance inspires employees to create their own resource, which subsequently enhances engagement again over time. According to Salanova et al (2010) individuals strive to protect their resources, and to accumulate resources over time. For instance, employees learn new skills and competencies in order to increase their employability and reduce the risk of being laid off. Increased employability does not only reduce the risk of unemployment but also increases the possibility of finding a better job that offers additional opportunities for learning and development, which enhance engagement at work. Hence, gaining resources increases the resource pool, which makes it more likely that additional resources will be subsequently acquired.

4.5.2 Conservation of resources

The conservation of resources theory (COR) (Hobfoll, 2001) is relevant for understanding the effects of job resources (or the lack thereof) on employees. The basic principle of the COR theory is that "individuals strive to obtain, retain, protect and foster those things that they value" (Hobfoll, 2001, p. 341) which are called resources. Resources comprise of objects, conditions, personal characteristics and energy resources which are prevalent in a given situational environment. This theory implies that individuals must strive to acquire and maintain their resources, a process which is similar to mastery-oriented strategies (mastery and control) as identified by Sonnentag and Fritz (2007).

Mastery experiences refer to pursuing mastery-related off-job activities that offer an individual challenges or opportunities to learn new skills (Sonnentag & Fritz, 2007). These experiences are expected to enhance recovery, because they help to build up new internal resources, such as skills, competencies, self-efficacy and positive mood. Control applied to leisure time refers to control over such decisions as to which activity to pursue, and when and how to pursue the chosen activity. According to Sonnentag

and Fritz (2007), the experience of control during leisure time may increase self-efficacy and feelings of competence; therefore, it may be an external resource that promotes recovery from job strain.

According to Mauno et al (2007), the main assumption in the COR theory is that positive experiences or resources are likely to accumulate, creating a positive spiral of resources which, in turn, are likely to have positive health-promoting effects. This suggests that people who have some important resources are often able to gain other resources. The opposite also holds; losing an important resource causes a loss of other resources, yielding finally a negative spiral of resource loss. Consequently, engagement as a positive resource may result in a positive spiral of resources as well as in positive health effects.

In terms of the COR theory, personal resources affect every individual and exist as a resource pool, and an expansion of one is often associated with the other being augmented (Hobfoll, 2001). When the external environment lacks resources, individuals can neither reduce the potentially negative influence of high job demands nor achieve their work goals. The COR theory predicts that in such a situation, employees will experience a loss of resources or failure to gain an investment (Hobfoll, 2001). Moreover, in order to reduce this discomfort or job stress, employees will have to minimise their losses with the intention of achieving equity without suffering further negative, personal consequences.

4.6   OUTCOMES OF EMPLOYEE ENGAGEMENT

Previous studies have revealed ample evidence of the importance of employee engagement for both the individual and organisational outcomes as well as its association with positive organisational outcomes. Such outcomes include increased job satisfaction, organisational commitment, motivation, employee productivity, increase profit, and low turnover intention. In addition, employee engagement improves the health and well-being of employees in terms of in-role and extra-role performance (Gibbons, 2006; Rich et al., 2010; Saks, 2006; Schaufeli & Bakker, 2004b; Sonnentag,

Mojza, Binnewies, & Scholl, 2008). Furthermore, Halbesleben (2011) asserts that the consequences of engagement are particularly important, as organisations are increasingly looking at cost effective ways to improve performance and engage employees in their work activities. Consequently, Schaufeli and Salanova (2008) argue that to achieve organisational performance, there should be sufficient motivation and energising resources that could stimulate employees to be engaged.

Put succinctly, engaged employees are always happy, satisfied and committed to their work activities, and time is of insignificance to them when performing their activities. They have less intent to leave the organisation as compared to the less engaged employees. Engaged employees have the urge to meet challenging goals and to succeed in their activities. Consequently, Chughtai and Buckley (2008) posit that investing in conditions that foster engagement among employees is vital for the growth and profitability of the organisation.

Moreover, in a business context, Harter et al (2002) have shown that levels of employee engagement were positively related to business-unit performance (i.e., customer satisfaction and loyalty, profitability, productivity, turnover, and safety). Through their research, they concluded that engagement is "related to meaningful business outcomes at a magnitude that is important to many organisations" (Harter et al., 2002, p. 276) and that increasing employee engagement as well as building an environment that helps to boost employee engagement can significantly increase organisational chances of success in a competitive advantage.

Alternatively, Halbesleben and Wheeler (2008) argue that engaged employees are generally more committed to their employing organisation and therefore have a lower cognition to turnover because they tend to invest an enormous amount of their time and energy in their jobs and strongly identify with the work they do. Their commitment to the organisation is further intensified by the availability of many resources, which make leaving difficult. However, employees can become so immersed in their work that they forget to rest or to maintain their personal relationships. A persistent pattern of excessive commitment could therefore contribute to health or relationship problems.

Organisational commitment is more attitudinal in nature and includes dimensions of affective, continuance and normative commitment (Macey & Schneider, 2008). Cited in Moshoeu (2012), affective commitment refers to feelings of affection or belonging that a person has towards the organisation and is positively associated with citizenship behaviour. Normative commitment relates to employees who feel they ought to be and as such are focused on their job for its social value. Continuance commitment refers to people who feel trapped in their organisations since the cost of leaving is too high. Essentially, organisational commitment refers to the employees' loyalty, attitudes and attachment to the organisation and this in turn brings the benefit of employment (Saks 2006).

Job satisfaction has been widely researched as an outcome of employee engagement (Macey & Schneider, 2008) and it is described by Saks (2006) as a congenial or affirmative expressive state derived from the judgment of an employee's work experiences. In literature, job satisfaction has been shown to have a relationship with attitudes and behaviours. For instance, Saks (2006) asserts that engaged employees are found to be more satisfied with their jobs as compared to their non-engaged colleagues. That is, happier engaged employees are more satisfied with their work activities and more likely to increase their level of engagement based on discretionary effort.

Job satisfaction is conceived as "the primary affective reactions of an individual to various facets of the job and to job experiences" (Igbaria & Guimaraes, 1993, p. 148). In similar vein, Maslach et al (2001) maintain that job satisfaction does not encompass employees' relationship with the work itself, but rather the extent to which employees use work as a source of fulfilment of their needs, by which they feel comfortable or avoid feelings of dissatisfaction.

There is a view within the literature which assumes that engaged employees are likely to go the extra mile for their respective organisation, although such assertion has not been supported by empirical studies. In other words, it is assumed that engaged employees possess a high degree of cognitive and affective commitment, which

manifests itself in desired behavioural outcomes, hence employees will be seen to exercise discretionary effort.

Recently, there are studies that argue that too much excessive engagement and personal resources during execution of tasks without appropriate outcomes could lead to a lack of reciprocity, thereby precipitating employees to experience feeling of burnout (Bakker, 2011; Bakker et al., 2011; Schaufeli & Salanova, 2011). It has been noted that engaged employees possess personal energies which are driven by physical, emotional and mental resilient during their work activity to such as extent that the imbalance could disturb the reciprocity between effort and outcomes. In similar vein, Macey and Schneider (2008) recently noted that "there are limits on the pool of energy and resources available to employees" and that "sustained levels of engagement will be difficult to achieve (p. 25). This implies that employees who exert significant energy and resources at work may find themselves depleted when they are supposed to carry other life activities. This in essence presupposes that excessive engagement can contribute to work interfering with family responsibilities.

In support, Halbesleben et al (2009) report that too much engagement can actually deepen work-family conflicts and family-work conflicts beyond the effects of workaholism, because employees will be left with less energy and resources (time, energy and focus) to execute other activities (family). Therefore, work-life balance can be considered as an antecedent and consequence of employee engagement. As evident from the existing literature, engagement consists of absorption which refers an intense concentration and commitment towards the work roles suggesting that time is insignificant when employees are actively engaged in their work roles. Thus, it is possible to assume that absorption as a component of engagement seems likely to evoke unhealthy behaviour in the sense that employee can become so immersed in their work that they forget to rest or maintain social relations with significant others.

Taken together, the outcomes of employee engagement reflect what most organisations are looking for in terms of increased job satisfaction, organisational commitment, motivation and low turnover intention, while simultaneously improving the health and

well-being of employees (Saks, 2006; Schaufeli & Bakker, 2004a). Accordingly, employee engagement has been associated with organisational performance and success (Harter et al., 2002).

4.7   MEASUREMENT OF EMPLOYEE ENGAGEMENT

Many measuring instruments have been proposed to empirically test the employee engagement construct. Martins (2016) identified the research instruments that are currently available to measure engagement from different perspectives. Robertson-Smith and Markwick (2009) identified the following existing measures of employee engagement: Institute of Employment Studies (IES) Engagement Survey, Gallup Workplace Audit (Q12), NetPromoter, Roffey Park Institute's Engagement Diagnostic Service, Towers Perrin Rapid Engagement Diagnostic Survey, Utrecht Work Engagement Scale (UWES) and Workplace Insight Tool (WIT). Martins (2016) also provided an overview of the employee engagement research conducted from 1990 to 2014 (for a comprehensive review of the engagement instruments see Nienaber & Martins, 2016). This part of the discussion has singled out few instruments that consider engagement as the opposite of burnout, namely, UWES, Q12 and OLBI because of their already well-established validity and reliability.

4.7.1   The Utrecht Work Engagement Scale (UWES)

The Utrecht Work Engagement Scale (UWES) was developed by Schaufeli et al (2002) and Schaufeli and Bakker (2004a). The UWES is very popular and has been used very widely to measure of engagement (Bakker et al., 2011; Cole et al., 2012). It has also been used widely across different countries, including South Africa (Schaufeli, 2013). The UWES is a self-report instrument that consists of three interrelated dimensions, namely, vigour, dedication and absorption. The scale constitutes of 17 items which assess vigour (six items), dedication (five items) and absorption (six items), and have encouraging psychometric properties. However, a shorter version which contains nine items has been developed and shows similar encouraging psychometric properties (Schaufeli & Salanova, 2008). The higher score on the vigour, dedication and

absorption items as measured by the UWES are indicative of the employee engagement. The person-level scores are usually then aggregated to measure engagement at the organisational and/or workgroup or individual level.

The UWES was introduced as the opposite pole of burnout measure of MBI-GS developed by Maslach et al (2001). Accordingly, proponents of the scale argue that engagement cannot be measured by the direct opposite profile of the MBI-GS, even though in conceptual terms, it is the positive antithesis of burnout. In addition, other studies point to the fact that burnout and engagement do not share similar antecedents and the measurements of both concepts are different (Jeung, 2011; Schaufeli & Bakker, 2010) which reinforces the independence of engagement from burnout researchers. In a confirmatory factor analysis, Demerouti et al (2010) indicate that considerable studies have provided some support of the Scahufeli's distinction between burnout and engagement with each construct loading to separate factors.

The UWES has been validated in several countries, including South Africa, and the internal consistency of the subscales has proven to be sufficient in those countries (Barkhuizen & Rothmann, 2008; Rothmann & Jordaan, 2006; Schaufeli et al., 2006). Previous studies have shown that the concept of employee engagement can be reliably measured (Schaufeli et al., 2006) and also can be discriminated from other related concepts such as workaholism (Schaufeli, Taris, & van Rhenen, 2008) job involvement and organisational commitment, as well as job satisfaction.

The reliability of the three dimensions of the UWES varies from .80 to .91 (Schaufeli & Bakker, 2004a; Schaufeli et al., 2002). In the study conducted among South African Police Officers, Storm and Rothmann (2003) used the UWES and reported a reliability of .78 for vigour, .89 for dedication and .69 for absorption. In a study amongst employees in a South African financial institution, Coetzee and De Villiers (2010) reported a reliability of .77, .88 and .83 in vigour, dedication and absorption respectively.

Although, the confirmatory factor analyses confirmed the fit of the hypothesis three-factor structure as superior to alternative factor structure such as the one factor (Rothmann, Jorgensen & Hill, 2011, Mostert, 2006) or the two-factor (Brand-Labuschagne et al., 2012; Coetzee & De Villiers, 2010; Rothmann & Jordaan, 2006; Rothmann & Joubert, 2007), a number of studies in South Africa have failed to achieve the three-based theoretical structure of the UWES. For instance, based on the research results by González-Romá et al (2006), several studies conceptualised engagement in terms of vigour and dedication, thereby claiming that the items for absorption were not reliable after conducting confirmatory factor analysis in South Africa.

Similar to any other research instruments, the UWES has undergone rigorous criticism, stemming from its methodological and theoretical concerns regarding its construct validity. For instance, Shirom (2003) critiques the three interrelated dimensions of employee engagement for not being theoretically developed, and as merely the results of the opposites of burnout. This suggests that when the UWES was developed there was no theory on which its dimensions were based; the engagement items represent the opposites of burnout. Another critique levelled on the UWES was that its dimensions overlap considerably with other psychological concepts, such that vigour includes willingness to invest effort (motivational elements) and persistence in the face of difficulties (resilience), dedication overlaps with the major dimensions of job involvement and absorption overlaps with psychological presence at work (Shirom, 2003).

Although, extensive research has demonstrated the validity and reliability of the UWES across a wide range of settings (Scahufeli, 2013), the theoretical three factor structure of the measure is not as robust as anticipated (Wefald, Mills, Smith, & Downey, 2012) as a considerable number of studies failed to achieve the three factor structure of the UWES. In addition, Viljevac, Cooper-Thomas and Saks (2012) failed to obtain discriminant validity of the UWES comparable to job satisfaction, but established that the UWES was discriminate in terms of organisational commitment, job involvement and intent to stay. Other researchers have found that the measure cannot be transferable to other nationalities and ethnic groups with multicultural and multilinguistic

background (Goliath-Yarde & Roodt, 2011). In addition, the instrument does not include the three psychological conditions of meaningfulness, availability and safety as identified by Kahn (1990), because it is based on the burnout literature (Cole et al., 2012).

Despite the inherent shortcomings, the UWES will be used in this study, because it reflects how people view, feel about and react to their jobs and will therefore improve understanding of employees' emotional and personal experience of their work. Moreover, the scale is used because it reflects employees' engagement with the organisation through scientifically formulated questions that indicate levels of vigour, dedication and absorption. Furthermore, the UWES can be used as an unbiased instrument to measure engagement because its equivalence is acceptable for different racial groups. A more detailed description of the UWES will be presented in the research methodology chapter.

4.7.2   The Oldenburg Burnout Inventory (OLBI)

The Oldenburg Burnout Inventory (OLBI) was developed by Demerouti, Bakker, Vardakou and Kantas (2003) to clarify the uncertainty of whether the dimensions of burnout and engagement were indeed each other's opposite. Burnout was originally conceptualised as a syndrome of exhaustion, depersonalised and reduced professional efficacy (Maslach et al., 2001), and the MBI-GS was formed to measure both positive (engagement) and negative (burnout) items which were included in the scale (González-Romá et al., 2006; Demerouti et al., 2010). Some irregularities and criticisms have been levelled against the MBI-GS for (1) theoretically emphasising that it measures only affective exhaustion, (2) including the subdimension of professional efficacy and (3) wording its items as a one-directional scale. Put together, all the criticism led to the formation of the OLBI (Hasbesleben & Demerouti, 2005). It features items that contain positive and negative statement and in addition, assesses the cognitive and physical components of exhaustion, consistent with burnout.

Hasbesleben and Demerouti (2005) report that the OLBI internal consistency reliability was accepted with the scores ranging from .74 to .87 which exceed the recommended guideline of Nunnally and Bernstein (2010). In addition, the factorial structure of two-factor measurement model was also found to be acceptable. However, the OLBI has been found to be a reliable and valid measure of burnout and engagement in work context (Halbesleben & Demerouti, 2005).

Two limitations of the OLBI have been identified, namely, the lack of construct validity in any other language except utilising it among English-speaking sample (Hasbesleben & Demerouti, 2005) and its construct validity and phrasing of some items. In addition, the OLBI is also limited on the basis that relatively few studies in the English-speaking sample were able to test the reliability of the instruments. The instrument has not been translated in other language groups except English (Hasbesleben & Demerouti, 2005), due to the uncertainty that the English translation of the scale might not be capable to achieve the acceptable psychometric properties.

4.7.3 The Q12

The Q12 was developed and validated by the Gallup Research Group and is currently known as the Gallup Workplace Audit (GWA) (Harter et al., 2002; Jeung, 2011; Simpson, 2009). The GWA is a 12 workplace audit statement questionnaire known as the Q^{12} that measures employee engagement on a five-point scale where "1" is indicative of strongly disagree and "5" as indicative of "strongly agree and a sixth option of "Don't know/ Does not apply" (Harter, Schmidt, Killham, & Agrawal, 2009). The instrument was developed through studies of satisfaction and motivation, supervisory practices and work-group effectiveness (Harter et al., 2002). Accordingly, the GWA was designed to measure two broad categories of employees, namely those that measure attitudinal outcome and those that measure issues that are within the manager's control (Harter et al., 2002).

The Gallup Research Group's conceptualisation and measurement of employee engagement are similar to that of Kahn's (1990) personal engagement theory which

include physical, cognitive and emotional engagement during a role performance. As mentioned previously, May et al (2004) were the first researchers that empirically tested Kahn's (1990) theory among almost 200 employees in an insurance company, where they established that all three of the psychological conditions were important in determining employee engagement at work (Shuck & Wollard, 2010). The reliability, convergent validity, and criterion-related validity had already been established through extensive studies by Harter et al (2002) and other practitioner researchers.

The validation of the GWA was based on more than 30 years of accumulated quantitative and qualitative research (Harter et al, 2009). It is an instrument validated through prior psychometric studies as well as practical considerations regarding its usefulness for managers in creating change in the workplace (Harter et al., 2002; Jeung, 2011). The GWA has proven to be a valid measurement instrument of employee engagement (Harter et al., 2009) and with a reliability Cronbach's alpha coefficients .91 at business unit level and approximately .70 at the true-score broader value (Harter et al., 2009).

Prior studies have highlighted that the QWA is limited in terms of measuring the engagement construct itself, instead of the potential antecedents of engagement (Towers Perrin, 2003). In other words, the GWA does not assess the engagement per se, but rather measures aspects or factors that relate to the antecedents of engagement for the organisation, such as job satisfaction motivation.

4.8   INTEGRATION: THEORETICAL FRAMEWORK OF PERSONALITY TRAITS, WORK-LIFE BALANCE AND EMPLOYEE ENGAGEMENT

Previous empirical studies have empirically linked constructs such as job characteristics (quality of work, cooperation, job challenge, autonomy, fairness, workload, support and feedback), leadership, work-life balance, personality traits and employee engagement to organisational performance. However, there are few studies have investigated the effect of employee engagement on work-life balance (Baral & Bhargava, 2011; De Klerk & Mostert, 2010; Marais et al., 2009; Rothmann & Baumann, 2014) and personality traits

(Akhtar, Boustani, Tsivrikos, & Chamorro-Premuzic, 2015; Inceoglu & Warr, 2012; Kim et al., 2009; Ongore, 2014) as antecedents of employee engagement. In the context of this study, the conceptual frameworkfrom the aforementioned studies were modified to construct and test the proposed employee engagement model.

4.8.1 Relationship between personality traits and employee engagement

Personality refers to relatively enduring personal characteristics in the sense of generalised and basic conduct tendencies that reflect long-term, pervasive individual differences in emotional style and have a general influence on emotional responses. Moreover, the role of personality has been recognised widely in the field of psychology and in particular, in stress-related well-being research (Salminen et al., 2014; Mäkikangas et al., 2013). According to Mäkikangas et al (2013) there is a lack of understanding of the role personality traits play in employee well-being. In this respect, they have identified the various reasons behind the limited research and understanding of personality traits in employee well-being.

Firstly, they indicate that there is a remarkable research undertaking on personality constructs used in occupational well-being, but that no consensus exists as to what the core constructs of personality that really matter in promoting or impairing employee well-being at work are. Secondly, they indicate that the occupational well-being literature has paid particular interest on single personality characteristics, thus ignoring the employee as a complete person possessing many personality traits. Thirdly, they acknowledge that the rise of positive psychology and related constructs has presented research on personality and occupational well-being with an additional challenge.

On the contrary, complementary studies show that the effect of personality traits has an impact on the extent to which individuals are engaged in their work activity (Sonnentag et al., 2008). Therefore, it stands to reason that engagement can be significantly related to personality traits, but the question of which personality traits relate to employee engagement (Kim et al., 2006; Langelaan, Bakker, Von Doornen & Schaufeli, 2006; Mäkikangas et al., 2013; Mostert & Rothmann, 2006) as compared to burnout has yet

to be answered. Kim et al (2009) argue that because burnout employees were characterised by their personality profile, it is reasonable to assume that personality traits can equally predict the level of engagement by employees. Consequently, Macey and Schneider (2008) argue that there are certain personality characteristics that predispose employees to feel engaged at work. They identify such personality as including conscientiousness, extraversion, traits positive affectivity and proactivity.

The taxonomy of personality traits or rather, the five factor model (FFM) of personality dimensions inherent in this study is grouped around five factors which are listed below (Mostert & Rothmann, 2006). These dimensions do not represent a particular theoretical perspective, but were derived from analyses of natural-language terms people use to describe themselves and others.

- Neuroticism refers to the general tendency to experience distressing emotions such as fear, depression and frustration, etc.
- Extraversion represents a person's sociability, cheerfulness and a general tolerance for sensory bombardment.
- Openness to experiences combines imagination, interest in novelty, tolerance for change, and intellectual complexity.
- Conscientiousness relates to the person's concentration, discipline, and methodicalness.
- Agreeableness is a person's interest in serving others and his or her tendency to challenge the status quo.

More engaged and less engaged workers are likely to differ in certain traits as well as in the nature of their jobs, but few studies of possible personality contributors to job engagement have been published. For instance, engagement has been conceived to predict the primary function of personality factors, namely, neuroticism and more energised forms of extraversion and conscientiousness (Langelaan et al., 2006; Mostert & Rothman, 2006; Sonnentag et al., 2008).

Opie and Henn (2013) investigated factors that impact on work-family conflict and engagement among working mothers. More specifically, their study aimed to investigate the moderating role of conscientiousness and neuroticism on the relationship between work-family conflict and engagement. The result indicates that work-family conflict negatively predicts engagement. Conscientiousness was found to be positively moderated by engagement, and neuroticism negatively moderated by engagement. A significant interaction effect was also found for conscientiousness but not for neuroticism.

Bakker et al (2010) conducted a study to explore the two core personality factors in the JD-R model among a large sample of Australian academic staff. Their study hypothesised that neuroticism will be most strongly related to health impairment and that extraversion will be most strongly related to the motivational process. As expected, their study supports their hypothesis, suggesting that academics experiencing high levels of workload and work-home conflict were most likely to experience physical and/or mental health impairment. Their findings suggest that engagement can only be attainable provided employees are offered reasonable workloads and adequate resources to complete their tasks.

Kim et al (2009) examined all five factors of personality and engagement in a study among employees working for quick service restaurants. Consistent with other studies, their findings reveal that engagement was particularly predicted by conscientiousness and neuroticism. Conscientiousness was a positive predictor of engagement; whereas, neuroticism had a negative association with this construct. They conclude that conscientious employees are more likely to invest energy into their work, complete their job task and ultimately feel a stronger sense of professional efficacy.

Langelaan et al (2006) examined whether burnout and engagement could be differentiated on the basis of personality and temperament characterised by high neuroticism and low extraversion and engagement by low neuroticism and high extraversion. The results reveal that burned out employees are high on neuroticism; whereas engaged workers are characterised by low neuroticism, high extraversion and

high levels of mobility. This evidence suggests that generally, engaged employees adapt well to changes in their work environment (mobility); are cheerful and outgoing (extraversion); and are less likely to experience negative emotions such as fear, depression and frustration (neuroticism).

Mostert and Rothman (2006) also report similar findings in their study among a large sample of police officers conducted in South Africa. Specifically, their results show that three of the five personality traits: emotional stability, conscientiousness and extraversion exercised significant unique effects on the two core dimensions of engagement, that is, vigour and dedication.

Taken together, it appears from the aforementioned discussion that both conscientiousness and emotional stability exert a strong influence towards employee engagement. This suggests that people who are responsible, dependable, achievement-orientated, confident and satisfied with their work roles and organisation can easily achieve and complete their work roles.

4.8.2 Relationship between work-life balance and employee engagement

Within the body of literature on work-related variables and strain, work demands have been the most frequently examined construct. Previous studies considered work demands in relation to both work-family conflict (WFC) and work-family enrichment (WFE) (Parkes & Landford, 2008; Rantanen, Kinnunen, Mauno & Tillemann, , 2011; Sanz-Vergel et al., 2010) as encapsulated under the umbrella of work-home interaction. The work-family interface consists of the intersection of various work and family characteristics for a given person, and addresses both negative and positive relations between work and family domains.

Accordingly, work-family conflict refers to the negative interface between work and family domains, whereas work-family enrichment refers to the positive interface. Based on the extant of the literature, individual employees are assumed to experience both the WFC and WFE simultaneously on a daily basis. Similarly, Rantanen et al (2011) as

well as Sanz-Vergel et al (2010) posit that both WFC and WFE define the nature and the experience of the work-family interface.

Rantanen et al (2013) describe work-family conflict as perceived difficulty to fulfil simultaneous and/or conflicting work and family demands due to the insufficiency of time- and energy-related individual resources. This notion is based on the role stress theories which state that if a given set of social roles imposes conflicting role expectations and pressures on people, it can create psychological conflict and role overload for that person because individual resources are finite and scarce (Greenhaus & Beutell, 1985; Rantanen et al., 2013b). They define WFC as "a form of inter-role conflict in which the role pressure from the work and family domains are mutually incompatible in some respect. That is, participation in the work or family roles is made more difficult by virtue of participation in the family (work) role" (Greenhaus & Beutell, 1985, p. 77). This is indicative of the bi-directional in nature which divides conflicts arising from work-related demands hindering well-being and performance in the family domain (work-to-family conflict) and conflicts arising from family-related demands hindering well-being and performance in the work domain (family-to-work conflict) (Demerouti et al., 2012; Greenhaus & Beutell, 1985).

The concept work-family enrichment (WFE) is defined by Greenhaus and Powell (2006) "as the extent to which experiences in one role improve the quality of life in the other role" (p. 73) and as a synonymy with positive spillover, enhancement, and facilitation. It is postulated that enrichment occurs when resource gains generated in one role promote performance or affect in the other role (Demerouti et al., 2012; Greenhause & Powell, 2006; Rantanen et al., 2013), enrichment is enhanced, which in turn leads to positive outcomes. Therefore, such resource gain can either be achieved through the instrumental path or affective path.

The instrumental path occurs when resources such as skills and perspectives gained from one role directly improve performance in the other role, whereas the affective path occurs when a resource in one domain produces positive affect within that domain, which in turn, improves individual functioning in the other domain (Greenhaus &

Powell, 2006). The affective pathway is aimed at positive moods and emotions derived from experiences obtained through work and family roles.

The majority of work-family research has focused on the WFC between demands and outcomes and between the work and family domains as compared to the positive spillover (Bakker & Schaufeli, 2011), ignoring that life outside work is as important as the work itself, because it affects how one feels and behaves at work. In the study conducted by Ten Brummelhuis, Bakker and Euwena, (2010), it is reported that employees's family-work interference have a positive relationship with their colleague's sickness absence through the crossover of feelings of burnout. In support of this finding, May et al (2004), argue that activities outside the workplace could draw away individuals' energies from their work and make them less psychologically available for their work roles. These activities and the time demands associated with them are likely to distract an individual's attention so that he/she is unable to focus on his/her role tasks. This suggests that family responsibilities at work not only affect employees but they can also crossover to their colleagues. Specifically, home demands that require too much effort (too many home obligations) are associated with negative built-up load effects that may ''spill over'' to the work situation.

For instance, Richman et al (2008) examine the relationship of perceived workplace flexibility and supportive work-life policies on employee engagement and expectations to remain with the organisation. Their research also explores the association of formal and occasional (informal) use of flexibility with these outcomes. Results reveal that perceived flexibility and supportive work-life policies are related to greater employee engagement and longer than expected retention. Employee engagement fully mediates the relationship between perceived flexibility and expected retention and partially mediates the relationship between supportive work-life policies and expected retention. Thus, both formal and occasional uses of flexibility are positively associated with perceived flexibility, employee engagement, and expected retention. These analyses provide evidence that workplace flexibility may enhance employee engagement, which may, in turn, lead to longer job tenure.

Siu, Lu, Brough, Lu, Bakker, Kalliath, O'Driscoll, Phillips, Chen, Lo, Sit and Shi (2010) investigated work-family enrichment and test the mediating role of engagement. The inclusion of engagement extends prior research on work-family interface and allows for examination of the effects of role resources (job resources, family support) on work-family enrichment. Using the Structural Equation Modelling (SEM) analyses, their results show that engagement is the most proximal predictor of work-family enrichment. Employee engagement was found to fully mediate the relationship between family-friendly organisational policies and work-family enrichment, and also between job autonomy and family-work enrichment. Moreover, engagement was found to partially mediate the relationships between two job resources (supervisor support, job autonomy) and work-family enrichment, and also between family support and family-work enrichment.

Parkes and Langford (2008) conducted a study to assess whether employees are satisfied with their ability to balance work and other life commitments. It was hypothesised that work-life balance is important for engaging and retaining employees in the context of other aspects of organisational climate. Their results showed that of the 28 organisational climate factors, work-life balance was the least aspect related to employee engagement and intention to stay in the organisation. In addition, their result showed that employee engagement was highly correlated with management of change and degree of innovation, belief in the organisation's mission and values, satisfaction with rewards and recognition, successfully achieving organisational objectives, participation and involvement in decision-making, career opportunities, competence of and communication with leadership, and employee perceptions of customer satisfaction with goods and services.

Alternatively, the effort-recovery theory emphasises that work and family demands are not necessarily negative for individuals if they have the opportunity to recover from the effort expended to meet those demands. This implies that recovery, such as the psychological detachment from work during the evening, is instrumental in terms of recuperating from stressful situations experienced during the day and maintaining well-being. Put differently, Sanz-Vergel et al (2010) aver that recovery takes place during

periods when the previously existing demands are not present, making it possible to restore resources or build up new energy (Hobfoll, 2001). Therefore, such a state of being recovered enables employees to become fully immersed in their work and to fully concentrate on it on the next day.

Psychological detachment has been widely studied within the field of recovery. According to Sonnentag and Fritz (2007) detachment implies disengaging oneself mentally from work and stopping thinking about job-related problems. Detaching from work is important as employees have other social responsibilities outside their work roles that have to be taken care of such as spending time with spouses, parenting, friends or children. Sanz-Vergel et al (2010) explain that these social roles have the proclivity to also affect the working life of employees. For instance, one can be thinking about family issues at work, making it difficult to concentrate on job tasks. When the working day is over, people have to move not only physically but also psychologically to another role.

For instance, Sanz-Vergel et al (2010) conducted a daily study to examine the effects of specific recovery inhibiting and enhancing conditions on work-family interaction and well-being among various professional backgrounds in Spain. They hypothesise that day-specific work pressure as an example of job demands is positively related to (a) WFC and (b) exhaustion at bedtime, and negatively related to (c) WFF and (d) vigour at bedtime. The results show that recovery inhibiting condition, namely work pressure, is positively related to WFC and exhaustion at bedtime. These findings are in line with the ''resources loss spiral'' proposed by Hobfoll (2001). Furthermore, recovery after breaks significantly predicted WFF and vigour at bedtime.

Sonnentag (2003) examined the effects of recovery in the evening after daily work in a regular work week. The study intended to investigate the impact of recovery periods on subsequent engagement and proactive behaviour at work. It was hypothesised that recovery has a positive effect on the three dimensions of engagement. The findings supported the hypothesis, as it was reported that there was a positive effect of recovery on engagement and proactive behaviour, with engagement mediating the effects of

recovery on proactive behaviour. These findings suggest that individuals who feel that they sufficiently recover during leisure time experience a higher level of engagement during the subsequent work day. This high level of engagement in turn helps them in taking initiative and pursuing learning goals.

4.8.3 Proposed model for the relationship between personality traits, work-life balance and employee engagement

The proposed model is based on the revised job demands-resources model (JD-R) by Bakker and Demerouti (2007; 2008) and illustrates in the simplest way, how personality traits and work-life balance influence employee engagement. The JD-R model examines the impact of work-life balance (i.e. job demands and job resources) and personality traits (personal resources) on employees' optimal (employee engagement) work-related well-being. These work-life balance and personality traits in turn relate to employee engagement, leading to organisational effectiveness in the form of profitability, loyalty and financial revenues.

Against this background the proposed model for the relationship between personality traits, work-life balance and employee enmgagement is illustrated below:
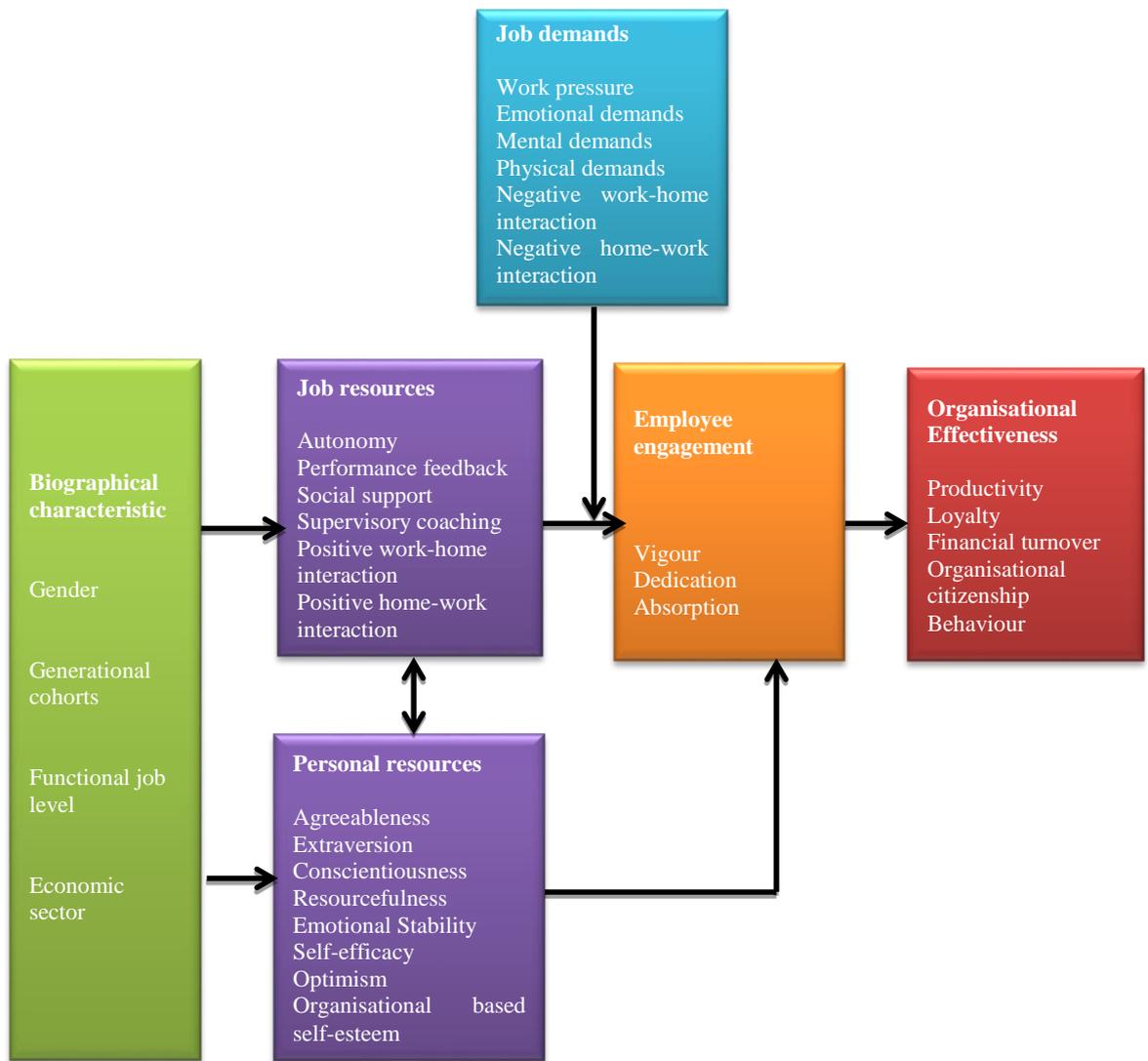
Figure 4.2.   *Proposed model of personality traits, work-life balance and employee engagement*

As shown in Figure 4.2, job resources are the physical, psychological, social, or organisational aspects of the job that facilitate the achievement of work goals, reduce job demands and its costs, or stimulate personal growth through meaningful work (Bakker & Demerouti, 2007). The positive relationship between engagement and job resources resonates well with the job characteristic theory outlined by Hackman and Oldham (1980). Job resources comprise of all aspects of job characteristics and work-life balance in the form of positive work-home interaction and positive home-work interaction acting as motivational hypothesis. The job characteristics have been considered as important antecedents of both work-home interactions and engagement

(Geurts & Demerouti, 2003). It is believed that adequate job resources can assist employees to balance the demands at work and home, leading to a positive interaction between the domains, which in turn brings forth higher levels of engagement (Geurts & Demerouti, 2003).

Personal resources are described as positive self-evaluations that are linked to resilience and refer to the individual's sense of their ability to control and impact upon the environment successfully (Hobfoll et al., 2003). Hobfoll (2002) refers to personal resources as proximal to the self and includes personal traits and energies. In the proposed model, personal resources constitute of five factors of personality traits which include agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability. It is noteworthy that personality traits influence the way people perceive their environment whether work and/or home and in addition, how they handle demands and resources arising from either the work or home environment. Personal resources such as personality traits and characteristics are functional in controlling the environment and exerting impact on it in a successful way. In addition, they can assist in understanding how employees can utilise resources in their environment to achieve other purposes.

Resources (job and personal resources) are structural or psychological assets that may be used to facilitate performance, reduce demands, or generate additional resources. Drawing from the conceptual framework of Macey and Schneider (2008), there are "limits on the pool of energy and resources available to employees" and "sustained levels of engagement will be difficult to achieve" (p. 25). Geurts and Demerouti (2003) investigated whether engagement can have a negative impact for employees with regard to how work interferes with family. Their research results indicated that the relationship between engagement and work interference with family were weaker, specifically amongst employees who are conscientious. This suggests that personality traits such as conscientiousness may act as a resource that enables employees to better balance their work and family responsibilities.

Studies have consistently tested the relationship between job resources and the influence between work and home interaction (Demerouti et al., 2004; Koekemoer & Mostert, 2007; Mostert & Oosthuizen, 2006). Based on the results, it is apparent that job resources such as opportunities for development, autonomy, social support and performance feedback have been found to produce more positive experiences among employees, which in turn, spillover to the home environment (Demerouti et al., 2004; Mostert, 2009; Mostert et al., 2006).

Therefore, it seems that job resources and positive work-home interaction and engagement are all related (Geurts & Demerouti, 2003; Montgomery et al., 2003; Mostert et al., 2006). It can be assumed that positive work-home interaction is rooted in the spillover from sufficient resources and consequently, that such positive spillover can lead to higher levels of engagement. Therefore, when an individual experiences a lack of resources due to high job demands, it could hinder him/her from balancing the demands at work and home, which in turn could hamper positive interaction between the two domains, leading to lower engagement (Mostert et al., 2006). This however, will allow work-home interaction to act as a mediating variable in the relationship between job resources and engagement.

There is an abundance of research that has examined the negative consequences of work-home interaction as compared to the positive work-home interface/interference. However, there is limited research examining the relationship between engagement and positive work-home interaction. Montgomery et al (2003) conducted a study among a sample of 69 newspaper managers to determine the conflicts experienced in fulfilling the responsibilities of work and family/home. In other words, their study intended to assess which type of demands and resources mediated by work-home interference (WHI) or home-work interference (HWI) in relation to burnout and engagement. Their results indicated that negative interference mediated between demands and outcomes, and positive interference mediated between resources and outcomes, hence the need to measure positive concepts in termsof constructing a more balanced picture of work and home interference.

Hakanen et al (2011) conducted a longitudinal study to determine the reciprocal causal effects which exist between resources, enrichment and well-being. Their study found that job resources positively predict future work-family enrichment, which in turn, predicts engagement.

Job demands refer to those physical, social and organisational aspects that require sustained physical and mental effort and are therefore associated with certain physiological and psychological costs (Bakker & Demerouti, 2007). Job demands consist of work-life balance in the form of negative work-home interaction and negative home-work interaction. According to Montgomery et al (2003) the negative work-home and home-work interaction is caused by having too many demands and limited resources, and such interference can result in a feeling of burnout.

4.9   SUMMARY OF CHAPTER

The chapter outlines the positive psychology movement which is based on optimal functioning and human strength, where engagement, along with happiness, was identified by traditional psychological research. This is followed by the conceptual foundation of employee engagement based on various approaches. A distinction between 'employee' and 'work' engagement which contributes to the confusion about the construct engagement is clarified. Within the extant of the literature, engagement refers to the relationship of an employee to his or her work, whilst employee engagement also includes the relationship with the employee's professional or occupational role and with his or her organisation. Different approaches of employee engagement are discussed and supported with evidence for their contribution to the construct.

The antecedents of the employee engagement are presented from the job demands-resources model, the conservation of resources theory, personality traits and work-life balance. The JD-R model is useful to the extent that the relations on engagement with specific demands or resources do not vary significantly within these overarching categories. The model provides a good vehicle to summarise these relationships

between job demand and job resources. Essentially, the JD-R model suggests that JR promotes engagement through a motivational process and that JD contributes to burnout through an energy depletion process. In addition, this chapter shows that engagement, job resources and personal resources are interlocked in a complex mutually reinforcing relationship and can reciprocally affect each other over time. The COR theory is generally used to understand the effects of job resources on employees.

Previous studies have shown that engagement can predict personality and work-home interaction. Numerous studies have also found empirical evidence pointing to the fact that engagement can translate into various work-related outcomes such as increased job satisfaction, organisational commitment, motivation and low turnover while it improves the health and well-being of employees. The various measuring instruments for the construct engagement are briefly described, namely the UWES, the OLBI and the GWA. A comprehensive discussion of the UWES will be presented in the research methodology chapter that follows.

The next chapter will discuss the research methodology.

CHAPTER 5:   RESEARCH METHODOLOGY

5.1   INTRODUCTION

The general aim of this research was to construct and test a model on the relationship between personality traits and work-life balance as determinants of employee engagement. The research aimed further to investigate which biographical characteristics (gender, generational cohorts, functional job level and economic sectors) significantly moderate the relationship between and personality traits and work-life balance and employee engagement. This chapter provides information on the research methodology used to investigate the above-mentioned research objectives and research hypothesis. The selection of the sample, the procedure and measures used for data collection, and the statistical analyses are also discussed. The chapter concludes with the formulation of the research hypotheses and chapter summary. Figure 5.1 presents the flowchart of the research procedures.
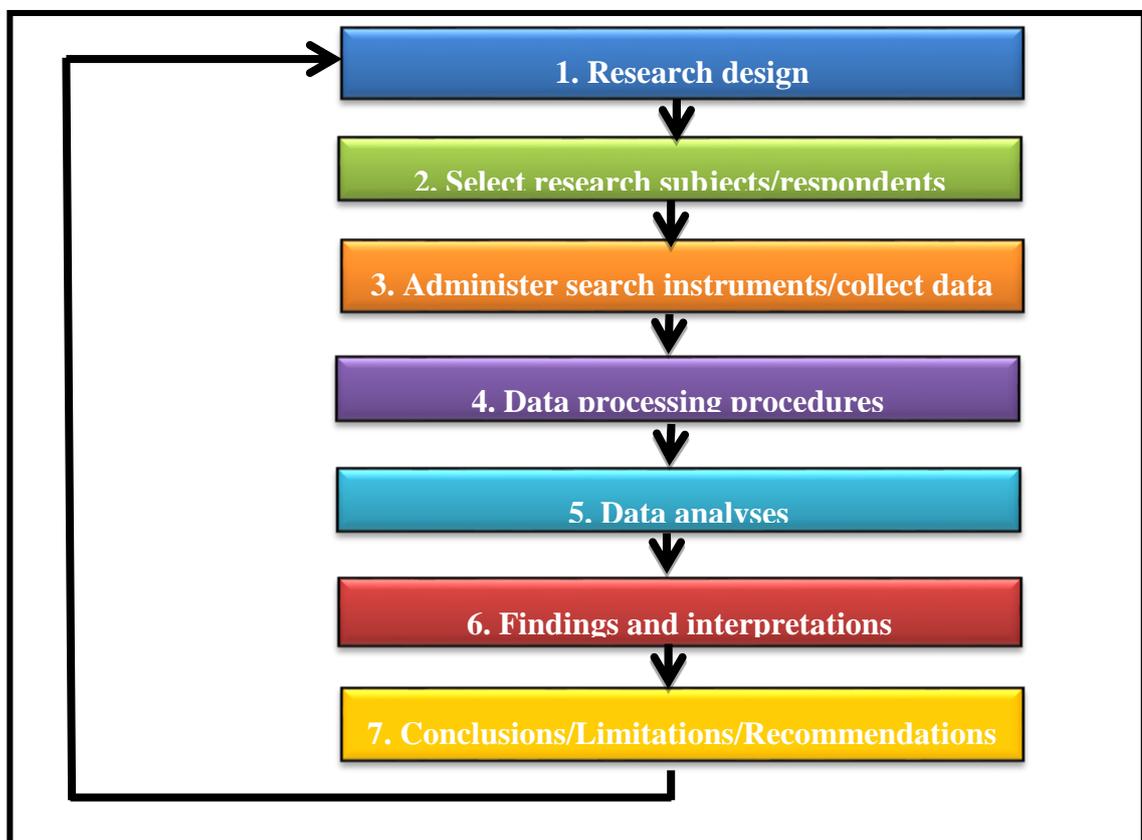
Figure 5.1.   Schematic presentation of the research procedures of the study
(Adapted from Bryman, 2010, p.161)

Chapter 6 and 7 will discuss the data analyses and findings as well as the interpretation of the results as well as conclusions, limitations and recommendations respectively.

5.2   RESEARCH DESIGN

The general aim of this research is to construct and test a model on the relationship between personality traits (agreeableness, extraversion, conscientiousness, resourcefulness, and emotional stability) and work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction, and positive home-work interaction) as determinants of employee engagement (vigorous, dedication, and absorption). Furthermore, the research aimed to investigate which biographical characteristics (gender, generational cohorts, functional job level and economic sectors) significantly moderate the relationship between personality traits and employee engagement as well as work-life balance and employee engagement.

Due to the nature and complex social phenomena, this research is grounded within the positivist paradigm. Bryman (2010) refers to the paraphernalia of positivism as characterised typically by the operational definition, objectivity, replicability and causality. The positivist paradigm relies on a deductive reasoning approach to the research process, whereby researchers are required to draw some conclusion subsequent to the reasons generated from the empirical study (Blumberg et al., 2005, Neuman, 2011; Terre Blanche & Durrheim, 2002). The deductive reasoning approach involves research in which a conceptual and theoretical structure are developed and tested through empirical observation (Welman et al., 2005) to make inference about variables.

In an attempt to achieve the overall purpose of this study, a certain philosophical foundation (ontology), strategic inquiry (epistemology) and specific methods (methodology) are scrutinised in the application of the research study. Generally speaking, research in social phenomena is classified into three main groups based on the application of the research study, its objectives in undertaking the research and how

the information is sought. These three main groups can be implemented through the research design and research method.

On the one hand, Babbie (2014) refers to a research design as "the plan or structured framework of how the researcher intends conducting the research process in order to solve the research problem" (p. 647). Welman et al (2005) considers a research design "as the process followed in an attempt to obtain data about the research phenomenon from the participants" (p. 52). Overall a research design is perceived as the masterplan that integrates the different components of research in a coherent and logical way, with the ultimate goal of addressing the research questions. It constitutes a research plan that specifies the methods and procedures to be followed when collecting and analysing the required information aligned with the research objectives.

Durrheim (2006), on the other hand, describes a research design as "a strategic framework for action that serves as a bridge between research questions and the execution or implementation of the research" (p. 34) and subsequently data analysis. Furthermore, Durrheim (2006) also considers a research design as a plan that specifies how the research is going to be executed in such a way that it answers the research questions, and associate research design with an "architectural blueprint" of a building (which describes the exact sample size, sampling technique and measurement instrument as well as the type of data analysis) (Durrheim, 2006). Accordingly, both the research design and architectural blueprint consist of a structural plan which outlines the procedure and process to be followed to achieve the resultant outcomes.

There are three fundamental types of research design, namely qualitative, quantitative, and mixed methods. On the one hand, qualitative research is concerned with exploring and understanding insightful meaning derived from interaction with individuals on social and natural issues. On the other hand, quantitative research explains phenomena through instruments, uses numeric data analysis (Creswell, 2009; Durrheim, 2006; Welman et al., 2005) and is often used for theory testing. Complementary studies use words or texts to describe qualitative and numbers for quantitative research (Blumberg

et al., 2005; Creswell, 2009; Durrheim, 2006; Durrheim & Painter, 2006). The mixed method consists of a combination of the qualitative and quantitative research.

To further contextualise the difference between qualitative and quantitative methods, Bryman (2010) states that the choice between them has to do with their suitability in answering particular research questions. Unquestionably, both qualitative and quantitative methods are appropriate to answer any social and natural research problems and each design has its own relative weaknesses and strengths.

Therefore, the main strength of the quantitative research approach is to strive towards control in order to understand the phenomenon in an objective manner and uninfluenced by subjective judgement. Hence, Cooper and Schindler (2014) maintain that the procedure for quantitative research requires that researchers distance themselves from the actual research in order to avoid influencing the results.

Creswell (2009) and Neuman (2011) propose that a quantitative research design is characterised by one or more of the following aspects:

- It states the research problem clearly and precisely.
- It starts with a research hypothesis to be tested.
- It clearly specifies both the independent and dependent variables under investigation.
- It eliminates subjectivity judgement.
- It uses standardised procedure to collect some form of numerical data.
- It uses statistical procedures to analyse and draw conclusions from the data.

Nonetheless, one of the limitations inherent in quantitative research approach relates to denigration of human individuality and the ability to think (Babbie, 2014; Bryman, 2010; Creswell, 2009). The quantitative research approach does not allow humans to explore the world as they experience it, but rather subjects them into law-like entities. It fails to take into account people's unique ability to interpret their own experience and meaning of social phenomenon, hence the mixed methods tends to be the preferred

method. Noticeable is the fact that no scientific research can be totally objectively observed due to the realisation that the subjectivity of the subject is present throughout the conceptualisation and operationalisation of the study, as well as the interpretation and report writing of the research results.

This study aimed to explore and describe the extent to which personality traits and work-life balance serves as determinants of employee engagement. In this particular study, the focus is on fostering employee engagement and how to ensure that employees unleash their full potential in the work context. The study explored the effects of work-life balance and personality traits and intends to contribute new insight to the body of knowledge on employee engagement. This study is grounded within the positivism and quantitative research design because of its proclivity to consider a phenomenon objectively in its totality and explains behaviour in real-life without the influence of the researcher. Furthermore, the research study will explicitly utilise descriptive analysis with standardised instruments.

Equally important, the research study aimed to test different theories, identify all relevant variables and utilise survey questionnaire in order to collect numeric data. The cross-sectional research which evaluates a number of variables at the same time relating to a single individual in the sample will be the preferred time series for the study. It should be noted that cross-sectional research has been identified as a limitation in a number of studies purely because it cannot account for causality or social changes. However, this problem will be lessened by the computation path analysis and related regression techniques when conducting structural equation modelling.

In the context of quantitative research approach, different methods are available for the collection of primary data such as observation or experimental studies, correlation research, developmental designs and survey research. The choice of method appropriate for the research under observation is purely guided by the type of information required from the participants. In particular, this study will use the survey research method to gather information from the participants. The method is chosen on the bases that the instruments are grounded on distinctive theories, objectivity and replication can be

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maintained. In addition, they can be operationalised with survey questionnaire which is easy to disseminate to geographically diverse sample elements through the technological mode.

5.3 POPULATION AND SAMPLING PROCEDURE

This section discusses the steps undertaken when determining the samples to be included in the study. The discussion is structured along the lines of Cooper and Schindler's (2014) five research questions for securing appropriate sample elements, namely:

- What is the target population?
- What are the parameters of interest?
- What is the sample frame?
- What is the appropriate sampling method?
- What size sample is needed?

The **target population** is described as a group of individuals who possesses specific characteristics from which a sample is drawn to determine the parameters or characteristics of a fairly large population (Leedy & Ormrod, 2010). Specifically, the target population refers to a group of people or entities from which information is required, where statistical inferences can be made about a particular phenomenon under observation. Welman et al (2005) articulate that target population validity is important and greater care should be taken to obtain a representative sample in order to prevent biased results.

In the context of this study, a company database consisting of 285 000 people employed in the various industries, reflecting the profile of the South African working population, was used as a **sample frame** and **population of interest**. Additionally, the target population was selected for inclusion based on a number of criteria. Among others, individuals had to be of a working age population, had to have access to the Internet and employed within the economic sectors of South Africa. The scope of the study was

restricted to a quantitative research design among selected South African Internet users. The selected sample was of working business people, who were assumed to be reasonably computer literate and had Internet connectivity.

On the basis of the total number of the targeted population, it would not be feasible to study the entire group. In addition, evidence from various studies supports that a portion of the population known as a sample be selected to participate in the study (Babbie, 2014). A sample is a segment of the population selected for observation intended to yield some knowledge about the population under observation for the purpose of statistical inferences. A sample is representative of a population if elements in the sample have been randomly selected from a sample frame, listing every person in the population (Cooper & Schindler, 2014; Durrheim & Painter 2006).

There are two sampling techniques that are widely used in social phenomena, namely, probability and nonprobability sampling techniques. Probability sampling techniques are concerned with a mathematically sophisticated method for selecting sample elements with the aim of generalising the results to the entire population under observation, whereas nonprobability sampling does not use any scientific method, but relies on judgemental and/or convenience for sample selection. Neuman (2011) states that probability sampling is often used to create an accurate representative sample and has mathematically predictable errors, while nonprobability sampling is less accurate and is preferred in the absence of a probability sample.

In similar vein, Blumberg et al (2005) categorise the probability and nonprobability sampling techniques in terms of restricted and unrestricted selection of the sample element respectively. The probability sampling methods include simple random sampling, systematic sampling, stratified sampling and cluster sampling. Conversely, the nonprobability sampling methods include convenience sampling, judgement sampling, quota sampling, and snowball sampling. Therefore, various aspects have to be taken into consideration when deciding on the suitability of sampling techniques. In essence, the purpose and type of information required to achieve the research objectives is governed by the type of sampling technique utilised and how large the sample size

should be. In addition, cost and time also have an influence on the determination of sample size as well as the geographical scope of the study.

In this particular study, the probability sampling technique was chosen. The selection of this sampling technique is based on the availability of a sample frame and the opportunity to calculate the sample error that might be anticipated. Essentially, simple random sampling was used for the selection of sample elements. A simple random sample is the most attractive type of probability sampling because it allows each element in the target population an equal probability chance of being included in the sample (Durrheim & Painter, 2006; Welman et al., 2005). This implies that each element has exactly the same chance of being selected and the selection is independent of the selection of a previous element. Cooper and Schindler (2014) refer to simple random sampling as unrestricted because each population element has a known and equal chance of selection, which is totally different from the other probability techniques which rely on nonzero probability of selection.

The determination of sample size is one of the most crucial aspects of any research. Sample size refers to the number of research participants to be included in the study under observation. The size of the sample drawn affects the quality and generalisation of the data as well as the envisioned statistical analysis. Theoretically speaking, researchers are guided by various aspects when contemplating the appropriate sample size as there is no definite size that could yield the required information for statistical analysis. However, factors such as nonresponse, time and money need to be filtered into the determination of sample size (Bryman, 2010).

For this reason, Neuman (2011) and Welman et al (2005) outline some aspects that govern the choice of sample size:

- The size of the total population from which a sample is drawn.
- Level of certainty that the characteristic of the data collected represent the characteristics of the total population.
- The level of accuracy needed to justify the sample.

- The heterogeneity (variance) of the variable being measured.
- The number of categories which could be subdivided in the data.

In the context of this study, a sample size of 1 000 individual employees was considered sufficient to yield the required statistical analysis. Approximately, 1 110 individuals participated in the web-based survey. Ultimately, a realised sample size of approximately 1 063 useable responses per sample was achieved. The decision for the sample size was based on the notion that the larger the sample size, the lower the likelihood of errors in generalising to the population. Neuman (2011) asserts that the larger the population, the smaller the sampling ratio for an equally good sample because, as the population size grows, the returns in accuracy for sample size decrease. On the contrary, Bryman (2010) warns that a larger sample size does not guarantee precision. Nevertheless, Hair, Black, Babin, Anderson and Tatham (2010) caution researchers to be careful against too small sample size as it could weaken the power of the statistical tests of significance. The following section presents survey instruments.

5.4   SURVEY INSTRUMENTS

The study encompassed an empirical research study of the relationship between personality tyraits, work-life balance and employee engagement. The selection of the survey instruments were guided by the literature review. Survey instrument in this particular study is used to refer to a questionnaire that serves as the primary vehicle to gather information from the participants. Generally, the questionnaire aimed to assess individual's perceptions, attitudes, values and/or personalities. In addition, the choice of the psychometric instruments was specifically based on the validity and reliability of the various instruments. Validity is the extent to which a test measures what it is supposed to measure, while reliability refers to the "repeatability or consistency" of a person's performance on a test of other method of assessment, such as an interview.

The survey instruments were originally based on the research hypotheses and the intended research model mentioned earlier in chapter one. Three standardised and validated instruments were utilised to elicit the requisite data. In addition, the

biographical variables such as gender, generational cohorts, marital status, parental status, functional job level, tenure, and industry sectors were also reflected in the questionnaire. A detailed description of each research instrument is give in the section below:

5.4.1   Measurement of work-life balance

Work-life balance was measured by the Survey Work-home Interaction/NijmeGen (SWING). The section to follow discusses the scale in terms of its development and rationale, dimensions, administration and interpretation, reliability, validity and justification for inclusion.

5.4.1.1   *Development and rationale*

The SWING was developed by Geurts et al (2005) based on the Effort Recovery Theory (ERT) developed by Meijiman and Mulder's (1998) to measure and assess the work-home interaction. The work-home interaction (WHI) can be defined as an interactive process in which a worker's functioning in one domain (i.e. home) is influenced either negatively or positively by load effects that have been built up in another domain (i.e. work) (Demerouti et al., 2004; Geurts et al., 2005; Mostert & Oldfield, 2009). This definition suggests that any interaction that occurs between the work and home environment can occur in both directions, which in turn can influence each domain either in a negative or a positive way. This theory-based instrument is used to measure both the direction of influence (i.e. work-to-home influence and home-to-work influence) and the quality of influence (i.e. negative and positive) in a person's life (Geurts et al., 2005; Marais et al., 2009; Mostert & Oldfield, 2009; Van Aarde & Mostert, 2008).

Mostert and Oldfield (2009) assert that the E-R theory explains how work and personal life may interact with each other and by which mechanisms of well-being may be affected during this process. The need to recovery plays a central role to the ERT in order for one to effectively manage and perform required responsibilities in both the

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work and environment with minimum intereference. Recovery takes place when the exposure to load ceases and the respective psychological systems stabilise at the baseline of a specific level within a certain period and the employees that are recovered are willing to invest their effort in tasks and are more resilient when they are confronted with stressful situations (Geurts et al., 2003).

The central principle of the theory is that work demands that require too much effort are associated with building up of negative load effects that can spillover to home or personal environment. As a consequence, it becomes difficult for an employee to effectively perform home or personal life roles as the energy might have been depleted from the effort one has put at work resulting in negative interference between the work and home environments.

The rationale for the theory and in particular for the instrument allows researchers to capture the mitigation of the load reactions arising from the work and home environment which could either be negative or positive spillover to the domains. In essence, the instrument encompasses interaction between the two domains (interaction between the work and home domain) and quality (negative and positive interaction) (Mostert & Oldfield, 2009; Rost & Mostert 2007). The work-home interaction measures the direction of influence (work to home interaction vs. home to work interaction) and the quality of influence (negative and positive) of the interaction between work and home.

5.4.1.2   Descriptions, administration and interpretation

The SWING consists of 22 items (of which 13 items were developed specifically for the scale, while nine items were generated from an item pool of existing instruments measuring the negative interaction) and is a self-report questionnaire which measures the four dimensions of work-home interaction. Originally, the SWING consisted of 187 items of which 30 were discarded because they duplicated other items in the pool. The 157 items were further scrutinised on the basis of four criteria, namely: items should fit the four definitions of WHI/HWI, items should not confound with external variables,

items should not contain ambiguous expressions that could be difficult to translate into other languages and items should be applicable to all workers (Geurts et al., 2005).

Based on the four criteria, 78 items were discarded for failing to satisfactorily adhere to the criteria and ten-items remained to be incorporated to the already 17 self-developed items for the scales. Paradoxically, the scale for the SWING consisted of 27 items of which five-items from the self-developed item pool were omitted as a result to high overlap with other items and also low factor loading. The remaining 22 items are used as the composite scale of the SWING and are based on four dimensions of the work-home interaction. The four types of the work-home interaction are labelled and described as follows:

- negative work-home interaction (NWHI) is measured by eight-items that constitute items of strain-based interference and time-based interference (De Klerk & Mostert, 2010; Marais et al., 2009; Mostert & Oldfield, 2009; Van Aarde & Mostert, 2008). NWHI refers to a situation where negative load reactions build up at work, hampering a person's functioning at home (De Klerk & Mostert, 2010; Geurts et al., 2005).

- positive work-home interaction (PWHI) is measured mostly by self-developed items (five-items) that probed the spill-over of positive mood developed at work to the home domains, as well as the transfer of skills learned at work that improve functioning at work (De Klerk & Mostert, 2010; Marais et al., 2009; Mostert & Oldfield, 2009; Van Aarde & Mostert, 2008). PWHI is defined as positive load reaction built up at work that facilitates functioning at home (De Klerk & Mostert, 2010; Geurts et al., 2005).

- negative home-work interaction (NHWI) is measured by four-items of which one-item was a self-developed item specific for the scale and three-items were parallel items from the negative WHI (De Klerk & Mostert, 2010; Marais et al., 2009; Mostert & Oldfield, 2009; Van Aarde & Mostert, 2008). NHWI refers to

those negative load reactions which develop at home that fetter a person's functioning at work (De Klerk & Mostert, 2010; Geurts et al., 2005).

🞣 positive home-work interaction (PHWI) is measured by predominantly self-developed items (five-items) that capture the spill-over of positive mood developed at home to the work domain and that parallel the positive WHI scale (Geurts et al., 2005; Marais et al., 2009; Mostert & Oldfield, 2009; Van Aarde & Mostert, 2008). PHWI occurs when positive load reactions developed at home facilitate functioning at work. (De Klerk & Mostert, 2010; Geurts et al., 2005).

The SWING uses a four response format anchoring from 0 (*never*) to 3 (*always*). The participants are requested to indicate the degree to which a particular statement applies to them. The instrument is scored by adding the responses of each statement per subscale separately to arrive at a score for each subscale. The total score of the four subscales of the SWING gives an indication of whether a participant experienced WHI (either negative or positive) or HWI (either negative or positive). The score of the statements assists the researcher in determining the position of the participants.

In this study, higher scores were interpreted as high positive WHI and HWI, whereas lower scores meant negative WHI and negative HWI. Therefore, a mean score of 0 to 1 was interpreted as low, and seen in the negative WHI and negative HWI subscale. A mean score of 2 and 3 was interpreted as high and seen in the positive WHI and positive HWI subscale and a score between 1 and 2 was average.

5.4.1.3   Reliability and validity

Geurts et al (2005) found the Cronbach alpha coefficients for all four scales exceeding the conventional guideline of .70. (.84 for negative WHI; .75 for positive WHI; .75 for negative HWI and .81 for positive HWI). In the South African context, a considerable number of studies have also reported acceptable reliability for the all four scales of the SWING. In a study conducted on a sample of earthmoving equipment industry

employees in the eight provinces, Pieterse and Mostert (2005) reported acceptable reliability for the four subscales of the SWING, which ranged from .87 for negative WHI, .79 for positive WHI, .79 for negative HWI and .76 for positive HWI.

In another study among a sample of workers in the mining industry in three provinces of South Africa (Gauteng, North West and Northern provinces), Mostert and Oldfield (2009) found acceptable reliability of .90 for negative WHI, .74 for positive WHI, .78 for negative HWI and .77 for positive HWI. In similar vein, in a study conducted among a sample in the Northern Cape Mining Industry, Marais et al (2009) found that all four scales of the SWING have high internal consistencies $\alpha > .70$ (i.e. NWHI = .90; PWHI = .84, NHWI = .87 and PHWI =.82), and concluded that the SWING was indeed a reliable instrument to be used among South African population with its diverse language and cultural background.

Beside the internal consistency reliability, Geurts et al (2005) further examined the internal (relates mainly to issues of causality) and external validity (the extent to which the results can be generalised beyond the specified research context) of the SWING using data from 2,472 workers drawn from five different and independent samples. The results of confirmatory factor analysis (CFA) strongly support the proposed four-dimensional structure of the SWING across various theoretically relevant subgroups, providing evidence regarding its robustness and generalisability. The largely invariant factor loadings, factor covariances and item error variances across samples and subgroups demonstrate that the SWING items do not function differently in any of these groups.

5.4.1.4 *Justification for inclusion*

The SWING was included in the study on the basis that it captures both the negative and positive dimensions of the interaction between work and home. It is considered relevant to the study based on the validity and reliability achieved in various previous studies and gives a platform to further validate the instrument in a multicultural and linguistic environment. More importantly the scale is used because it applies to all kinds

of employees irrespective of their marital or parental status as it is presumes that every person has a personal life that may influence their work life.

5.4.2   Measurement of personality traits

Personality traits were measured by means of the "Big Five" as adapted by the Centre of Industrial and Organisational Psychology (Martins, 2000; Von der Ohe & Martins, 2010; Von der Ohe, 2014). The following discussion outlines the development and rationale, descriptions, administration and interpretation, reliability and validity as well as justification for inclusion of the instrument.

5.4.2.1   *Development and rationale*

The personality traits instrument was adapted by Martins (2000) for the South African sample. It shares similar expressions as the Big Five traits taxonomy derived from the classical work of Norman (1963) that analyses the natural-language terms people use to describe themselves and the significant other. The instrument originates from the study conducted in 1995/6 by the Centre of Industrial and Organisational Psychology at the University of South Africa (Unisa) to assess the state of trust in 17 companies (Martins, 2000; 2002; Von der Ohe, 2014). Subsequent to a number of empirical studies, it was concluded that trust within various companies could possibly be created by personal characteristics and managerial practices, which serve as antecedents of interpersonal trust in an organisation (Martins, 2000; 2002; Von der Ohe & Martins, 2010; Von der Ohe, 2014). It is notable that no instrument which specifically measures personality in relation to trust in industrial and organisational psychology existed at the time of the initial investigation.

Moreover, numerous attempts to associate work performance with personality aspects were also proven unsuccessful (Martins, 2000). Consequently, it was contemporary research and a series of studies that facilitated interest in the instrument and agreement was reached to recognise the five personality aspects, also known as the Big Five personality factors (Martins, 2000; 2002) as the most robust taxonomy of trait

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descriptors. Von der Ohe (2014) states that the FFM was the most accepted model of general personality structure, and has amassed considerable empirical support (McCrae & Costa, 2008).

It should be noted that personality items in Martins' (2000) trust model use slightly different labels for the five factor model and facets measures of personality in terms of five broad domains, namely: Conscientiousness, Agreeableness, Emotional Stability, Resourcefulness and Extraversion (Martins, 2000). Cited in Von der Ohe (2014), the model of personality derived by Martins is considered as the most acceptable model of general personality structure.

On the contrary, McCrae and Costa's (2003) basic descriptions comprises five aspects. The first is Neuroticism, which consists of the general tendency to experience negative affect such as fear, sadness and anger. Secondly, Extraversion consists of the factors sociability, high energy, assertiveness, and cheerfulness. The next aspect is Openness which consists of imagination, preference for variety, intellectual curiosity, and aesthetic sensitivity. Agreeableness consists of the factors altruism and sympathy and finally, Conscientiousness consists of a sense of purpose, a strong will, punctuality and reliability. These five personality aspects are considered the most relevant taxonomy which capture, at a broad level of abstraction, the commonalities amongst human differences (John, Naumann, & Soto, 2008; McCrae & Costa, 2008) and thus providing an integrative model of research.

5.4.2.2   Descriptions, administration and interpretation

The Big Five personality aspects consist of 35 items which measure the five-factor personality dimensions, namely Conscientiousness (8-item), Agreeableness (8-item), Emotional Stability (5-item), Resourcefulness (7-item) and Extraversion (7-item) (Martins, 2000; 2002; Von der Ohe & Martins, 2010; Von der Ohe, 2014). The scale uses descriptors in the form of adjectives ranging from negative to positive to describe personality traits, anchored to each extreme point. Table 5.1 below presents descriptors of the Big Five personality aspects included in this study.

Table 5.1

Description of the "Big Five" personality aspects

Agreeableness	Conscientiousness
cold-hearted – warm-hearted	irresponsible – responsible
unfriendly – friendly	disorganised – organised
rude – tactful	sloppy – neat
insensitive – sympathetic	lazy – hardworking
hostile – peaceful	dishonest – honest
mean – gentle	careless – careful
opposing – cooperative	deceitful – trustworthy
angry – happy	
Extraversion	**Resourcefulness**
quiet – talkative	dull – intelligent
withdrawn – sociable	unimaginative – creative
unassertive – assertive	conventional – innovative
reserved – outgoing	believing – questioning
gloomy – cheerful	simple – complex
shy – bold	prefers routine – prefers variety
passive – active	
	Emotional stability
	nervous - relaxed
	moody – stable
	insecure – confident
	touchy – even-tempered
	agitated – calm

Source: Martins (2002, p.759)

The dimensions are discussed in detail below:

(a)   Conscientiousness

This dimension relates to being "organised and hardworking as well as dependable, trustworthy and responsible, with the opposite pole as being carelessness or irresponsible" (Martins, 2000, p. 758). The dimension conscientiousness is measured with 8 items. Von der Ohe, Martins and Roodt (2004) maintain that positive aspects of being conscientiousness relate to being alert, responsible, thorough and industrious within the work context. Conscientious people have a tendency to always stick to a planned schedule and they are good in time management in order to achieve their goals

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and excellent in their work activities. They do not allow external factors to interfere with their planned schedules the moment they connect themselves emotionally and physically to their work activities.

(b)   Agreeableness

The dimension reflects being courteous, good-natured, cooperative, trusting and soft-hearted while the opposite echoes a person who is cold, rude, unkind and independent (Martins, 2000). Agreeable people are oriented towards helping others and cooperating with them. Specifically, agreeable people reflect the compatibility and interpersonal relations with the significant other. Often, people who score low on agreeableness have a tendency to be egocentric, self-centred and put their own needs and perspectives above those of others. On the contrary, people with a high score of agreeableness tend to be compliant, pleasant and cooperative and care strongly about the well-being of family and friends. This dimension is measured with 8 items.

(c)   Emotional stability

Emotional stability is described in "the absence of anxiety, depression, anger, worry and insecurity, while the opposite pole is known as neuroticism" (Martins, 2002, p. 759). It represents a predisposition to be calm, poised and confident. People who score high on emotional stability focus on the negative aspects of the self, others and the world. They have a tendency to experience positive emotions and are more satisfied with their work-related activities. They are unlikely to be disturbed by extraneous factors other than their work. On the contrary, those who score low on emotional stability which is the inverse of high neuroticism are prone to emotional distress such as anxiety, nervousness, moodiness and agitation. This dimension is measured with only 5 items.

(d)   Resourcefulness

Martins (2000) define resourcefulness as "imaginativeness, creativeness, broad-mindedness and intelligence, with the opposite pole as being narrow-mindedness, unimaginativeness and conventionality" (p. 759). This dimension has been theoretically conceptualised with a construct such as intelligence and culture which are deemed unsuitable in encompassing the entirety of such a diverse dimension (Cheung et al., 2008; Congard et al., 2012). Conceptually, resourcefulness denotes openness to experience in the FFM and is measured with 7 items. Typical behavioural tendency for resourcefulness embodies people who have active imagination, attentiveness to inner feelings and curiosity as opposed to being concrete-minded and narrow thinking (eSilva & Laher, 2012; Raja & Johns, 2010; Vogt & Laher, 2009). Individuals who score high in openness to experience have a tendency to actively accept and appreciate new ways and creative solutions of doing things.

(e)   Extraversion

According to Martins (2000), the extravert dimension mirrors characteristics such as "sociability, cheerfulness, talkativeness and assertiveness, while the opposite pole represents an introvert, quiet, shy and reserved person" (p. 759). Conceptually, this dimension measures the individual differences in terms of social interaction and the extent to which the extravert person can influence others. People who score high on extraversion have a tendency to have positive emotions and cognitions and are outgoing and energetic, while those who score low are more introverted and reserved. The extravert people are often assumed to be optimistic about their future and less likely to be susceptible to distraction as compared to introvert people. This dimension is measured with 7 items.

Most personality research uses a self-report to capture personality charcateristics. The validity of the self-reporting method has been criticised for assuming that participants always provide accurate responses of their personality traits. Colbert, Judge, Choi and Wang (2012) unequivocally state that individuals have the tendency to provide a

perception of their own personality traits; the rating tends to differ from actual behavioural tendencies due to self-deception, faking and a lack of perspectives which can distort and reduce the accuracy of self-reporting.

In the context of this study, observer's rating will be used to assess personality in terms of the subordinate's judgement of his/her mangers' behaviour as compared to the self-report inventory. Von der Ohe (2014) maintain that observers' ratings of personality traits are better predictors of overall job performance than self-report measures. In addition, the observer ratings of personality have been reported to yield accurate results in terms of behavioural prediction (Colbert et al., 2012).

5.4.2.3   Reliability and validity

Martins (2000) reported highly satisfactory reliability alpha coefficients that range between .87 and .95 for the big five personality aspects. Similar findings were evident in the study of Von der Ohe et al (2004) with alpha coefficient ranging between .82 and .95 for five factor personality traits. The high reliability coefficient is consistent with acceptable level of .70 recommended by Nunnally & Bernstein (1994). Therefore, suffice it to conclude that the five factor model of personality, though tested in a fairly low proportion of empirical studies, has promising psychometric properties. The current study intends to further validate the psychometric properties of the five factor personality traits.

5.4.2.4   Justification for inclusion

The measurement of personality as revised by Martins (2000) includes the subjective well-being by incorporating the organisational well-being. Subjective well-being entails an individual's positive evaluation of and overall satisfaction with his or her life as well as positive affect and absence of negative affect (Diener & Lucas, 1999). On the one hand, organisational well-being is a multifaceted construct that includes employees' subjective feelings about their jobs and their organisation, attitudes to work and the organisation. In addition, the scale specifically places items within the

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workplace context. The valid and reliability of the instrument has been confirmed by results from research conducted by Martins (2000), Martins and Von der Ohe (2002), Von der Ohe et al (2004) within a multicultural and multilingual environment such as South Africa, which makes it appropriate and relevant for use in this study. Accordingly, no other model of personality, that has been widely accepted and researched, exists, other than the Big Five (Von der Ohe, 2014).

5.4.3 Measurement of Utrecht Work Engagement Scale

Employee engagement was measured with the Utrecht Work Engagement Scale (UWES). The scale is discussed in terms of its development and rationale, description, administration and interpretation, reliability and validity as well as the justification for inclusion.

5.4.3.1 *Development and rationale*

Employee engagement was operationalised by the Utrecht Employee Engagement Scale (UWES) developed by Schaufeli and Bakker (2003; 2010) after opposing the measure of burnout, which was exclusively preoccupied with negative results (Moshoeu, 2016). Conceptually, Maslach et al (2001) consider engagement as the positive antithesis of burnout, characterised by energy, involvement and efficacy which are the direct opposites of the three burnout dimensions, namely, exhaustion, cynicism and inefficacy.

Interestingly, Schaufeli and Bakker (2003; 2010), acknowledge that burnout, which is the negative side of engagement, has spurred interest in positive psychology, especially engagement. The researchers are, however adamant that the constructs should be treated as distinct entities as they measure two different constructs. Schaufeli and Bakker (2004a; 2010) unequivocally consider engagement as a positive, fulfilling, affective-cognitive work-related state of mind that is persistent and pervasive and that can be measured independently with different instruments.

In addition, engagement also emphasises human strength and optimal functioning (Seligman & Csikszentminhalyi, 2000), an area that has been ignored by earlier traditional psychologist who were so determined to understand the wrongfulness of people. The UWES scale has been designed to measure employee engagement along three underlying dimensions namely vigour, dedication and absorption. Accordingly, engaged employees are characterised by high levels of energy and dedication to their work (Bakker, 2009; Bakker & Demerouti, 2008; Demerouti et al., 2010) and are likely to have high levels of job satisfaction and lower levels of turnover intention (Bakker & Demerouti, 2008).

Previous studies share similar sentiments that engagement cannot be measured by the opposite profile of the MBI-GS because the structure and the measurement of engagement and burnout are totally different (Demerouti, Mostert, & Bakker, 2010; Xanthopoulou, Bakker, Kantas, & Demerouti, 2012). In addition, both burnout and engagement do not share the same antecedents and are explained by different psychological mechanisms (Schaufeli & Bakker, 2010). They should therefore be treated as distinctive entities of well-being.

Vigour refers to individuals who possess high levels of energy and mental resilience, invest more effort and are persistent to complete work-related tasks even in difficult circumstances. Dedication is conceived as a tendency to feel strong psychological attachment towards work roles and the organisation. People scoring high on dedication are enthusiastic, proud, challenged and can associate themselves with their work roles. Absorption refers to being engrossed in one's work and finding it difficult to detach oneself from work (Bakker & Demerouti, 2008). People scoring high on absorption are constantly preoccupied with their work, while those with lower scores could be seen as disengaged.

The rationale for the instrument is that the UWES reflects the individual's engagement to the organisation through scientifically formulated questions that indicate levels of vigour, dedication and absorption which are considered as central features of the construct employee engagement (Moshoeu, 2012). In addition, Storm and Rothmann

(2003) state that the UWES can be utilised as an unbiased instrument to measure employee engagement because its equivalence is acceptable to different racial groups and organisational settings. More importantly, the UWES emphasises that engaged employees perform better than their disengaged counterparts (Moshoeu, 2012), and have been reported to influence productivity, loyalty and profitability (Martins, 2016).

5.4.3.2   Description, administration and interpretation

The UWES is a self-report questionnaire that consists of 17 items (UWES-17), which measure the three underlying dimensions of employee engagement, namely, vigour (six items), dedication (five items), and absorption (six items) (de Bruin, Hill, Henn, & Muller, 2013; Goliath-Yarde & Roodt, 2011; Schaufeli et al., 2002). Initially, the UWES consisted of 24 items, but after careful psychometric testing on two different samples of Spanish employees and students, seven unsounded items were removed and 17 items retained. Subsequent to the 17 items, Schaufeli et al (2006) developed a shorter version with 9 items known as UWES-9 and three items per scale. Likewise, Chaudhary, Rangnekar and Barua (2012) and other engagement scholars also found encouraging psychometric properties similar to the UWES-17, suggesting the reliability of the UWES-9.

The UWES 17 items are generally operationalised as a seven-point scale ranging from 0 (never) to 6 (every day) to measure the work-related state of mind of employees characterised by vigour, dedication and absorption. Participants were requested to indicate how often they experienced feelings in terms of vigour, dedication and absorption statements where 0 represents Never, 1 = A few times per year or less; 2 = Once a month or less; 3 = A few times per month; 4 = Once a week; 5 = A few times a week and 6 = daily. The mean scale score of the three UWES subscales is computed by adding the scores on the particular scale and dividing the sum by the number of items of the subscale involved.

The overall mean score for each of the subscales is calculated by adding the scores and dividing the total by the number of items of the subscale (Schaufeli & Bakker, 2003).

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This would imply that participants who score higher on vigour have much energy and stamina when working, whereas those who score lower have less energy. Those who score high on dedication strongly identify with their work because they experienced it as meaningful, inspiring, and challenging. Those who score low do not identify with their work because they do not experience it to be meaningful or challenging. Those who score high on absorption feel that they usually are happily engrossed in their work. Those who score low on absorption do not feel engrossed or immersed in their work (Schaufeli & Bakker, 2003).

5.4.3.3 *Reliability and validity*

The UWES has been found to achieve acceptable reliability. Schaufeli and Bakker (2004a) and Schaufeli et al (2002) report internal consistent results for the three subscales of the UWES which vary from .80 to .91. The Cronbach alpha coefficient for each subscale ranged between .81 and .85 for vigour, .83 and .87 for dedication, .75 and .83 for absorption (Schaufeli et al., 2006; Schaufeli et al., 2002). Apparently, other studies also confirm the internal consistency reliability exceeding the conventional guideline .70. For instance, Storm and Rothman (2003) report a reliability of .78 for vigour, .89 for dedication and .69 for absorption, among a sample of South African Police Officers.

In terms of validity, Demerouti et al (2010) tabled that the UWES has been validated in a number of countries, including China (Yi-Wen & Yi-Qun, 2005), Finland (Hakanen, 2002), Greece (Xanthopoulou, Bakker, Demerouti, & Kantas, 2007a), South Africa (Storm, & Rothmann, 2003), Spain (Schaufeli et al., 2002), and The Netherlands (Schaufeli, & Bakker, 2003; Schaufeli et al., 2002).

Though the scale has shown the supremacy of the three-factor structure, the issue of its dimensionality has remained elusive among different scholars. Several studies are still questioning the relevance of the theoretically-based three-factor structures of the scale across different occupational groups, cultures and nationalities (De Bruin et al., 2013; Goliath-Yarde & Roodt, 2011). A considerable number of studies have failed to achieve

the three factor structures of the UWES. For instance, Shimazu, Schaufeli, Kosugi, Suzuki, Nashiwa, Kato, Sakamoto, Irimajiri, Amano, Hirohata and Goto, (2008) did not find support for the original three-factor model, but, instead, reported that the one-factor model fitted their data well, assuming that all items measure one dimension.

Similar patterns were also noticeable within the South African samples. In a study conducted among selected organisations, Rothmann et al (2011) found only a single factor model for the UWES. Other studies reported a two-factor structure for the UWES scale (Brand-Labuschagne et al., 2012, Goliath-Yarde & Roodt, 2011, Coetzer & Rothmann, 2007). Brand-Labuschagne et al (2012) report two factor structures of the engagement constructs in a study among a sample of blue-collar workers in different industries in South Africa. Using structural equation modelling, Mostert, Pienaar, Gauché and Jackson (2007) confirm that the two factor structure best fits the model for engagement in comparison to a one factor model. These calls for further empirical research on the engagement construct in order to develop specific norms for the South African context.

Against this background, it is still unclear how previous studies obtained the supremacy of the theoretically- based three-factor structure of engagement scales. This study intends to explore the suitability of the UWES in a South African context on the basis of (1) a one-factor model of employee engagement with all items loading into one latent factor, (2) a first-order three-factor model comprising three latent variables (i.e., vigour, dedication, and absorption), and (3) a two-factor model of employee engagement with all items loading into two latent factors.

5.4.3.4 *Justification for inclusion*

The justification for inclusion of the UWES is the potential positive consequence for both the organisation and individual employees. From the individual employees' perspective, a high level of engagement has the tendency to enhance organisational commitment and increase job satisfaction as well as lower turnover rates. According to Schaufeli and Bakker (2010) engaged employees often experience positive emotions

including happiness, joy and enthusiasm. They create their own job and personal resources as well as transfer their engagement to others.

The scale was chosen for this study because it reflects how people view, feel about and react to their jobs and will therefore improve our understanding of employees' emotional and personal experience of their work. Not only is employee engagement personally valued and motivating, it also drives positive business processes and outcomes. The UWES is consistent with the conceptualisation of employee engagement. Comparing highly engaged employees with less engaged workers provides some insights into how engagement can affect business outcomes.

5.4.4 Biographical Questionnaire

In addition to the research instruments, the questionnaire included items that measure biographical variables of survey participants. These variables include gender, generational cohorts, marital status, parental status, functional job level, tenure and industry sectors. The biographical variables are often used to provide objective characteristics of the participants, which are easy to identify and measure.

5.5 DATA COLLECTION

Data collection represents the method used to gather the information from survey participants. The following section discusses data collection in terms of the pilot study and the actual field survey.

5.5.1 Conducting a pilot study of the survey instrument

Prior to the actual distribution of the questionnaire, a pilot study was deemed necessarily to ascertain the feasibility of conducting the study. In addition, a pilot study was conducted to determine various aspects relating to the research under observation such as suitability of the measuring instruments to the actual field conditions; identification of any difficulty relating to content (language), validity; accuracy and

appropriateness of the instrument and establishment of the adequacy and appropriateness of the methodology. The pilot study was conducted among six participants of various demographic profiles (educational level, gender generational cohorts) and occupations, including a statistician to evaluate the sequence of the questions, understandability of scoring techniques, identification of ambiguous content and administration of the survey.

Participants in the pilot study generally indicated that the questionnaire was user-friendly and easy to respond to, apart from some items which were rephrased to improve the structure and clarity of the questions. The items that were rephrased are reflected **in bold** in accordance to the feedback received, in order to ensure understandability during the field survey by all potential participants:

- At my work, I feel **excited** (bursting) with energy.
- I am **passionate** (enthusiastic) about my job.
- My job **motivates** (inspires) me.
- It is difficult to **separate** (detach) myself from my job.
- I am **engrossed** (immense) in my work

5.5.2 Conducting the actual field survey

In this study, a self-administered survey method was used, because it does not require the presence and assistance of the researcher and it includes instructions, which respondents read on their own, on how to fill in the questionnaire (Blumberg et al., 2005; Bryman, 2010). The final version of the questionnaire was uploaded in the Web-based server hosting the survey. The Web-based survey entails the uploading of the Web-based questionnaire on a Web-server. The actual survey was designed to be completed electronically through a self-completion Web-based survey, where participants complete the survey questionnaire on their own and at their convenience.

The Web-based questionnaire is a measurement instrument both delivered and collected data through the Internet (Cooper & Schindler, 2014). This research technique does not

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require the presence of a researcher to assist in completing the questionnaire and therefore lower the response rate (Bryman, 2010). However, clear and concise instructions are provided which aid the participants to complete the questionnaire (Blumberg et al., 2005).

A company database was used to disseminate the questionnaire to that segment of the respondents who indicated a willingness to participate in survey questionnaires. A solicited e-mail invitation containing an introduction to the research and the purpose of the study as well as a link to the actual electronic survey platform was sent to potential participants. With the absence of formal informed consent, participants were informed that acceptance and responding affirmatively to an e-mail invitation by clicking on the survey link to commence the survey confirmed their agreement to participate in the survey.

The Web-based survey was selected as a method of data collection based on a number of reasons. Among others, this method was preferred based on the ability to target a large sample of the population, thereby increasingthe generalisability of the research results. In addition, the method is relatively fast, inexpensive and flexible, enabling a high control of the sample and, most importantly, its availability to directly load data into the analysis software. Essentially, the advantages of this kind of survey are that it is low cost, covers all participants and protects participants' privacy and confidentiality (Blumberg et al., 2005).

On the contrary, one major concern identified with Web-based survey relates to the possibility of the low response rates (Blumberg et al., 2005; Neuman, 2011). In addition, accessibility to Internet connectivity has also been identified as limiting the coverage/sample of the study (Babbie, 2014; Neuman, 2011), in the sense that older, less educated, low-income and rural people are likely to be excluded. The disadvantage connected with the potential limited access (Blumberg et al., 2005) to the Internet was eliminated, as all participants had convenient access to the Internet.

However, given the need for social science studies to be reliable and replicable, a Web-based survey serves as a promising means of conducting future surveys because it allows both replicability and to certain extent, cross-study comparability. This study utilised the Web-based survey for data collection because of its compelling advantages.

Church and Waclawski (2001) and Kraut (1996, cited in Martins 2010) outline the following strengths for using an online survey:

- The survey population, especially their literacy levels and familiarity with computers;
- The cost of conducting the survey and which survey method will be the most cost-effective and reliable;
- The complexity of the survey population, for example, their geographical location;
- The length of time respondents will have to complete and return the survey;
- How questionnaires and/or responses will be tracked;
- How important confidentiality is;
- The size of the sample;
- Sponsors' expectations of the outcomes of the survey;
- The population size, the required sample size, the confidence levels and the margin of error;
- The role and impact of stakeholders such as unions, management teams and consultants on the survey process before and after the survey.

5.6   ETHICAL CONSIDERATION

Ethics in any social science research play a fundamental role, not only for safeguarding the rights of participants (Cooper & Schindler, 2014), but also for evaluating the researcher's conduct of what is right or wrong when doing research. Welman et al (2005) maintain that ethical considerations and ethical behaviour are as important in research as in any discipline that involves human activity (p. 182). Similarly, Wassenaar (2006) also maintains that ethics should be a fundamental concern throughout the

planning, designing, implementing and reporting of research findings involving humans.

Cooper and Schindler (2014) are of the opinion that research should be designed in such a way that participants do not suffer physically or feel discomfort or embarrassed when completing survey questionnaire. It is the researcher's duty to ensure that participants' dignity, privacy and well-being are not harmed in any way during the execution of the research and also when reporting the research results. Creswell (2009) and Leedy and Ormrod (2010) point out that a considerable number of studies have been under ethical attack for deliberately omitting to disclose aspects relating to authenticity and credibility of the research report, evidence of informed consent and privacy of the participants.

In the context of this study and to adhere to research ethics principles, considerable effort to protect the interest of the participants was made prior to collecting the actual field survey data. Such effort included, among others, the following:

❖ **Department of Industrial and Organisational Psychology (IOP) and the University Ethics Committee were consulted to seek ethical clearance**: The procedure entails a permission letter to the department of IOP and an application form submitted to the Departmental Ethical Committee and the Ethics Committee of the University of South Africa (UNISA). Permission was obtained from both committees.

In the absence of a formal signed informed consent form, the following ethical aspects were communicated to potential participants:

✦ Potential participants were informed about the aims and purpose as well as the nature of the research.

✦ They were advised that acceptance and responding affirmatively to an e-mail invitation by clicking on the survey link to commerce the survey confirms their agreement to participate in the survey.

- They were also alerted to the fact that participation in the research was completely voluntary and informed about their rights to withdraw or discontinue their participation at any time in the survey without giving any explanation.
- They were also ensured that all information supplied in the questionnaire will be strictly confidential and that their rights will be respected.
- In addition, the participants were informed that their responses will not be supplied to their respective employers, but will be used for academic purposes only, thereby guaranteeing them anonymity.

5.7   STATISTICAL PROCESSING OF DATA

The nature of online Web-based survey results is that responses are captured in electronic format. The quantitative data processing was supported and complemented by the use of a Statistical Package for the Social Sciences (SPSS) computer programme version 23 (IBM SPSS, 2015) and AMOS program (Arbuckle, 2010). Most of the variables used ordinal scales and all data were examined using a categorical procedure to determine the accuracy of the raw data. Babbie (2014) maintains that in order to ensure accuracy of the instrument, the data has to be cleaned and verified by checking for mismatches between the original and captured data (p.417). Therefore, all raw data which consists of lists of numbers that represent scores on variables were transformed to the electronic dataset in preparation for the editing process. Data editing is a thorough scrutiny of the completed questionnaire in terms of its relevance, completeness, consistency, comprehensibility and accuracy.

5.8   DATA ANALYSES

The statistical analysis includes a presentation of quantitative descriptive results in the form of tables and graphics. The statistical techniques used in this study include descriptive statistics (internal consistency reliability, Rasch analysis and means, standard deviation, skewness and kurtosis), test for assumptions and construct validity (exploratory factor analysis) as well as correlation, inferential and multivariate statistical analyses (canonical correlation analysis, multiple regression analysis,

structural equation modelling, hierarchical moderated regression analysis and test of significant mean differences).

5.8.1 Descriptive Statistical analyses

The term descriptive statistics entails ordering and summarising the data by means of tabulation and graphic presentations (Durrheim, 2006; Steyn, Smit, Du Toit, & Strasheim, 2003). Descriptive statistics organises and summarises the univariate and bivariate analysis of quantitative data. On the one hand, the univariate data analysis is conceived as the analysis of one variable at a time (Bryman, 2010). It is concerned with measures of central tendency and measures of dispersion. The most common measures of central tendency widely used are the arithmetic means, while the measure of dispersion is the standard deviation and range. On the other hand, the bivariate data analysis is concerned with the measurement of two or more variables at a time in order to uncover whether or not the two variables are related (Bryman, 2010). The bivariate analysis can take the form of correlations and multivariate statistics.

5.8.1.1 Rasch analysis: Assessing the unidimensionality

This section discusses the two main phases of descriptive statistics, the Rasch analysis (unidimensionality of the instruments) and the internal consistency reliability as calculated by the Cronbach's alpha coefficient (Brand-Labuschagne et al., 2012). The reliability of the rating scale is generally clarified by the item difficulty (item separation index and item reliability index) and person ability (person separation index and person reliability index) (Brand-Labuschagne et al., 2012). The results of the Rasch analysis make it possible to identify items that were found to be more difficult than others to answer correctly (dichotomous items) or more difficult to endorse (polytomous items).

The Rasch further identifies any respondents whose scores do not appear to be consistent with the model (Taylor, 2008). Respondents whose response patterns are inconsistent with the expected responses (according to the model) are those respondents who were too anxious or those respondents whose standing on the latent trait was not

measured appropriately, maybe due to their misunderstanding of the items (Taylor, 2008).

The person separation reliability is comparable to the traditional internal consistency reliability measure (Cronbach's alpha coefficient) which estimates the true person variance (Brand-Labuschagne et al., 2012). Item reliability indicates how well the difficulty levels of the item are distributed along the measured latent variable and evaluates the chances of replicating the item placement in other samples (Brand-Labuschagne et al., 2012).

In Rasch analysis, two fit statistics are reported, namely infit and outfit statistics (Bond & Fox, 2001). These statistics are used to measure the fit of the data. Infit statistics are less sensitive than outfit statistics when an extreme response is evident (Brand-Labuschagne et al., 2012). Basically, fit statistics are utilised to evaluate the validity of each scale dimension through identifying respondents (persons) and items that function differently with regard to what was expected (Brand-Labuschagne et al., 2012). Item fit refers to whether the items provide logical and useful information while person fit refers to whether the responses of the respondents to items are consistent. As regards item fit, mean square statistics are used to evaluate the unidimensionality of the scale.

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5.8.1.2   *Internal consistency reliability analysis*

Reliability refers to how consistently a measuring instrument derives the same result when measured between different groups of the same population (Bryman, 2010; Leedy

& Ormrod, 2010; Neuman, 2011). It is the most important psychometric indicator used to determine the usefulness and the accuracy of the instruments (Von der Ohe, 2014) and whether the results are repeatable (Bryman, 2010). Tests of this nature are conducted to ascertain whether the instrument can be relied upon to provide reliable information if the survey is administered repeatedly to different groups under similar conditions (test-retest).

The table 5.2 below presents a summary of different forms of reliability:

Table 5.2

Different forms of reliability

Coefficient	What is measured	Methods and type
Interrater	Degree to which two or more individuals evaluating the same product.	Correlation
Internal consistency	Degree to which all items within a single instrument are homogenous and reflect the same underlying results	Correlation
Equivalent	Degree to which alternative forms of the same measure yield similar results.	Correlation, parallel forms
Stability/test-retest	Degree to which a test yields similar results administered twice to same subject on different occasions.	Correlation; test-retest

Source: Adapted from Leedy & Ormrod (2010, p. 93).

In this current study, the reliability of instruments will be determined by calculating the internal consistency reliability on the basis that it is the extent to which all the items within the single instrument yield similar results. The Cronbach alpha coefficient (α) and inter-item correlation coefficient are the most common estimates of internal consistency and will be used to assess the scales and subscales and also to confirm the reliability of the measuring instruments.

The Cronbach alpha coefficient reflects the homogeneity of the scale as a reflection of how well the different items complement each other in their measurement of different aspects of the same variables. It gives an index which shows that all the items measure the same attributes. By convention, a reliability coefficient of .70 or higher is widely accepted, implying that the higher the coefficient, the more reliable the instrument is. Nunnally and Bernstein (1994) indicate that inter-item correlations of above .70 are considered acceptable, and as a result they were used to determine the internal reliability of the instruments in this study.

5.8.1.3   *Means, standard deviation, skewness and kurtosis*

The mean is the mostly widely used measure of central tendency, and is defined as the summary of values divided by their number (Diamantopoulos & Schlegelmilch, 2006; Leedy & Ormrod, 2010; Neuman, 2011). The mean provides an arithmetic average on a set of values and the intended mean is used to compute the score averages that are obtained in the different dimensions of the instruments.

The standard deviation is perceived as the square root of the variance that measures the average of the deviations of each score from the mean, and measures the average distance of all the scores in the distribution from the mean or central point of the distribution (Tredoux & Durrheim, 2002; Cooper & Schindler, 2014). It gives an approximate picture of the average distance of each number in a set from the centre value. It aims to determine if the values on a parametric test are evenly distributed and clustered closely around the means (Welman et al., 2005). The standard deviation is a measure of variability mostly used in statistical procedures.

Skewness refers to a measure of the distribution's deviation from symmetry (Cooper & Schindler, 2014; Tredoux & Durrheim, 2002). A symmetry distribution classifies data if the mean, median and mode are in the same location. The opposite of the symmetric distribution could either be negatively or positively skewed distribution, which occurs depending on which side has majority of scores. Kurtosis is a measure of the distribution's peakedness or flatness in relation to a normal distribution (Cooper &

Schindler, 2014). Such distribution can either be one of the kurtosis depending on whether a large sample (leptokurtic), medium sample (mesokurtic), and smaller sample (platicurtic) is utilised. Therefore, both the skewness and kurtosis values ranging between -1 and +1 normal range are recommended for conducting parametric tests, and thus were calculated in the research study.

5.8.2 Validity Analysis of Survey Instruments

The validity is concerned with the extent to which the instrument measures what it is supposed to measure in a consistent and accurate manner (Babbie, 2014; Leedy & Ormrod, 2010; Neuman, 2011). Bryman (2010) is of the opinion that validity reflects the integrity of the conclusions that are generated from the research. It entails the degree to which evidence and theory support the interpretation of test scores intended by the proposed model. There are two major forms of validity, namely internal and external validity. External validity is concerned with whether the results of the study can be generalised beyond the specified research context, while internal validity relates mainly to issues of causality (Bryman, 2010).

The table 5.3 below presents a summary of different types of validity:

Table 5.3

Different forms of validity

Type of validity	What is measured	Methods
Construct	Degree to which the underlying instrument being used to measure captures the relevant aspects of the construct	Factor analysis, Correlation, Judgmental
Criterion-related (concurrent, predictive)	Degree to which a predictor is adequate in capturing the relevant aspect of the criterion	Correlation
Content	Degree to which content of the items adequately represents the universe of all relevant items under observation	Judgement

Source: Cooper & Schindler (2014, p 257)

It should be noted that the validity of the survey instrument was ensured through the use of appropriate and validated instruments. Numerous studies have critically examined the criterion-related validity for the instrument under observation and ensured the accurate prediction of scores on the relevant criteria, content validity (validated through pilot study) and construct validity. In addition, further validation of the instrument ensured thorough factor analysis and exploratory factor analysis as well as structural equation modelling (SEM) methods administered by the AMOS programme (Arbuckle, 2010).

Factor analysis is a statistical technique that is used to identify a relatively small number of factors in order to represent the relationship among sets of related variables (Ho, 2006; Tredoux, Pretorious, & Steele, 2006). Factor analysis is mainly concerned with data reduction by merely looking for patterns among the variables to discover whether the underlying combination of original a variable can be replicated in another study. Factor analysis is used to reduce the number of variance, to detect structure in the relationship between variables as well as to discover the underlying construct that explains the variance (Cooper & Schindler, 2014). In particular, factor analysis was

computed for the survey instruments to determine the underlying structure of the variables in the analysis.

The construct validity of the variables under scrutiny was administered through exploratory factor analysis (EFA). The latter can also assist with assessing the level of construct (factorial) validity in a dataset regarding a measure purported to measure certain constructs. In addition, it is directed at understanding the relations among variables by merely understanding the constructs that underpin them. As a result, the EFA was used to determine the structure of the instruments among a sample of participants in the various industries of South Africa.

There are different methods available for computing factors for factor analysis, namely, principal component analysis (PCA), principal axis factoring (PAF), maximum likelihood (ML), alpha factoring and canonical (Costello & Osborne, 2005; Williams, Onsman, & Brown, 2010). In addition, various rotation methods are also available to choose, namely, varimax and quartimax (orthogonal rotattion) and oblimin and promax (oblique rotation) (Costello & Osborne, 2005; William et al., 2010). In this study, EFA using principal axis factoring and varimax rotation were conducted to ascertain the factor structure of all the latent variables under investigation.

According to Costello and Osborne (2005), principal axis factor analysis is recommended particulalrly when data violated the assumption of multivariate normality. The principal axis factor analysis was used for the purpose of understanding the covariation among variables, while the varimax rotational method was, however, used because it is considered effortless when interpreting the results (Hair et al., 2010). In this study, factor analysis using principal axis factoring method and varimax rotation were conducted to assess how all latent variables were clustered.

Subsequently, Hair et al (2010) proposes a number of criteria for significant factor loadings that "factor loadings greater than ± .30 are considered to meet the minimal level; loadings of ± .40 are considered more important; and if the loadings are ± .50 or greater, they are considered practically significant" (p. 111). In light of Hair's et al

(2010) recommendation, the factor loadings in the correlation matrix were set at a cut-off point of ± .50. This would necessarily imply that factorability of .50 indicates that the factors account for an approximately 50% relationship within the data (Williams et al., 2010). However, loading of .30 or less magnitudes should be discardrd, as it does not meet the minimum level of practical significance (Costello & Osborne, 2005; Ho, 2006).

In addition, the Kaiser Meyer Olkin (KMO) measure of sampling adequacy was used as a method for deciding on the number of factors to be retained for rotation and also for grouping items (Hair et al., 2010; Williams et al., 2010). The KMO measure of sampling adequacy is an index used to examine the appropriateness of factor analysis; it varies between 0 and 1 with .50 considered suitable for factor analysis (Costello & Osborne, 2005; Ho, 2006; Williams et al., 2010). The KMO or the eigenvalue evaluates how strongly an item is correlated with other items in the EFA correlation matrix, and any factor with eigenvalues less than 1 is discardrd.

Bartlett's test of Sphericity (BTS) is a test statistic used to examine the hypothesis that the variables are uncorrelated in the population (Hair et al., 2010) and provides a chi-square output that should be significant. It indicates that matrix should be significant (p < .05) for factor analysis to be suitable (Hair et al., 2010; Williams et al., 2012). Therefore, both the KMO value greater than .50 (Hair et al., 2010) and a BTS which is significant (p < .05) indicate suitability for factor analysis (Williams et al., 2010). In this particular study, both the KMO and the BTS were conducted in an attempt to determine the factorability and significance of the instruments.

5.8.3   Correlation analysis

Correlation statistics test the direction of the strength of the relationship between two or more variables, and the strength of this relationship is represented by a correlation coefficient (Bryman, 2010; Tredoux, & Durrheim 2002). Pearson product-moment correlation is represented by a small letter (r) and is used to typically calculate the magnitude (direction) and strength of the relationship between variables (Cooper &

Schindler, 2014; Leedy & Ormrod, 2010). The magnitude of the relationship entails the level of significance in the relationship between two variables. This significance level is used to either accept or reject the null hypothesis. The level of significance often ranges from any number depending on the researchers' probability of making errors. The p value provides an indication of the significance of the relationship and represents the population correlation. The general convention is that significance level $p \leq 0.05$ is used to conduct a hypothesis test.

The Pearson product-moment correlation coefficient generally ranges from +1.00 to -1.00, suggesting that the former is indicative of positive relationship while the latter indicates no relationship or negative relationship (Cooper & Schindler, 2014; Welman et al., 2005). A positive coefficient (+1.00) reflects a direct relationship, stating that an increase in one variable corresponds to an increase in another variable, whereas two variables that are inversely related generally produce a negative correlation (-1.00).

5.8.4   Inferential Statistics of Survey Instruments

Inferential statistics analysis is mainly concerned with testing the hypothesis (Leedy & Ormord, 2010). In general term, inferential statistics are meant to predict/determine how closely the sample statistics approximate parameters of the overall population. Such an estimate depends, to a large extent, on whether the sample was randomly selected and is a representative of the total population. Cooper and Schindler (2014) describe inferential statistics as the application of inductive reasoning, because it allows a researcher to make a claim based on empirical evidence in order to draw conclusions about the population. Several statistical tests are warranted in the inferential statistics, namely, canonical correlation analysis, standard multiple regression analysis, structural equation modelling, hierarchical moderated regression analyses and test for significant mean differences.

Prior to computing the inferential statistics, it is essential to take into cognisance several assumptions underlying the multivariate procedures and tests for significant mean differences such as:

+ Accuracy of the data and the handling of missing values;
+ Outliers;
+ Normality, linearity and homoscedasticity;
+ Multicollinearity and singularity

Each of these mean differences is discussed in detail below.

(a)   Accuracy of the data and the handling of missing values

The term missing data describes as a statistical challenge characterised by incomplete data matrix that results when one or more individuals in a sampling frame do not respond to one or more survey items (Newman, 2009). Most missing data occur as a result of nonresponse, which might be due to a participant's intention not to complete the question or difficulty in understanding the question or an unintentional act. Thus, it is imperative that the researcher verifies the accuracy of data prior to statistical analysis and reporting. The procedures to verify the accuracy of data involve thorough scrutiny of the data to check for missing values and foreign elements in the dataset. Tabachnick and Fidell (2007) pointed out that missing data are one of the most pervasive challenges in data analysis, because they can distort the real essence of the information collected and also render the generalisability of the results impossible. Newman (2009) indicates that missing data or low response rate can manifest in low external validity, implying that the results obtained from a sub sample of individuals who filled out the questionnaire may not be the same as the results which may have been obtained if the response rate was 100%.

Newman (2009) identifies several methods to dealing with missing data which include, listwise deletion, pairwise deletion, mean substitution and expectation maximisation method and multiple imputation (MI). Listwise deletion entails analysing data from those individuals who have completed the questionnaire for all variables. However, the method reduces the sample size and also leads to loss of statistical power. The mean substitutes insert the mean value of the variable in place of the missing values. This method does not take into account individual differences when estimating missing data,

while empirically it results in somewhat biased estimates for regression coefficients. Therefore, in the current study, the method used was the listwise which is the default method in many statistical software packages. In other words, all unsatisfactory and incomplete questionnaires were deleted from the analyses; these amounted to approximately 46 questionnaires.

(b)   Outliers

The observation with a unique combination of characteristic identifiable as different from the rest of the observation is referred to as the outliers (Pallant, 2010). Outliers can take different forms and can occur as a result of observation errors, data entry errors, instrument errors based on layout or instructions, or actual extreme values from self-report data (Hair et al., 2010). Mertler and Vannatta (2005) recommend that outliers be detected and removed from the mean standard deviation and correlation coefficient values. This is because they have the proclivity to distort the result of a statistical analysis (p. 27), by allowing the results with few extreme values on one variable (univariate) or combination of two or more variables (multivariate) to overly influence the results (Hair et al., 2010). In the context of this study, data were checked for possible outliers, and no extreme outliers were detected.

(c)   Normality, linearity and homoscedasticity

The assumption inherent in the normality and linearity distribution assumes that the relationship between the independent and dependent variables is linear (Cohen, Cohen, West, & Aiken, 2013) and that statistical inference becomes less robust as the distributions depart from normality (Cohen et al., 2013). The term normality refers to the shape of the data distribution for an individual metric variable and its correspondence to the normal distribution (Hair et al., 2010). Accordingly, multivariate normality is based on the assumption that each variable is normally distributed. The normality of the distribution can also be tested through an examination of the skewness and kurtosis.

There are also statistical tests for normality, namely, Shapiro-Wilks test and Kolmogorov-Smirnov test. Each test calculates the level of significance for the difference from a normal distribution (Hair et al., 2010). The Kolmogorov-Smirnov test is based on a statistic that indicates how much a sample cumulative distribution function deviates from a specific population cumulative distribution function (Saunders, Lewis, & Thornhill, 2009). It indicates the deviation of a sample distribution from a specific population distribution and tests the goodness of fit of the variables (Saunders et al., 2009). Pallant (2010) proposes that significance values smaller than .05 can be indicative of a violation of the assumption of normality which is presumed to be quite common in larger samples.

Therefore, the Kolmogorov-Smirnov test was used to test for normality and to determine the normality of the distribution of scores. It was evident that all the tested variables had a statistical significance of less than .05 as recommended by Pallant (2010) and is indicative of normality. However, a significant value of .000 suggests a violation of the assumption of normality, which is prevalent in larger samples (Pallant, 2010). To further ascertain the normality of the variables used, exploratory factor analysis and Rasch statistics were computed to test for unidimensionality of factors.

Hair et al (2010) assert that linearity predicts values that fall in a straight line by having a constant unit change (slope) of the depedent variable for a constant unit change of the independent variable. In other words, linear method is based on the assumption that the relationship between the independent and depedent variables is based upon a straight line. Therefore, this assumption was tested by means of Pearson correlation moment that show a linearity relationship within the variables.

Homoscedasticity is the inverse of the normality (Cohen et al., 2013), and is based on the assumption that the variability in scores for one variable is roughly the same for all values of the other variables, which is related to normality (Cohen et al., 2013, Hair et al., 2010). When normality assumptions are achieved, the relationship between variables are perceived as homoscedastic (Tabachnick & Fidell, 2007). In the same vein, Hair et al. (2010) note that the assumptions of homoscedasticity occur when the

variance of error terms (e) appear to be constant over a range of predictor variables, and the data are assuming to be homoscedastic. In this current study, the homoscedasticity was not tested owing to the non-parametric test of Mann-Whitney and Kruskal Wallis tests were used.

(d)   Multicollinearity and singularity

Highly correlated variables are generally referred to as multicollinearity and pose a challenge when estimating reliability of the individual regression coefficients (Cohen et al., 2013). Specifically, multicollinearity surface when the independent variables are highly correlated with the correlation exceeding (r = .90) which implies that the variables are measuring same construct. In order to avoid the multicollinearity, (Hair et al., 2010) maintain that correlation between predictor variables greater than .90 should be removed or rather be merged with other variables. Tabachnick and Fidell (2007) assert that highly intercorrelated predictors increase the probability of standard error of the beta coefficients and could make the assessment of the unique role of each predictor variable difficult. A combination of one independent variable correlated with another independent variable is known as the singularity.

In the context of this study, the collinearity diagnostics was examined prior to conducting regression analysis in order to ascertain that zero-order correlations were below the level of multicollinearity concern ($r \geq .90$), that the variance inflation factors (VIF) did not exceed 10, that the condition index was well below 15 and that the tolerance values were close to 1.0 (Hair et al., 2010). The level of significant value was set at 95% confidence interval level (Fp $\leq$ .05) in order to limit the probability of committing Type I error. The risk of Type I error within a study relates to the likelihood of finding a statistically significant result when one should not have obtained statistical significant score (Hair et al., 2010). In this particular study, the value of the adjusted R^2 *was* used to interpret the results.

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5.8.4.1   Canonical correlation analysis

Canonical correlation analysis is a method of multivariate statistics and not the most popular technique to analyse the linear interrelationship between a pair of multidimensional random variables or data sets (Hair et al., 2010; Tabachnick & Fidell, 2007). As a pair of multidimensional variables, it reflects a composite set of independent variables and a composite set of dependent variables where canonical variates are formed for each set. It is mostly used to identify and quantify the association between the two subsets of variables. The main aim of the canonical correlation analysis is to maximise the association (measured by correlation) between the variables based on the projection of the data sets.

A typical way of understanding canonical correlation analysis is to consider it as an extension of multiple regression analysis (Hair et al., 2010; Tabachnick & Fidell, 2007). Multiple regression analysis involves several sets of variables on each side of the continuum, whereby the variables are combined into a predictive value that produces the highest level of correlation between the predicted values and the single variable. However, in canonical correlations, there are also sets of variables known as canonical variates (personality traits and its dimensions (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance and its dimensions (negative WHI, positive WHI, negative HWI and positive HWI)) that represent sets of independent variables, and also another set of canonical variates, namely, employee engagement (work enthusiasm and work occupied) that represent dependent variables. The underlying principle is to determine a linear combination of each set of the variables in such a manner that it maximises the correlations between two sets (Hair et al., 2010).

Therefore, the strength of the canonical variate can be seen as analogue of the principal component analysis (PCA) as canonical variates are often interpreted by means of the canonical loading (Hair et al., 2010; Tabachnick & Fidell, 2007). The idea is to find canonical indexes between the variable such that the correlation is maximal. In addition, canonical correlation can develop multiple canonical functions which are independent

from the other canonical functions to represent different relationships found among the sets of dependent and independent variables.

In the context of this study, canonical correlation analyses were computed to determine whether or not personality traits and its dimensions (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance and its dimensions (negative WHI, positive WHI, negative HWI and positive HWI) as a composite set of independent latent variables were significantly and positively related employee engagement (work enthusiasm and work occupied) as a composite set of dependent latent variable. It was considered appropriate and useful to further test the association between two variables, as the technique aims to discover and ascertain the strength of the association between the variables under investigation. Specifically, the canonical correlation analysis was selected because it is considered as the highest level of the general linear model (GLM) guiding the multivariate statistical methods and can easily be conceptualised as a method (Cohen et al., 2013).

Most importantly, the technique was found appropriate because it limits the chances of committing Type I errors. Type-I is error referred to a situation where the result is a rejection of the null hypothesis, while in actual fact the null hypothesis is true. The opposite relates to Type-II errors which occur when the data do not support a rejection of the null hypothesis while in reality, the null hypothesis is false (Cooper & Schindler, 2014; Neuman, 2011). The canonical correlation analysis was applicable in this current study because it can be used to determine the relationship between two sets of variables (independent and dependent) in a single relationship, rather than using separate relationships for each dependent variable.

5.8.4.2   *Multiple Regression Analysis*

Multiple regression analysis is one of the most commonly used multivariate statistical techniques and is used to build models for predicting scores on one variable (dependent variable) from a number of other variables (independent variables) (Hair et al., 2010; Schumacker & Lomax, 2010; Tredoux et al., 2006). The overall objective of the

multiple regression analysis is to predict the influence of a set of independent variables towards the dependent variable. In this instance, the r-squared (R^2) values aim to indicate how well a set of independent variables explains the dependent variable and it measures the direction and size of the effect of each variable on a dependent variable.

In order to determine the contribution of personality traits and work-life balance as predictors of employee engagement, a standard multiple regression analysis was computed. The following statistical significance levels were used for rejecting the null hypotheses:

f(p) ≤ .001;
f(p) ≤.01;
f(p) ≤ .05

The adjusted $R^2 ≤ 0.12$ (small practical effect size), $R^2 ≥ 0.13 ≤ 0.25$ (moderate practical effect size), $R^2 ≥ 0.26$ (large practical effect size) were considered when interpreting the magnitude of the practical significance of the results (Cohen, 1992).

5.8.4.3   *Structural equation modelling (SEM)*

Structural equation modelling (SEM) was implemented by the AMOS programme (Arbuckle, 2010) in order to construct and test the model of the relationship between the variables under observation. The main purpose of SEM is to explain the relationship between multiple variables. SEM involves a combination of exploratory factor analysis and multiple regression analysis (Schreiber, Nora, Stage, Barlow, & King, 2006; Tredoux et al., 2006), although it is more of a confirmatory technique because it affirms what is already known about the structural model.

The structural equation modelling offers a tool that can be used to validate the confirmatory factor analysis and test the relations among constructs using the path analysis in a single model (Hair et al., 2010). It determines the extent of whether the patterns of variances and co-variances in the data are consistent with the structural path

model specified by the researcher. Accordingly, SEM is a multivariate technique (which includes factor analysis, regression analysis, discriminant analysis, and canonical correlation) that is used to describe and evaluate the validity of substantive theories with the empirical data (Hair et al., 2010). It is used to assess the relationship among the latent variables that are indicated by multiple measures and consists of a measurement model and a structural model.

SEM is illustrated with a path diagram to show how the variables are inter-linked. A path diagram consists of squares or rectangles and circles which are connected through arrows. Theoretically, the squares or rectangles represent the observed variables while the unobserved variables (latent) are shown graphically with circles or ovals (Hair et al., 2010; Schreiber et al., 2006). In addition, the inter-link between variables is shown by lines and lack of lines between variables, suggesting either that a relationship does exist or no relationship exists between the variables respectively. A single headed arrow is indicative of regression coefficient while double-headed arrows depict covariance between variables.

Hair et al. (2010) summarises the major benefits of using SEM in a multi-construct model:

- It allows the researchers to investigate whether a hypothesised cause does actually have an effect by computing path coefficients between the exogenous variables and endogenous variables. The exogenous variables are variables that are not influenced by any factor(s) in the quantitative model but can exert an influence unto other constructs under observation. The endogenous variables are theoretically affected by the exogenous and other endogenous within the model (Hair et al., 2010; Schreiber et al., 2006).
- It allows researchers to measure mediating effects by easily creating additional paths in the hypothesised model.
- It provides information about the goodness of fit of the hypothesised model, which allows researchers to compare competing models.

The structural equation modelling in this study followed the six basic steps proposed by Hair et al (2010). These steps included:

- Specification of the model;
- Evaluating model identification;
- Selecting measurements and data collection as well as data preparation;
- Estimating the model (evaluate model fit, interpret parameter estimates, and consider equivalent or near-equivalent models);
- Respecifying the model;
- Report the results.

Each of these steps are discussed in the following section.

(a)   Specify the model

This step involves the specification of the model and the variables that are being tested in structural equation modeling. It entails the substantive background of all relevant theories, research and information applicable to the variables under investigation (Hair et al., 2010; Schumacker & Lomax, 2010). Model specification involves determining every relationship and parameter that will best fit the model that generates the sample covariance matrix. The ultimate goal is to outline clear and concise research questions that need some responses.

According to Hair et al (2010) a theoretical framework plays a fundamental role in specifying a systematic set of relationships that provide a consistent and comprehensive explanation of the phenomena under investigation. Theory offers a conceptual framework for the entire study, serving also as an organising model for the research questions or hypotheses and for the entire data collection procedure (Terre Blanche, Durrheim & Painter, 2006). In actual fact, theory and empirical results are important when constructing SEM because they specify a model that should be confirmed with variance and covariance data.

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In this study, a set of plausible models such as personality traits, work-life balance and employee engagement (M_1, M_2 and M_3) were identified from a theoretical framework and were deemed adequate to fit the sample data. The identification and specification of each variable should identify all the interrelated constructs relevant to the variable under scrutiny.

(b)   Evaluate model identification

The specification and validity of the measurement model and the fitting of the structural equation are central when conducting SEM. Schumacker and Lomax (2010) and Schreiber et al (2006) state that the measurement model is used to define the relationship between the latent variables (unobserved) and observed variables. The main purpose of the measurement model is to clarify how well the observed variables serve as a measurement instrument for the latent variables (Hair et al., 2010; Schreiber et al., 2006). The latent variables are labels for the hypothetical constructs or theoretical concepts under observation, which allow a researcher to make a distinction between the structural model and measurement model.

In turn, the structural model or path analysis specifies the relationships among the independent latent variables and the dependent latent variables as well as the correlations among the independent latent variables. In other words, the structural model or path analysis acts as an extension of the regression model. The main aim of structural model is to assess the relationships among the latent variables and examine how well the overall model fits with the data submitted (Schumacker & Lomax, 2010). The regression weights predicted by the model are compared with the observed correlation matrix for the variables, and a goodness-of-fit statistic is calculated. The model is illustrated in circles and arrows, where single arrows indicate causation.

(c)   Designing a study to produce empirical results

This stage involves the research design (type of data analysis, missing data, and sample size) and estimation (model structure, estimation techniques, and computer software

used). In this instance, the missing data and sample size are of paramount importance and can have a profound effect on the result when conducting SEM (Hair et al., 2010). However, common problems anticipated in the application of SEM relate to sample size.

Sample size

The determining factor when making a decision concerning the sample size is the degree to which the sample will be representative of the entire population. There are conflicting assumptions about the ideal sample size required to obtain valid statistical results. Specifically, Hair et al (2010) maintain that the sample size for statistical requirement should at least be five times the observations for every included parameter that needs to be estimated (p. 637). On the contrary, Ho (2006) maintains that sample size should be equivalent to ten respondents for every parameter, with an increase in the sample size as model complexity increases. For example, Ho (2006) suggests a path model with 20 parameters as the minimum sample size of 200 cases. The sample size in this study is large (more than 1 110 in total); this should not become critical, although the intended listwise deletion of missing values dramatically reduce the sample.

(d) Estimating the model

This stage involves specifying the structural model by assigning relationships among the constructs to another based on the proposed theoretical model. The fit indices provide an overall indication of the fit of the model (of the measured variables and their relationships to the latent variable) through the maximum likelihood estimation method (Schumacker & Lomax, 2010). The maximum likelihood estimation is the method most widely used and assumes multivariate normal data and a reasonable sample size.

(e) Modification of the model

This step of the SEM entails the examination of the possible model modification in order to improve the goodness-of-fit of the model. Schumacker and Lomax (2010) state

that the model can be modified by specification search which alters the original model in the search for a model that is better fitting and yielding parameters that have practical significance and substantive meaning. In essence, the modification of the model is enacted by merely deleting parameters that are not significant and thus adding parameters that could possibly improve the fit.

5.8.4.4   Hierarchical moderated regression analyses

Hierarchical moderated regression analyses, also known as cluster analyses, are mostly used to empirically examine whether certain biographical group of variables that has an influence in the nature of the relationship between the independent and dependent variables. In the context of this study, hierarchical moderated regression analyses were used empirically to determine whether the various biographical variables (gender, generational cohort, functional job level and economic sector) significantly moderated the relationship between the independent personality traits and work-life balance and the dependent employee engagement.

The procedure for the computation of the hierarchical moderated regression analysis often involves at least three or four steps (Hair et al., 2010). In this instance, three steps of hierarchical moderated regression analysis is applied with the moderator regression analysis being entered in step 1 while the independent and dependent variables are entered in step 2 and the interaction effects are entered in step 3. That is, the moderating effect occurs when the level of the third variable (gender, generational cohorts, functional job levels, economic sectors) influences or affects the relationship between the personality traits and work-life balance as independent variables and employee engagement as dependent variables. Because the interactions were categorical by continuous interaction, each interaction was evaluated based on the unstandardized regression coefficient (Aiken & West, 1991).

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5.8.4.5   *Test of differences between mean scores*

The Mann-Whitney U-test and Kruskal-Wallis test for non-parametric data were conducted to identify significant differences within various biographical characteristics. Specifically, the Kolmogorov-Smirnov test was computed in order to test normality, using the data against a normal distribution with mean and variance equal to the sample mean and variance. The Kolmogorov-Smirnov test is often used as a non-parametric method for comparing two groups. The test is a non-parametric and distribution free as it does not depend on the underlying distribution function.

The Mann-Whitney test statistic U refers to differences between two independent groups (i.e. male and female) while the Kruskal Wallis test reflects the differences among three or more independent groups, and is equivalent to a factorial ANOVA. A nominal variable is split into two subgroups and is tested to see if there is a significant mean difference between the two split groups on a dependent variable, which is measured on an interval or ratio scale. Both the Mann-Whitney test statistic U and the Kruskal-Wallis test can be used as a distribution-free test if the normality assumptions are not justifiable (Steyn et al., 2003, p. 603). The logic behind the Mann-Whitney U test is to rank the data for each condition and to determine the significant mean difference between the two rank totals (Tredoux & Durrheim, 2013).

In this study, the Kruskal-Wallis (K-W) test and Mann-Whitney U-test was calculated to determine whether there is was a statistical significant mean difference among selected biographical characteristics that act as moderators between personality traits, work-life balance and employee engagement as well as the subscales. These statistical techniques were selected because they do not require that a sample be drawn from a normal distributed population or that a sample is from a population with equal variance. The non-parametric techniques do not have assumptions that are as stringet as the parametric testing with the likes of ANOVA and Scheffe.

5.8.5 Level of statistical significance

Statistical significance is designed to show that the estimated sample results represent the population parameters under observation. It cannot prove beyond anything with certainty, but rather uses the margin of either 0.05 or 0.01 and 0.001 (which indicates the probability of the findings occurring by chance at 5/100, 1/100, or 1/1000 respectively) to make claims about the sample population. Statistical significance allows the researcher to state the confidence level for the claims made in the study.

The level of statistical significance is normally used to estimate errors that can be present in the sample. The errors are termed as Type-I errors and Type-II errors depending on the outcome of the relationship. Type-I errors (represented by α) refer to a situation where the data results in a rejection of the null hypothesis, while in actual fact the null hypothesis is true. The opposite relates to Type-II errors (represented by β) and occurs when the data does not support a rejection of the null hypothesis, while in reality the null hypothesis is false (Cooper & Schindler, 2014; Neuman, 2011). Accordingly, hypothesis testing places a great deal of attention on Type I errors as compared to Type II errors. Table 5.4 indicates the different levels of significance.

Table 5.4

Different Levels of Statistical Significance

Probability	Level	Significance
P	.10	Less significant
P	.01 to .05	Significant
P	.001 to .01	Very significant
P	.001	Extremely significant

Source: Tredoux & Durrheim (2002, p.132)

5.8.5.1 Statistical significance of the Pearson product moment correlation coefficient

In the context of this study, the Pearson product moment correlation coefficient as outlined by Tredoux et al (2013) was applied:

$p \leq .10$	Less significant
$p \leq .01$ to .05	Significant
$p \leq .001$ to .01	Very significant
$p \leq .001$	Extremely significant

In addition, the the Pearson product moment correlation coefficient was interpreted by means of the conventional guidelines provided by Cohen (1992) to determine the practical significant:

$r \geq .10$ (small practical effect);

$r \geq .30$ (medium practical effect); and

$r \geq .50$ (large practical effect).

The significance level of $p \leq .05$ and $r \geq .30$ is sufficient to reject or accept the null hypotheses as well as establish practical significance.

5.8.5.2 Statistical significance of canonical correlation analysis

The canonical correlation analysis was interpreted by an acceptable $p \leq .05$ which is generally the significance considered in any correlation coefficient. The multivariate tests (Wilks Lambda, Pillai's Trace, Hotelling-Lawley Trace and Roy's Greatest Root) of all canonical roots are assessed based on the significance of the discriminant functions. The significant levels of canonical functions represented by the size of the canonical correlations are considered when deciding which functions to interpret.

5.8.5.3   Statistical significance of multiple regression analysis

The statistical significance levels for the multiple regression analysis consist of the following:

f(p) ≤ .001;
f(p) ≤.01; and
f(p) ≤ .05 as the cut-off point for rejecting the null hypotheses.

The adjusted $R^2 ≤ 0.12$ (small practical effect size), $R^2 ≥ 0.13 ≤ 0.25$ (moderate practical effect size), $R^2 ≥ 0.26$ (large practical effect size) was considered when interpreting the magnitude of the practical significance of the results (Cohen, 1992).

5.8.5.4   Statistical significance of structural equation modelling

One or more goodness-of fit was used to assess the overall model fit. According to Schumaker and Lomax (2010) the model fit evaluates the degree to which the sample variance-covariance data fits the SEM. In an attempt to determine the adequacy of model fit to the data, fit indexes were used when analysing statistical significance and substantive meaning of the hypothesised model. There are basically two types of fit indexes, namely absolute fit indexes and incremental fit indexes.

The absolute fit indexes are used to assess the ability of the model to reproduce the actual correlation or covariance matrix (Hair et al. 2010; Hooper, Coughlan, & Mullen, 2008). This index is used to assess the overall model fit of the measurement and structural models. According to Hooper et al (2008) the absolute fit indexes do not rely on comparison with a baseline model, but measure how well the model fits in comparison to no model at all. The absolute fit index includes the statistically non-significant chi-square statistic (χ^2), in association with its degrees of freedom (df), Goodness of fit index (GFI), Adjusted Goodness of Fit Index (AGFI), and Root Mean Square Error of Approximation (RMSEA). For the purpose of this research, the following indexes are briefly discussed:

🔸   Chi-Square (x^2)

Chi-square is a non-parametric techique that is used to assess the magnitude of discrepancy between sample and fitted covariance matrices (Hooper et al. 2008). Pallant (2010) refers to the chi-square test for goodness of fit as the one-sample chi-square that is often used to compare the proportion of cases from a sample with hypothesised values or those obtained previously from a comparison population. According to Pallant (2010), the chi-square is sensitive to the size of the sample, implying that it can nearly reject the model on the basis of large samples. On the contrary, if smaller samples are used, the Chi-Square statistic lacks power and because of this, may not discriminate between good fitting models and poor fitting models (Hooper et al. 2008). Accordingly, there is no consensus reached about the acceptable ratio for chi-square (Hooper et al., 2008) due to its sensitivity towards sample size, and the fact that it cannot discrimininate between good and poor fitting model. In an effort to minimise the effect of sample size, a relative or normed chi-square (x^2/df) can be used with a recommended index ranging from less than 2.0 (Tabachnick & Fidell, 2007) to less than 5.0 (Wheaton, Muthén, Alwin, & Summers, 1977) as the acceptable level.

🔸   Goodness of fit index (GFI) and Adjusted Goodness of Fit Index (AGFI)

The Goodness-of-Fit (GFI) and the Adjusted Goodness-of-Fit (AGFI) attempts to adjust the GFI for the complexity of the model. The GFI is an index that was created to replace the Chi-Square test and calculates the proportion of variance that is accounted for by the estimated population covariance (Hair et al., 2010; Hooper et al., 2008) in the sample data matrix explained by the model. Kline (2005) posits that GFI is an absolute fit index that estimates the proportion of covariance. It intends to determine whether the pattern of variance and covariance in the data are consistent with a structural model as specified by the researcher. The indexes range of GFI values is between 0 (indicative of no fit) to 1(denoting a perfect fit) as well as a value closer to 0.90 reflecting an acceptable fit (Hooper et al., 2008).

✚   Root Mean Square Error of Approximation (RMSEA)

The Root Mean Square Error of Approximation (RMSEA) is scaled as a badness-of-fit index where a value of zero indicates the best fit (Kline, 2005). RMSEA is a measure which conveys how well the model, with unknown but optimally chosen parameter estimates would fit the populations covariance matrix (Hooper et al., 2008). It is also a parsimony-adjusted index that does not approximate a central chi-square distribution. One of the greatest advantages of the RMSEA is its ability for a confidence interval to be calculated around its value. RMSEA values range from 0 to 1 with a smaller value indicating better model fit. Acceptable model fit is indicated by a value of 0.08 or less (Hooper et al., 2008; Schumacker & Lomax, 2010).

Incremental fit indices are also known as comparative or relative fit indices. These are a group of indices that do not use the chi-square in its raw form but compare its values to a baseline model (Hooper et al., 2008; Schumacker & Lomax, 2010). Indexes included in the incremental fit indices relate to Comparative Fit Index (CFI), Tucker-Lewis Index (TLI) and Normed Fit Index (NFI).

✚   Comparative Fit Index

Comparative Fit Index is an incremental fit index that is an improved version of the Normed Fit Index (NFI) which takes into account the issue of sample size that performs well when sample size is small (Hooper et al., 2008; Kline, 2005). CFI are used to assess whether the model under observation is better than the competing models. It assumes that all latent variables are uncorrelated and compares the sample covariance matrix with this null model. It indicates the relative improvement in the fit of the researcher's model compared with a statistical baseline model known as the independence model. The CFI values range between 0 (indicative of complete lack of fit) to 1 (denoting better model or perfect fit). However, an acceptable model fit for the CFI should at least have a value of 0.90 or greater (Hair et al., 2010; Hooper et al., 2008). In addition, an index of 0.95 for acceptable fit is recommended (Hooper et al., 2008, Schreiber et al., 2006).

Normed Fit Index

The Normed-fit index (NFI) assesses the model by comparing the Chi-square value of the model to the Chi-square of the null model (Hooper et al., 2008). Like with the CFI, it assumes that all measured variables are uncorrelated. One of the drawbacks of NFI relates to its sensitivity to sample size, but this could be rectified under the Non-Normed Fit Index (NNFI also known as the Tucker-Lewis Index (TLI)) which is an index that prefers simpler models. The NFI values range between 0 (indicative of complete lack of fit) to 1 (denoting better model or perfect fit), but then a value greater than 0.90 is considered a good fit. In addition, an index of 0.95 for acceptable fit is recommended (Hooper et al., 2008, Schreiber et al., 2006).

Tucker-Lewis Index (TLI)

As previously alluded, the Tucker-Lewis Index (TLI) is an index that prefers simpler model and was developed against the disdavtange of the Normed Fit Index on the bais of the sample size. The key advantage of this fit index is the fact that it is not affected significantly by sample size. TLI is not required to be between 0 and 1 as it is non-normed. The conventional cut-off point for the TLI measure is .90 with acceptable levels ranging between 0 (no fit) to 1 (perfect fit) (Schumacker & Lomax, 2004).

Summary of the model-fit criteria

Summary of the model-fit criteria and the model-fit interpretation is presented in Table 5.5 below:

Table 5.5

Model-fit criteria and fit interpretation

Model-Fit Criterion	Acceptable Level	Interpretation
Goodness-of-fit index (GFI)	0 (no fit) to 1 (perfect fit)	Value close to .90 or .95 reflect a good fit
Adjusted GFI (AGFI)	0 (no fit)to 1 (perfect fit)	Value adjusted for *df*, with .90 or .95 a good model fit
Root-mean-square error of approximation (RMSEA)	.05 to .08	Value of .05 to .08 indicate close fit
Tucker-Lewis Index (TLI)	0 (no fit) to 1 (perfect fit)	Value close to .90 or .95 reflects a good model fit
Comparative Fit Index	0 (no fit) to 1 (perfect fit)	Value close to .90 or .95 reflects a good model fit
Normed fit index (NFI)	0 (no fit) to 1 (perfect fit)	Value close to .90 or .95 reflects a good model fit

Source: Extracted from Schumacker & Lomax (2010, p. 76)

5.8.5.5   Statistical significance of hierarchical moderated regression analysis

The hierarchical moderated regression results as recommended by Cohen (1992) were the following effect size:

f2 = (R2 – R12)

f2 = practical effect size (.02 = small. .15 = moderate; .35 = large effect size.

5.9   FORMULATION OF RESEARCH HYPOTHESES

Based on the research problem indicated in Chapter 1, the following research hypotheses were proposed in an attempt to achieve the empirical objective of the study under observation.

H_1: There are statistically significant interrelationships between personality (agreeableness, conscientiousness, resourcefulness, emotional stability and extraversion), work-life balance (negative and positive work-home interference and

negative and positive home-work interference) and employee engagement (vigour, dedication and absorption).

H_2: Personality traits (agreeableness, conscientiousness, resourcefulness, emotional stability and extraversion) and work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction) as a composite set of independent latent variables are significantly and positively related to employee engagement as a composite set of dependent latent variables.

H_3: Personality traits and its dimensions (agreeableness, conscientiousness, resourcefulness, emotional stability and extraversion) and work-life balance and its dimensions (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction) positively and significantly predicted employee engagement (vigour, dedication and absorption).

H_4: The theoretical personality traits, work-life balance and engagement model has a good fit with the empirically manifested structure model.

H_5: The biographical variables (gender, generational cohort, job level and economic sector) do significantly and positively moderate the relationship between the independent personality traits and dependent employee engagement as well as independent work-life balance and the dependent employee engagement.

H_6: There are significant mean differences between the subgroups of biographical variables that act as significant moderators between the independent personality traits, work-life balance and the dependent employee engagement.

5.10   SUMMARY OF CHAPTER

This chapter provides an overview of the research methodology used in this study. The chapter specifically makes reference to the research design, the sampling of participants, and the procedure used for data collection. Additionally, the measuring

instruments used to include development and motivation for use, descriptions, administration and interpretation, reliability and validity and justification for inclusion, data collection and data preparations are provided. The statistical procedures and techniques used for data analyses are discussed.

The next chapter presents the empirical findings and the interpretation of the results obtained from the data analyses.

CHAPTER 6:   RESEARCH RESULTS

6.1   INTRODUCTION

This chapter presents and discusses the statistical findings of the empirical research in the form of tables and figures as well as graphs. The chapter starts with a profile of participants in terms of their biographical information, which is followed by construct validity by means of principal axis afactor analysis. It then focuses on statistical techniques including (i) descriptive statistics (Rasch statistics and internal consistency reliability, arithmetic mean, standard deviation, skewness, and kurtosis), (ii) correlation and (iii) inferential statistics (canonical correlation analysis, standard multiple regression analysis, structural equation modelling, hierarchical moderated regression analysis and test of significant mean differences). The chapter concludes with brief overview of the research results and summary chapter.

6.2   DATA PREPARATION AND BIOGRAPHICAL CHARACTERISTICS

This section explains decisions undertaken during the preparation of data analysis, specifically, the handling of missing values. Approximately 1 101 individuals attempted to participate in the survey. The visual inspection of missing values identified a total of 38 questionnaires where participants did not fully complete the questions relating to the big five personality traits. This implies that participants found it easier to respond to self-reporting items, specifically, work-life balance and employee engagement, than to observer reporting such as the big five personality traits. As a result, a total of 38 questionnaires were deleted due to incomplete questionnaires and responses not conforming to the required criteria. This resulted in the realised sample size of 1 063, which was still considered higher than the initially proposed sample size of 1 000. It should be noted that a relatively small proportion (13.7%) of participants chose not to reveal the economic sector which employs them. Since the descriptor was not critical to the study, the questionnaires were retained for further analysis in this study. The next section outlines the biographical characteristics of participants.

The biographical characteristics of participants are categorised according to the following control variables: gender, generational cohort, marital status, parental status, functional job level, job tenure and economic sector. These categories of variables are included in the current study on the basis of their influential position on the variables under observation. An overview of the profile of the realised survey participants is reflected below:

6.2.1   Composition of participants by gender

Figure 6.1 below displays composition of participants by gender:
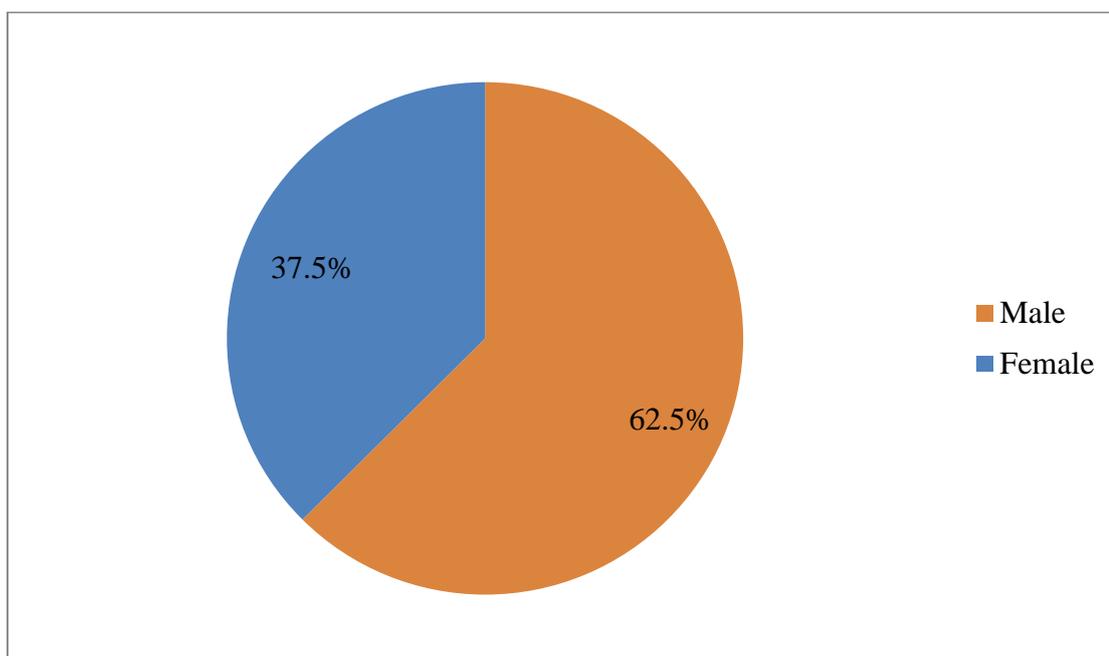
Figure 6.1.   *Distribution of participants by gender category*

The figure shows that the vast majority of the participants were males (62.5%) as compared to females (37.5%). This skewness of gender roles was expected due to the fact that the world of work prior to political dispensation was dominated by traditional roles of men as providers (breadwinner) and women were regarded as homemakers and caregivers. This is a clear indication that for the sample, the Employment Equity Act and Affirmative Action Act have had little effect in overcoming the employment gap between men and women in the labour market.

6.2.2 Composition of participants by generational cohort

The generational cohorts are considered as the experiences that are shared by a particular group that was born during a certain period. Figure 6.2 shows the composition of generational cohort of survey participants.
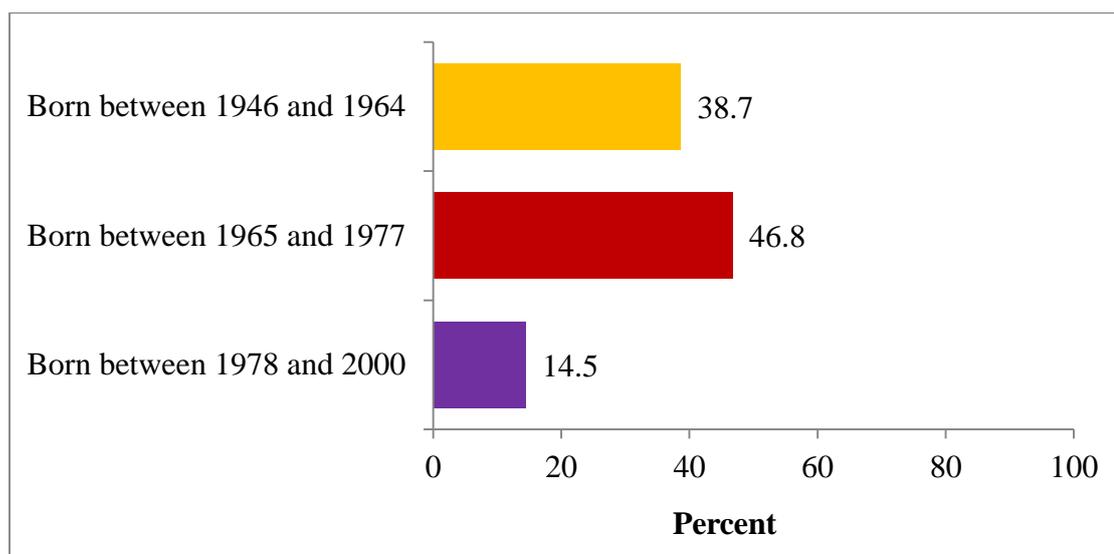
Figure 6.2.   Distribution of generational cohort of participants

It appears from Figure 6.2 that a large percentage (46.8%) of the total sample was born between 1965 and 1977, followed by those participants (38.7%) that are nearing retirement (born between 1946 and 1964). These generational cohorts are considered dominant in the workplace. Over 10% of survey participants were born between 1978 and 2000. This group are the most recent generation to enter the workplace. Overall, the results clearly show that employees of all generational cohorts are represented in the workplace in various organisations, even though the proportion is skewed. From this analysis, it can be concluded that survey participants consist of relatively old people who may impact the survey results.

6.2.3 Composition of participants by marital status

The distribution of the participants by marital status in shown in figure 6.3 below:
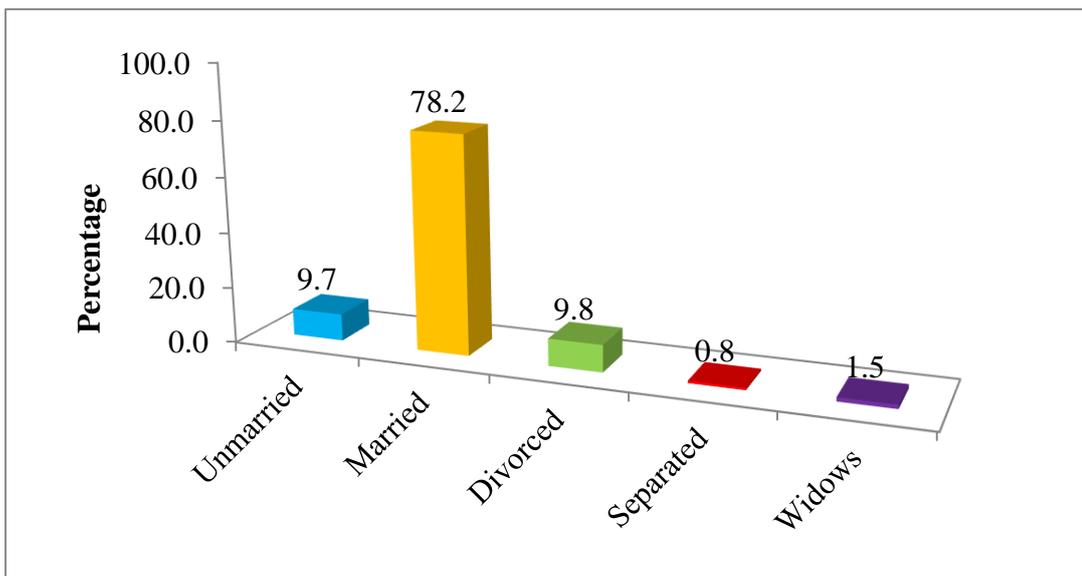
Figure 6.3.   Distribution of marital status of participants

As shown in Figure 6.3, the majority of the participants were married (78.2%), while unmarried, divorced, separated, and widows constituted 21.8% of the participants.

6.2.4   Composition of participants by parental status

The distribution of participants by parental status in shown in Figure 6.4 below:
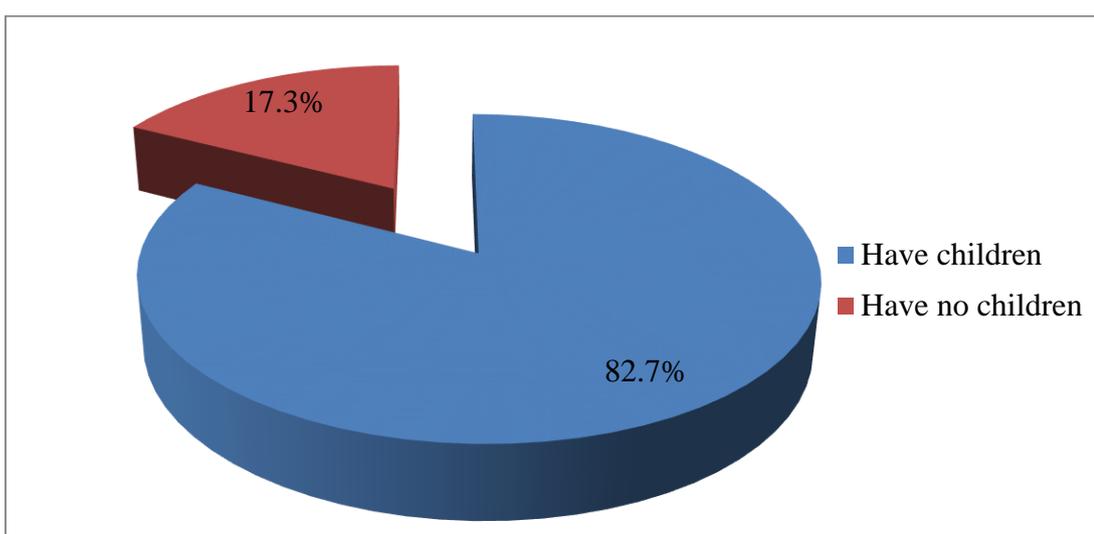
Figure 6.4.   *Distribution of parental status of participants*

The majority (82.7%) of the participants indicated that they have children, while only a fraction of the participants or 17.3% indicated that they do not have children. This demonstrates a typical family where responsibilities are shared by both men and women in terms of childrearing.

6.2.5   Composition of participants according to functional job level

Figure 6.5 below illustrates the breakdown of respondents by functional job levels:
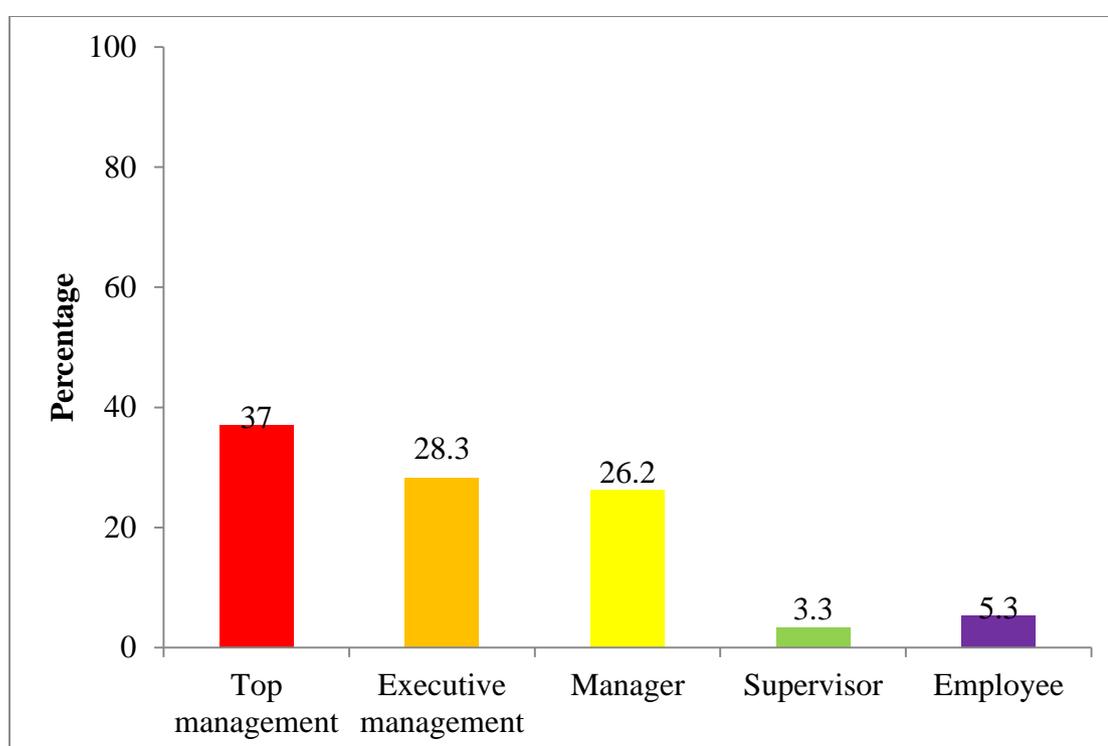
Figure 6.5.   Distribution of functional job level of participants

Over a third of the participants in the study indicated they were in top the management level, 28.3% were in executive management and 26.2% at managerial level. A fairly low proportion of the participants indicated their functional job levels as employees (5.3%) and supervisors (3.3%). Taken together, top management, executive management and managers accounted for approximately 91% of the survey population whereas combined, supervisors and employees constituted 9%. This distribution shows

that both the supervisors and employees are underrepresented, but the distribution is still reasonable for the survey population.

6.2.6 Composition of participants according to job tenure

The distribution of participants according to the job tenure is reflected in Figure 6.6.
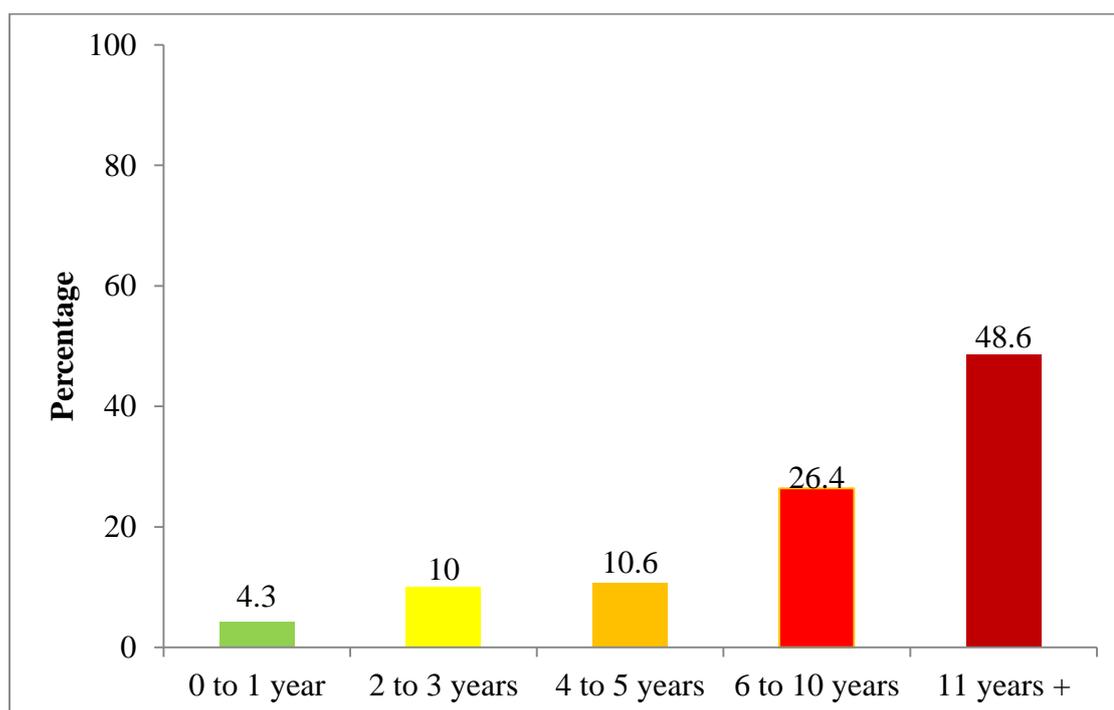
Figure 6.6. Distribution of job tenure of participants

As shown in Figure 6.6, almost half of participants (48.6%) indicated that they have been employed for more than ten years, while a third has been employed for between 6 and 10 years and another third for five years or less. This demonstrates the employment longevity of participants, which resonates with the functional job levels.

6.2.7 Composition of participants in terms of economic sector

Figure 6.7 below describes the participants in according to the economic sector which employs them.
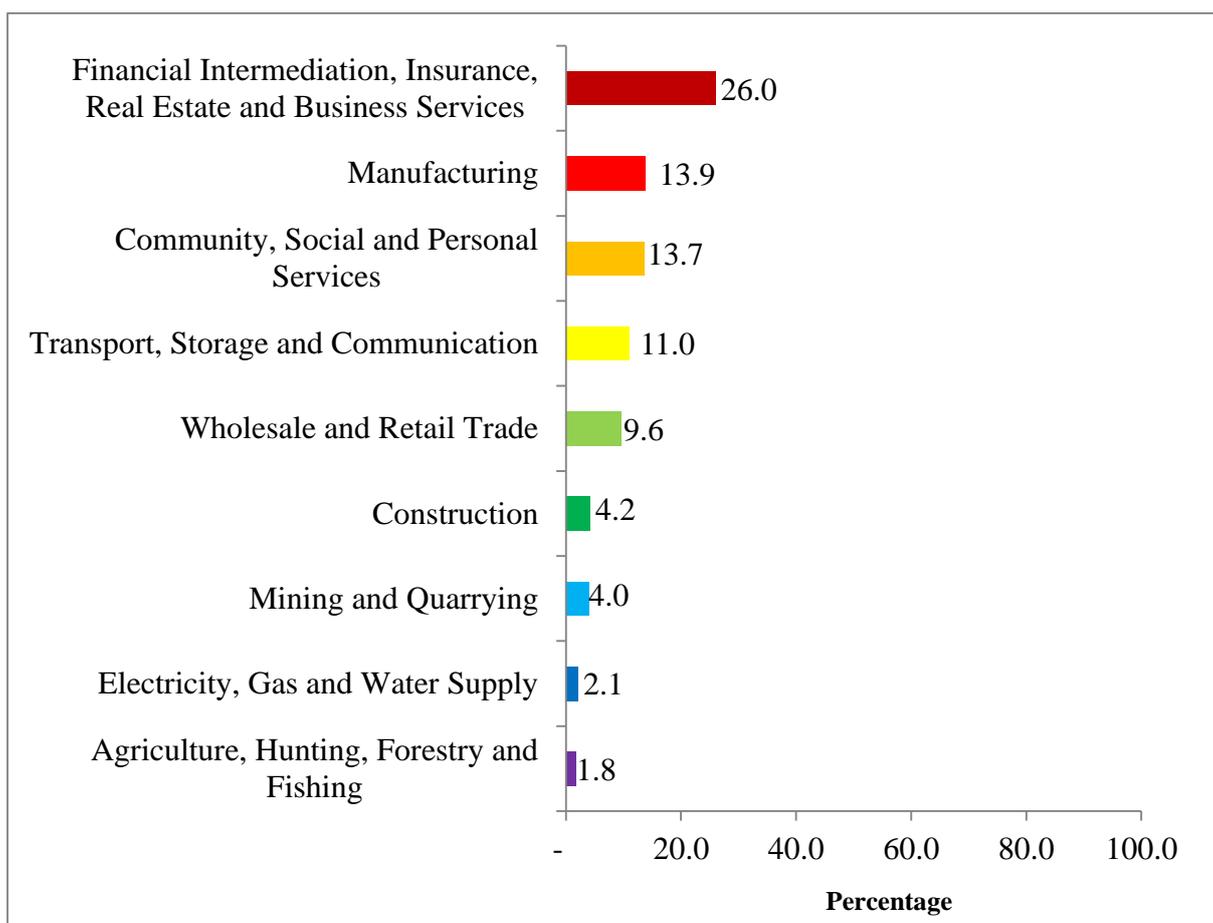
Figure 6.7.   Distribution of participants by economic sector

The figure depicts an uneven spread of the participants across the different Standard Industrial Classification of all Economic Activities. It is clear that the majority of the participants were employed in the financial, intermediation, insurance, real estate and business service sectors, representing 276 (26%) of the participants. This is followed by the manufacturing sector with (13.9%) and community, social and personal service sectors with (13.7%) of the participants respectively. The electricity, gas and water supply sectors representing (2.1%) and agriculture, hunting, forestry and fishing (1.8%) of the participants were the economic sector with a fairly low proportion of the participants. It should be noted that 146 (13.7%) of the participants did not indicate which economic sector they are employed. However, the distribution is deemed reasonable for the survey population.

6.3   REPORTING ON THE EXPLORATORY FACTOR ANALYSES

The construct validity of the variables under scrutiny was administered through exploratory factor analysis (EFA). The EFA was used to determine the structure of the instruments among a sample of participants in the various economic sectors of South Africa. An exploratory factor analysis using varimax rotation and principal axis factoring was conducted to ascertain the factor structure of all the latent variables under investigation. The varimax rotational method was used because it is considered effortless when interpreting the results (Hair et al., 2010).

6.3.1   Principal axis factor analysis (PA) for all measuring instruments

Initially, the PA was conducted for all 74 items used to measure the Big Five personality aspects (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability), work-life balance (measured by negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction) and employee engagement (vigour, dedication and absorption) to determine whether or not similar factor loadings could be obtained as per its original versions.

A visual examination of Table 6.1 (Appendix A) shows that 12 factors were extracted and no cross-loadings were observed in the 12 factor structures. The overall total variance explained by the 12 factors was an acceptable 64.9%, of which factor 1 (representing combined Agreeableness and Emotional Stability items) accounted for approximately 23.4% of the total variance.

Furthermore, the KMO statistic and BTS were used to determine the factorability of the correlation matrices. A scale exceeding the minimum KMO criteria of .60 (Tabachnick & Fidell, 2007) to achieve factorability of the scales was obtained, except of the following items q68, q14, q17, q16, q49, q5, q69, q38 which achieved a lower factor loading. However, Hair et al. (2010) affirm that a value of 60% is considered satisfactory for the social sciences. Therefore, based on the reasoning that loadings of ±.40 are considered more important and acceptable (Hair et al., 2010), the items were

retained for further analysis as composite scales of the big five personality traits, work-life balance and employee engagement respectively. In addition, the BTS were significant for all scales, indicating that the correlation matrices were not identity matrices.

With regard to the big five personality traits, the expected five factor structures loaded onto four factors due to the fact that factor 1 constitutes the combined items that previously represented Agreeableness and Emotional Stability in one common factor. Furthermore, no items were perceived to have loaded into other factors, except item q57 and item q68 which loaded along with the combined Agreeableness and Emotional Stability factors. Verification of the loading warranted further investigation to ascertain the factor structure of the instrument among a South African sample.

Additionally, the expected four factor structure of the work-life balance (SWING) was loaded onto five factor structures. However, an examination of the component matrix established that all items strongly loaded very carefully and meritoriously into their proposed scales, except for two items. Of note was that although these two items (item q30 and q31) did not load with any of the factor structures, they loaded in factor 10. These two items were previously represented in the PWHI ("After a pleasant working day/week, you feel more in the mood to engage in activities with your spouse/family/friends") scale and PHWI ("After spending a pleasant weekend with your spouse/family/friends, you have more fun in your job") scale. Verification of the loading warranted further investigation to ascertain the factor structure of the instrument among a South African sample.

The expected three factor structures of the UWES loaded onto one factor structure (factor 2), except two items. These two items, the UWES absorption item q16 "AB It is difficult to (detach) separate myself from my job" me", loaded onto factor 3 with items representing Negative work-home interaction of work-life balance, and item q6 "AB When I am working, I forget everything else around me", loaded in factor 11. The UWES warranted further exploratory factor analysis to ascertain and validate the factor

structure of the instrument among South African sample. As a result, the 17 items for the UWES were retained for further investigation.

The next section describes how exploratory factor analysis was utilised to further investigate the factor structure of the three instruments.

6.3.2   Reporting exploratory factor analysis for the SWING

The second order principal axis factor analysis was therefore computed to validate the factoring structure of the 20 items into four factor structures. Table 6.1 illustrates the factor loadings after varimax rotation, eigenvalues, and the percentage of variance that accounted for work-life balance

Table 6.1

Rotated factor matrix SWING items (N = 20 listwise)[a]

	Component			
	1	**2**	**3**	**4**
q24 NWHI Your work schedule makes it difficult for you to fulfil your domestic obligations	**.803**	-.032	-.098	.093
q29 NWHI Your work takes up time that you would have liked to spend with your spouse/family/friends	**.800**	-.078	-.046	.059
q26 NWHI You have to work so hard that you do not have time for any of your hobbies	**.795**	.008	-.047	.068
q19 NWHI You find it difficult to fulfil your domestic obligations because you are constantly thinking about your work	**.768**	.007	-.067	.122
q25 NWHI You do not have the energy to engage in leisure activities with your spouse/family/friends because of your job	**.742**	.006	-.019	.119
q28 NWHI Your work obligations make it difficult for you to feel relaxed at home	**.733**	-.012	-.055	.174
q21 NWHI You have to cancel appointments with your spouse/family/friends due to work-related commitments	**.726**	-.036	.009	-.032
q18 NWHI You are irritated at home because your work is demanding	**.648**	-.039	-.004	.228
q37 PHWI You manage your time at work more efficiently because at home you have to do that as well	-.048	**.828**	.253	.002
q35 PHWI You are better able to keep appointments at work because you are required to do the same at home	-.046	**.815**	.285	.021
q33 PHWI You take your responsibilities at work more seriously because you are required to do the same at home	.113	**.800**	.133	.025
q38 PHWI You have greater self-confidence at work because you have your home life like well organised	-.135	**.605**	.223	-.057

q27 PWHI You fulfil your domestic obligations better because of the things you have learned on your job	-.070	.297	**.755**	-.001
q22 PWHI You are better able to interact with your spouse/family/friends as a result of the things you have learned at work	-.010	.204	**.746**	.009
q20 PWHI You manage your time at home more efficiently as a result of the way you do your job	-.074	.102	**.722**	.008
q23 PWHI You are better able to keep appointments at home because your job requires this as well	-.059	.291	**.670**	-.003
q36 NHWI Problems with your spouse/family/friends affect your job performance	.101	.001	.032	**.812**
q39 NHWI You do not feel like working because of problems with your spouse/family/friends	.154	.050	-.080	**.769**
q34 NHWI The situation at home makes you so irritable that you take your frustrations out on your colleagues	.118	-.050	.075	**.683**
q32 NHWI You have difficulty to concentrate on your work because you are preoccupied with domestic matters	.132	-.005	-.022	**.673**
Eigenvalue	5.181	3.657	1.936	1.128
Percent of variance explained	25.9	18.3	9.7	5.6

Extraction Method: Principal Axis Factor Analysis. Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy: .881

Bartlett Test of Sphericity: 8400.53

Significance: 000

The Kaiser-Meyer-Olkin measure of the sampling adequacy for the analysis was .88. The Kaiser criterion extracted four factor structures for work-life balance. All four factor components obtained an eigenvalue higher than Kaiser's criterion of 1. Bartlett's test of sphericity, $x^2 = 8400.53$, $df = .190$, $p < .001$, indicated that the correlation between items were sufficiently acceptable for PA. The principal axis factor analysis with varimax rotation revealed that work-life balance scales loaded on four separate factors, supporting the conceptualisation of four factor structures of work-home interaction as proposed by Geurts et al (2005). All items had factor loadings of above .60 (Tabachnick & Fidell, 2007) and were therefore retained for further analysis.

The overall total variance explained by the four factors was an acceptable 59.51%, of which factor one explained approximately 25.9% of the total variance. The four factor structures were extracted with the following eigenvalues and corresponding percentages of variance: factor 1 (5.18, 26%), factor 2 (3.66, 18%), factor 3 (1.94, 10%) and factor 4 (1.13, 6%). This appears to be a statistically sound structure, and after considering the various factors, it was concluded that the factors were all conceptually meaningful when combined and deemed interpretable. Accordingly, the extracted components were labelled and used for further analysis.

The items that clustered onto factor 1 consist of items q24, q29, q26, q19, q25, q28, q21, q18 representing **Negative work-home interaction** (consisting of negative load reaction build up at work, hampering or interfering with a person's functioning at home (De Klerk & Mostert, 2010; Geurts et al., 2005).

The items that clustered onto factor 2 consist of items q37, q33, q35, q38 reflects the **Positive home-work interaction** (constituting of positive load reaction built up at work that facilitates functioning at home (De Klerk & Mostert, 2010; Geurts et al., 2005).

The items that clustered onto factor 3 consist of items q20, q27, q22, q23 reflects the **Positive work-home interaction** (consisting of positive load reactions that develops at home facilitate functioning at work (De Klerk & Mostert, 2010; Geurts et al., 2005).

The items that clustered onto factor 4 consist of items q36, q39, q34, q32 reflects the **Negative home-work interaction** (relating to negative load reactions which develop at home that fetter a person's functioning at work (De Klerk & Mostert, 2010; Geurts et al., 2005).

6.3.3 Reporting maximum likelihood analysis of Big Five personality

The Big Five personality traits adapted by Martins (2000) was used to measure personality characteristics on the levels of agreeableness, conscientiousness, extraversion, resourcefulness and emotional stability. The maximum likelihood (ML) was conducted on all dimensions measuring the big five personality aspects. The ML was used because it attempts to analyse the maximum likelihood of sampling the observed correlation matrix (Tabachnick & Fidell, 2007). It was used in an attempt to provide the most accurate estimates for the factor loading.

In addition, the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test of sphericity were used to determine the factorability of the correlation matrices. Table 6.2 illustrates maximum likelihood loadings after varimax rotation, eigenvalues, and the percentage of variance accounted for the big five personality traits.

Table 6.2

Rotated factor matrix for the Big Five Personality items (N=35 listwise)[a]

	Factor			
	1	**2**	**3**	**4**
q59 A Hostile vs Peaceful	**.882**	.195	.044	.049
q60 A Mean vs Gentle	**.859**	.206	.047	.057
q67 A Angry vs Happy	**.831**	.187	.189	.126
q66 A Agitated vs Calm	**.820**	.241	.049	.109
q61 A Opposing vs Cooperative	**.818**	.256	.116	.121
q58 A Insensitive vs Sympathetic	**.799**	.226	.105	.111
q65 A Touchy vs Ever-tempered	**.792**	.245	.084	.130
q56 A Rude vs Tactful	**.773**	.255	.007	.069
q63 ES Moody vs Stable	**.767**	.296	.086	.151
q55 A Unfriendly vs Friendly	**.729**	.164	.306	.143
q62 ES Nervous vs Relaxed	**.638**	.160	.182	.154
q54 A Cold-hearted vs Warm-hearted	**.635**	.291	.274	.110
q57 C Deceitful vs Trustworthy	**.618**	.472	.100	.212
q64 ES Insecure vs Confident	**.532**	.388	.220	.340
q68 R Dull vs Intelligent	**.450**	.428	.179	.394
q40 C Irresponsible vs Responsible	.288	**.760**	.122	.211
q42 C Disorganised vs Organised	.278	**.717**	.064	.128
q44 C Lazy vs Hardworking	.226	**.711**	.177	.190

q46 C Careless vs Careful	.333	**.699**	.110	.066
q43 C Sloppy vs Neat	.274	**.664**	.132	.116
q41 C Undependable vs Dependable	.327	**.652**	.167	.249
q45 C Dishonest vs Honest	.395	**.647**	.158	.137
q50 E Reserved vs Outgoing	.165	.099	**.835**	.173
q48 E Withdrawn vs Sociable	.243	.094	**.796**	.078
q47 E Quiet vs Talkative	.024	-.028	**.722**	.080
q52 E Shy vs Bold	.050	.196	**.696**	.255
q53 E Passive vs Active	.177	.324	**.602**	.261
q51 E Gloomy vs Cheerful	.523	.213	**.565**	.134
q49 E Unassertive vs Assertive	.008	.385	**.543**	.260
q70 R Conventional vs Innovative	.317	.147	.230	**.739**
q71 R Indifferent vs Curious	.332	.158	.225	**.706**
q74 R Prefers routine vs Prefers variety	.229	.020	.293	**.635**
q72 R Believing vs Questioning	.029	.236	.111	**.558**
q73 R Simple vs Complex	-.097	.130	.036	**.535**
q69 R Unimaginative vs Creative	.420	.222	.266	**.532**
Eigenvalue	15.60	3.77	2.43	1.88
Percent of variance explained	44.6	10.8	6.94	5.38

Extraction Method: Maximum Likelihood. Rotation Method: Varimax with Kaiser Normalization

a. Rotation converged in 6 iterations

Kaiser-Meyer-Olkin Measure of Sampling Adequacy: .961

Bartlett Test of Sphericity: 31526.774

Significance: 000

The Kaiser-Meyer-Olkin measure that verified the sampling adequacy for the analysis was .96. The Kaiser criterion extracted four factor structures of the big five personality traits. Bartlett's test of sphericity, $x^2 = 31526.77$, $df = 595$, $p < .001$, indicating that the correlation between items were sufficiently large for maximum likelihood. Bartlett's test of sphericity was significant for scale, indicating that the correlation matrices were not identity matrices. The total variance explained by the four factors was an acceptable 67.7 %, of which factor one explained approximately 44.6% of the total variance.

An examination of the component matrix found that 15 of the 35 items of the big five personality traits were strongly loaded onto factor 1, with loadings ranging between .45 and .88. This item constitutes of the combined items that previously represented **Agreeableness** and **Emotional Stability** and were therefore retained for further analysis.

In addition, two items (q57 and q68) were removed from their proposed factors **Conscientiousness** and **Resourcefulness** respectively and placed within the combined **Agreeableness** and **Emotional Stability**, as they were strongly loaded onto factor 1. The personality-linked items were used to confirm this different loading of the two items. Taken together, the results warranted further examination of the measure of personality as a five factor structure. Therefore, a subsequent maximum likelihood analysis was conducted, specifying the extraction of one component and all items strongly loaded onto it (eigenvalue = 9.55, variance = 56.18%).

The maximum likelihood confirmed that items q57 and q68 needed to move as they were highly loading on other factors than their proposed scales as discussed in chapter 5 of the research methodology. The analysis was repeated with both eigenvalue > 1, principal axis factor analysis and forcing items into five factors. That is, item q57 (Deceitful vs Trustworthy), which is a subscale of Conscientiousness, loaded in factor one and not with its proposed scales. In addition, item q68 (Dull vs Intelligent), which was a subscale of Resourcefulness, did not load with its proposed factor but rather with the previously presented Agreeableness and Emotional Stability factors. The results

repeatedly showed the two items needed to move to the combined Agreeableness and Emotional Stability factor.

In addition, a second order factor analysis was conducted for the 15 items in factor 1 to determine whether the items could be further grouped into two separate dimensions. The analysis indicates that the items indeed could be grouped into two separate dimensions as illustrated in Table 6.3 below.

Table 6.3

Rotated factor matrix for 15 items

	Factor	
	1	**2**
q60 A Mean vs Gentle	**.838**	.364
q59 A Hostile vs Peaceful	**.836**	.389
q58 A Insensitive vs Sympathetic	**.789**	.365
q61 A Opposing vs Cooperative	**.731**	.484
q56 A Rude vs Tactful	**.677**	.442
q54 A Cold-hearted vs Warm-hearted	**.651**	.344
q55 A Unfriendly vs Friendly	**.631**	.466
q57 AC Deceitful vs Trustworthy	**.550**	.531
q64 ES Insecure vs Confident	.277	**.783**
q63 ES Moody vs Stable	.533	**.683**
q65 ES Touchy vs Ever-tempered	.550	**.669**
q68 ESR Dull vs Intelligent	.287	**.656**
q66 ES Agitated vs Calm	.585	**.653**
q67 ESA Angry vs Happy	.616	**.626**
q62 ES Nervous vs Relaxed	.413	**.603**
Eigenvalue	10.064	.964
Percent of variance explained	67.1	6.4

Extraction Method: Maximum Likelihood. Rotation Method: Varimax with Kaiser Normalization
a. Rotation converged in 3 iterations
Kaiser-Meyer-Olkin Measure of Sampling Adequacy: .963
Bartlett Test of Sphericity: 15470.411
Significance: 000

The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis was .96. The Kaiser criterion extracted four factor structures for the big five personality aspects. Bartlett's test of sphericity, $x^2 = 15470.41$, $df = 105$, $p < .001$, indicated that the correlation between items was sufficiently large for maximum likelihood. Bartlett's test

of sphericity was significant for scales, indicating that the correlation matrices were not identity matrices. The total variance explained by the two factors was an acceptable 67.7%, of which factor 1 explained approximately 44.6% of the total variance.

Further examination showed that the remaining 21 items (Table 6.3) loaded meritoriously and satisfactorily to their proposed factors without forcing them. The items that clustered in factor 2 consist of items q40, q42, q44, q46, q43, q41, q45 representing **Conscientiousness** (includes aspects such as hardworking, dependable, responsible, organised, neat, careful and honesty) with an eigenvalue and corresponding percentage of common variance of 3.77; 10%.

The items that clustered in factor 3 consists of items q50, q48, q47, q52, q53, q51, q49 which reflect **Extraversion** (includes aspects such as sociable, assertive, outgoing, talkative, cheerful, bold and active) with an eigenvalue and corresponding percentage of common variance of 2.43; 6.9%.

The items that clustered in factor 4 consists of items q70, q71, q74, q72, q73, q69 which reflect **Resourcefulness** (includes aspects such as creative, innovative, questioning, complex, curious and prefers variety) with an eigenvalue and corresponding percentage of common variance of 1.88; 5.3%.

The maximum likelihood analysis confirms the original model of the five factor structure of the big five personality traits, as both **Agreeableness** and **Emotional Stability** distinctly loaded on separate factors, with unexpected high cross-loadings. The inspection further confirmed that indeed items q57 and q68 had to move as they again load on separate factors. For example, item q57 AC loaded with the agreeableness, while item q68 ESR loaded with emotional stability. Interestingly, item q67 ESA (Angry vs Happy) loaded with emotional stability and had to be removed from the previously agreeableness variable. The rationale was that participants interpreted and associated item q67 ESA (Angry vs Happy) in the same manner as items of emotional stability.

There appeared to be a statistically sound structure, and after considering the various factors it was concluded that they were all conceptually meaningful when combined. They were therefore deemed interpretable.

6.3.4 Reporting exploratory factor analyses for employee engagement

The Utrecht Work Engagement Scale (UWES) was developed by Schaufeli et al (2002) as a measure of engagement and is characterised by vigour, dedication, and absorption. The exploratory factor analysis was conducted on the basis that previous studies constructed engagement as a higher-order construct and multidimensional first-order construct (Schaufeli & Bakker, 2003). Specifically, the exploratory factor analysis intended to determine the suitability of the engagement construct in a South African context on the basis of (i) a one-factor model with all items loading into one latent factor and (ii) a two-factor model with all items loading into two latent factors.

A second principal axis factor analysis was conducted on all items measuring employee engagement. The Kaiser-Meyer-Olkin (KMO) statistic and Bartlett's test of Sphericity were used to determine the factorability of the correlation matrices. Table 6.4 below provides factor loadings after varimax rotation, eigenvalues, and the percentage of variance accounted by employee engagement scales.

Table 6.4

Rotated factor matrix - Employee Engagement items (N=17 listwise)[a]

	Component	
	1	2
q1 VI At my work, I feel full (bursting) with energy	**.812**	.120
q4 VI At my job, I feel strong and energetic (vigorous)	**.797**	.189
q2 DE I find the work that I do full of meaning and purpose	**.776**	.170
q8 VI When I get up in the morning, I feel like going to work	**.766**	.197
q7 DE My job motivates (inspires) me	**.762**	.323
q5 DE I am passionate (enthusiastic) about my job	**.758**	.314
q10 DE I am proud of the work that I do	**.647**	.283
q13 DE To me, my job is challenging	**.571**	.443
q9 AB I feel happy when I am working intensely	**.557**	.388
q3 AB Time flies when I am working	**.543**	.398
q15 VI At my job, I am very resilient (flexible), mentally	**.507**	.387
q14 AB I get carried away when I am working	.259	**.754**
q16 AB It is difficult to separate (detach) myself from my job	.037	**.731**
q6 AB When I am working, I forget everything else around me	.167	**.666**
q12 VI I can continue working for very long periods at a time	.361	**.654**
q11 AB I am engrossed (immersed) in my work	.509	**.575**
q17 VI At my work I always persevere, even when things do not go well	.304	**.481**
Eigenvalue	7.99	1.42
Percent of variance explained	46.9	8.38

Extraction Method: Principal Axis Factor Analysis Rotation Method: Varimax with Kaiser Normalisation.[a]
a. Rotation converged in 3 iterations
Kaiser-Meyer-Olkin Measure of Sampling Adequacy: .949
Bartlett Test of Sphericity: 9336.57
Significance: 000

The Kaiser-Meyer-Olkin measure for sampling adequacy for the analysis was .95. Bartlett's test of Sphericity was $x^2 = 9336.57$, $df = 136$, $p < .001$, indicating that the correlation between items were sufficiently large for PA. Two factors were extracted and the eigenvalues obtained was higher than Kaiser's criterion of 1. The two extracted factors account for approximately 55.5% of the total variance.

As can be seen further from table 6.5, the results of the exploratory factor analysis with varimax rotation specified a two factor structure for engagement scale which is in incongruity to its original version of three factor structures. A large proportion of items were clustered in factor 1, which somewhat combines items that previously represented **UWES Vigour** (q1, q4, q8, q15), **UWES Dedication** (q2, q7, q5, q10, q13) and **UWES Absorption** (q9, q3) onto one common factor. The combined scales represented aspects related to energy, motivation, passion, meaningfulness and mental resilience. Because vigour and dedication seems to share the same attributes in terms of high energy, enthusiasm, resilient as well as positive affect, the new dimension was therefore renamed as **Work enthusiasm**.

In addition, a similar pattern was also observed where a combination of items that previously represented **UWES Vigour** (q12, q17) and **UWES Absorption** (q14, q16, q6, q11) clustered in factor 2. The absorption shares the characteristics of clear-mindedness and intrinsic enjoyment with positive affect. Absorption is understood as the tendency of being pre-occupied or engrossed in the work task. As a result, the combined vigour and absorption items represent aspects that relate to attachment and occupied, **namely, meaningful, immersed and persistence, and were renamed as Work occupied.**

Further visual examination found that item q11 (I am engrossed in my work) had a spilt loading in both factor 1 and factor 2, although, the items are highly loading in factor 2. As a result, the item was retained in factor 2. The implication was that people who often find themselves engrossed or immersed are technically busy in their activities to such an extent that external circumstance will not interfere with their concentration.

Therefore, in this study, employee engagement is operationalised into two dimensions, namely work enthusiasm consisting of some items that previously measured vigour, dedication and absorption, and work occupied with some items for both vigour and absorption. An engaged employee demonstrates a high level of energy, enthusiasm, passion and connection with the work activity and she/he is so preoccupied that external situations do not distract his/her attention from the work activity. In other words,

engaged employees have high levels of energy, are enthusiastic about their work, and they are often fully immersed in their work so that time flies (Bakker et al., 2008; Macey & Schneider, 2008, Schaufeli & Bakker, 2010).

The new names for the dimensions of employee engagement, namely **Work enthusiasm** (factor 1) and **Work occupied** (factor 2) are used for further analyse demonstrating employee engagement. Despite the inability of the current study to find support for the three-factor structure, and a reliance on the core dimensions of engagement, namely vigour and dedication as postulated by previous studies (Schaufeli & Bakker, 2004a), all items were retained for hypotheses testing since they loaded on two factors.

6.4   DESCRIPTIVE STATISTICS

The following section presents the findings of the descriptive statistics in terms of the Rasch analysis and internal consistency reliability. The Rasch analysis was conducted to understand the unidimensionality of the instruments used in the study under investigation, while the internal consistency reliability was used to determine the alpha coefficients of the instruments, specifically, the reliability of the instruments. In addition, the means, standard deviations, skewness and kurtosis for the measuring instruments are also reported.

6.4.1   Interpretation of internal consistency reliabilities: Rasch analysis and Cronbach's alpha coefficients

This section discusses the two main phases of descriptive statistics in terms of the unidimensionality (construct validity) of the instruments. They are the Rasch analysis and the internal consistency reliability of the measuring instruments as calculated by the Cronbach's alpha coefficient (Brand-Labuschagne et al., 2012). The reliability of the rating scale is generally clarified by the item difficulty (item separation index and item reliability index) and person ability (person separation index and person reliability index) (Brand-Labuschagne et al., 2012).

Table 6.5 below indicates the internal consistency of the measurement of the SWING in terms of the item separation index and reliability, person separation index and reliability, person reliability in terms of Cronbach's alpha coefficients, the average measure of each dimension per person and item, as well as the infit and outfit statistics for each scale.

Table 6.5.

Descriptive Statistics: Person and item summary statistics for the SWING

Scale Dimension	Average measure (SD)	Infit (SD)	Outfit (SD)	Separation	Reliability	Alpha
RASCH internal consistency reliability analyses						
Total Work-life balance						
Person	-.75 (.73)	1.00 (.58)	.99 (.55)	1.99	.80	
Item	.00 (.76)	.99 (.22)	.99 (.21)	16.77	1.00	.78
Negative work-home interaction						
Person	-1.28 (2.23)	.98 (.72)	.99 (.73)	2.91	.89	
Item	.00 (.39)	.99 (.12)	.99 (.13)	6.25	.98	.90
Positive work-home interaction						
Person	-.47 (1.84)	.99 (1.00)	.99 (1.00)	1.73	.75	
Item	.00 (.38)	.99 (.17)	.99 (.16)	6.61	.98	.76
Negative home-work interaction						
Person	-4.17 (2.14)	.95 (1.01)	1.00 (1.34)	1.42	.67	
Item	.00 (1.20)	.98 (.10)	1.01 (.14)	14.28	1.00	.74
Positive home-work interaction						
Person	-.48 (1.77)	1.00 (.99)	1.00 (1.02)	1.78	.76	
Item	.00 (.75)	.99 (.25)	1.00 (.28)	13.55	.99	.81

Note: N = 1 063

It is evident in Table 6.5 that acceptable item reliability for all four factor structures of the SWING is observed, indicating that the subscales differentiated well between the measured variables (equal to or greater than .80). In addition, the item separations for all the dimensions of the SWING were sufficient compared to the guideline of at least 2.00 and high enough to be regarded as useful (Bond & Fox, 2013).

The person separation indexes for all the dimensions of the SWING is somewhat lower than the proposed guideline (>2.00) with the exception of negative work-home interaction (2.91) which is higher than the proposed guideline. The higher person separation indices for the negative work-home interaction indicate that the subscales did not separate or discriminate well among participants with different abilities (Boone, Staver, & Yale, 2014). Indeed, Brand-Labuschagne et al (2012) are of the opinion that the higher values for both the person and item separation indicate greater distribution of items or people along the measured latent trait.

In this particular study, the findings show that the items in the various dimensions differentiate well between the measured variables. The reliability test showed that these measurements demonstrated adequate levels of internal consistency reliability with alpha values well above the suggested cut-off of .70 provided by Nunnally and Bernstein (2010). For instance, the internal consistency reliability ranged between .74 and .90. The alpha coefficients for both the NWHI dimension (α = .90) and PHWI (α = .81) exceeded the guideline of $\geq$ .70 (Nunnally & Bernstein, 2010) suggesting that all the subscales used in the test were indeed reliable. These findings therefore, are in line with other previous findings of research on work-home interaction (Marais et al., 2009; Mostert & Oldfield, 2009; Rost & Mostert, 2007).

The negative home-work interaction shows the highest person average measure (-4.17, SD=2.14) and positive work-home interaction dimension the lowest average measure (-.47, SD= 1.84). The mean item fit and person fit were acceptable (Bond & Fox, 2013) which proves that the responses do not underfit ($\geq$ 1.30) or overfit ($\leq$ .70). The evaluation of the mean square infit and outfit suggests that the data exhibited fit the

model, which means they are likely to be measuring the single dimension intended by the construct theory.

Overall, Table 6.5 shows that the infit and outfit chi-square statistics for the person and item measures are equal to or closer to 1.00, which denotes the unidimensionality of the SWING. This emphasises that all dimensions of work-home interaction are indeed reliable measures for the work-home interaction variable. In addition, no item underfit (fit statistics ≥ 1.30) or person underfits (fit statistics $\leq .70$) were detected as per the guideline proposed by Bond and Fox (2013). The item infit and outfit statistics were all below 2.00, which indicates the usefulness and correctness of the data obtained from the survey participants, and also emphasises that a similar outcome could most probably be obtained from participants in other settings. The person infit and outfit indicate that the survey participants answered the measures consistently.

6.4.1.2   *Scale reliability: Big Five Personality (BF)*

Table 6.6 below indicates the internal consistency of the measurement the Big Five personality in terms of the item separation index and reliability, person separation index and reliability, person reliability in terms of Cronbach's alpha coefficients, the average measure of each dimension per person and item, as well as the infit and outfit statistics for each dimension in terms of the person and item infit and outfit statistics for each dimension.

Table 6.6

Descriptive Statistics: Person and item summary statistics for the Big Five Personality

| Scale Dimension | RASCH internal consistency reliability analyses | | | | | |
	Average measure (SD)	Infit (SD)	Outfit (SD)	Separation	Reliability	Alpha
Big Five Personality Total						
Person	(.94) .88	(1.08) .81	(1.07) .80	4.44	.95	
Item	(.00) .26	(1.04) .29	(1.07) .44	8.90	.99	.96
Agreeableness						
Person	(1.53) 1.83	(.99) .93	(1.00) .94	3.46	.92	
Item	(.00) .41	(1.01) .32	(1.00) .30	9.94	.99	.95
Extraversion						
Person	1.43 (1.35)	1.02 (1.07)	1.02 (1.07)	2.53	.87	
Item	.00 (.26)	1.00 (.21)	1.02 (.22)	7.00	.98	.89
Conscientiousness						
Person	1.52 (1.36)	1.04 (1.09)	1.03 (1.07)	2.83	.85	
Item	.00 (.31)	1.02 (.16)	1.03 (.15)	8.04	.98	.92
Resourcefulness						
Person	.87 (1.08)	1.03 (1.22)	1.03 (1.25)	2.08	.81	
Item	.00 (.26)	.99 (.24)	1.03 (.27)	8.04	.98	.85
Emotional stability						
Person	(1.63) 1.68	(.97) .91	(1.00) .93	2.98	.90	
Item	(.00) .59	(1.03) .32	(1.00) .27	14.35	1.00	.93

Note: N = 1 063

Table 6.6 demonstrates acceptable item reliability for all dimensions of the big five personality traits, indicating that these dimensions differentiate well between the

measured variables (equal to or greater than .80). The item separations for all the dimensions of the big five personality traits were sufficient compared to the guideline of at least 2.00 and higher, to be regarded as useful (Bond & Fox, 2013. The person separation indexes for all the dimensions were somewhat higher than the proposed guideline (>2.00). The higher person separation indices indicate that the subscales indeed separated well among respondents with different abilities (Boone et al., 2014). In this particular study, the findings show that the items in the various dimensions differentiate well between the measured variables.

The reliability test showed that these measurements demonstrated adequate levels of internal consistency reliability with alpha values well above the suggested cut-off of .70 provided by Nunnally and Bernstein (2010). In terms of the Cronbach alpha coefficient for all the dimensions of the big five, it appeared that the factors have a strong internal reliability which ranges from .85 to .96. These results are consistent with research reported by Von der Ohe (2014) and Von der Ohe et al (2004) in which the internal consistency reliability of all five factors of personality is highly satisfactory. Overall, it can therefore be assumed that the big five personality traits adapted in Martins (2000) are consistent in what they are supposed to measure and furthermore stable across different survey population in South Africa.

The emotional stability dimension shows the highest person average measure (1.63, SD=1.68) whereas the resourcefulness dimension the lowest average measure (.87, SD=1.08). The mean item fit and person fit were acceptable (Bond & Fox, 2013) which proves that the responses do not underfit (≥ 1.30) or overfit ($\leq .70$). The evaluation of the mean square infit and outfit suggests that the data exhibited fit the model, which means they are likely to be measuring the single dimension intended by the proposed theoretical construct.

Overall, Table 6.6 shows that the infit and outfit chi-square statistics for the person and item measures are equal to or closer to 1.00 which denotes the unidimensionality of the big five personality traits. This clearly demonstrates that all dimensions of the big five personality aspects are indeed a reliable measure of the big five personality traits

variable. Furthermore, with the recommendation proposed by Bond and Fox (2013), no item underfits (fit statistics ≥ 1.30) or person underfits (fit statistics $\leq .70$) were detected. In addition, both the item infit and outfit statistics were below 2.00, further emphasising the accuracy of the obtained data. The person infit and outfit indicate that the respondents answered the measures consistently.

6.4.1.3   Scale reliability: Utrecht Work Engagement Scale (UWES)

Table 6.7 indicates the internal consistency of the measurement the UWES in terms of the item separation index and reliability, person separation index and reliability, person reliability in terms of Cronbach's alpha coefficients, the average measure of each dimension per person and item, as well as the infit and outfit statistics for each dimension in terms of the person and item infit and outfit statistics for each dimension.

Table 6.7

Descriptive Statistics: Person and item summary statistics for the UWES

| Scale Dimension | Average measure (SD) | RASCH internal consistency reliability analyses | | | | |
		Infit (SD)	Outfit (SD)	Separation	Reliability	Alpha
Employee Engagement Total						
Person	1.51 (1.19)	1.08 (.87)	1.05 (.85)	3.39	.92	
Item	.00 (.49)	1.02 (.26)	1.05 (.30)	12.85	.99	.92
Work enthusiasm						
Person	1.99 (1.53)	1.03 (1.01)	1.05 (1.04)	3.12	.91	
Item	.00 (.50)	1.04 (.23)	1.05 (.20)	11.42	.99	.92
Work occupied						
Person	1.30 (1.23)	1.03 (1.05)	1.02 (1.04)	2.08	.81	
Item	.00 (.56)	1.00 (.17)	1.02 (.19)	14.95	1.00	.80

Note: N = 1 063

Table 6.7 demonstrates acceptable item reliability for the two factor structure of employee engagement, indicating that these subscales differentiate well between the measured variables (equal to or greater than .80). The item separations for all the dimensions were sufficient compared to the guideline of at least 2.00 and higher, to be regarded as useful (Bond & Fox, 2013). The person separation indexes for all the dimensions is somewhat greater than the proposed guideline (>2.00). The greater person separation indices indicate that the subscales indeed separated well among respondents with different abilities.

These findings show that the items in the various dimensions differentiate well between the measured variables. The reliability test shows that these measurements demonstrated adequate levels of internal consistency reliability with alpha values well above the suggested cut-off of .70 provided by Nunnally and Bernstein (2010). The work enthusiasm subscales obtained an alpha of .92 and work occupied .80, which demonstrates that the measures are indeed reliable. The mean item fit and person fit was acceptable (Bond & Fox, 2013). It is evident that, on average, the responses do not underfit or overfit.

Overall, Table 6.7 shows that the infit and outfit chi-square statistics for the person and item measures are equal to or closer to 1.00 which denotes the unidimensionality of the measure of employee engagement. This clearly demonstrates that both the work enthusiasm and work occupied were indeed a reliable measure of the employee engagement variable. Furthermore, no item underfit (fit statistics $\geq$ 1.30) or person underfit (fit statistics $\leq$ .70) was detected based on the guideline proposed by Bond and Fox (2013). In addition, both the item infit and outfit statistics were below 2.00, further emphasising the accuracy of the obtained data. The person infit and outfit indicate that the respondents answered the measures consistently.

6.4.2   Reporting of means and standard deviations

In an effort to provide descriptive information of the survey participants in terms of the measuring instruments, the descriptive statistics in the form of means and standard

deviations was used to serve such purposes. The results for means and standard deviations, kurtosis and skewness for each of the instruments are presented below.

6.4.2.1 The Survey Work-home Interaction/NijmeGen (SWING)

Table 6.8 depicts the arithmetic mean and standard deviation as well as the kurtosis and skewness for the Survey Work-home Interaction/NijmeGen (SWING) among a sample of 1 063 participants.

Table 6.8

Descriptive statistics for the Survey Work-home Interaction/NijmeGen (SWING)

Items	Means	Std. Deviation	Kurtosis		Skewness	
			Statistic	Std. Error	Statistic	Std. Error
Work-life Balance	**1.10**	**.34**	**.55**	**.150**	**.06**	**.075**
Negative WHI	1.15	.58	.02	.150	.48	.075
Positive WHI	1.35	.62	-.10	.150	.03	.075
Negative HWI	.53	.43	1.22	.150	.88	.075
Positive HWI	1.33	.75	-.41	.150	.27	.075

Note: N = 1 063

Means and standard deviations can be examined to ensure the data are generally in the expected range. The Likert-type scale was used to capture the participants' responses regarding work-life balance and its subscales, on a scale ranging from '0' indicative of never and '3' denoting always. The mean scores and standard deviation for each scale are relatively low, based on a range of the 0 to 3 Likert scale. The table indicates a mean score ranging from .53 to 1.35.

Overall mean score ($M = 1.10$) and standard deviation ($SD = .34$) was obtainable for the total work-life balance. The highest mean score ($M = 1.35$; $SD = .62$) was observed for positive work-home interaction and the lowest mean score ($M = .53$; $SD = .43$) was achieved for negative home-work interaction. This indicates that there is harmonious interaction between work and home domains. The table further shows that the standard

deviations indicate that the variability for the overall work-life balance construct was actually small (SD= .34) relative to its subdimensions, with higher variability in positive home-work interaction (SD = .75) among the survey participants with regard to work-life balance.

The assumption of univariate normality was assessed by examining the skewness and kurtosis statistics for variables (Pallant, 2010; Saunders et al., 2009). The table further shows that all the dimensions of the work-life balance are positively skewed with values ranging between .03 and .88, indicating that participants scored lower on these dimensions and reflecting skewness towards the right. This indicates that a relatively symmetric distribution is present. In contrast, the kurtosis represents an indication of how flat or peaked a distribution is. The kurtosis values ranged between -.10 and 1.22, thereby falling within the -1 and above the +1 normality ranges recommended for these coefficients (Tredoux & Durrheim, 2013).

6.4.2.2 The Big Five Personality Scale

Table 6.9 below depicts the arithmetic mean and standard deviation as well as the kurtosis and skewness for the Big Five Personality Scale among a sample of 1 063 participants.

Table 6.9

Descriptive statistics for the Big Five Personality Scale

Items	Means	Std. Deviation	Kurtosis Statistic	Std. Error	Skewness Statistic	Std. Error
Big Five Personality	**5.42**	**.93**	**.66**	**.150**	**-.87**	**.075**
Agreeableness	5.29	1.25	.88	.150	-.99	.075
Extraversion	5.41	1.06	.88	.150	-.92	.075
Conscientiousness	5.71	1.15	1.85	.150	-1.35	.075
Resourcefulness	5.28	1.10	.25	.150	-.67	.075
Emotional Stability	5.41	1.20	1.02	.150	-1.06	.075

Note: N = 1 063

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A seven-point slider scale was used to capture the participants' responses regarding the measure of the big five personality traits on a continuum scale ranging from '1'indicative of negative and '7' denoting positive. The mean score ranged from 5.28 to 5.71. An overall mean score ($M = 5.42$) and standard deviation of ($SD = .93$) was obtainable for the overall big five personality traits. The table further depicts that the highest mean score was obtained for conscientiousness ($M = 5.71$; $SD = 1.15$), followed by extraversion ($M = 5.41$; $SD = 1.06$); emotional stability ($M = 5.41$; $SD = 1.20$) and agreeableness ($M = 5.29$; $SD = 1.25$); the lowest mean score ($M = 5.28$; $SD = 1.10$) was observed in resourcefulness scale. Resourcefulness is characterised by a deep scope of emotional and intellectual awareness as well as the need to enlarge and examine experience. This is emanates from the imaginative, unconventional and curious nature of open individuals (McCrae & Costa, 2003). The table further depicts that the standard deviations indicate that the variability for the overall personality traits was actually smaller (SD = .93), relative to its dimensions with a larger variability indicated in agreeableness (SD = 1.25) among the survey participants regarding the big five personality traits.

Skewness refers to the extent that scores positively or negatively deviate from a normal distribution (Pallant, 2010; Saunders et al., 2009). The table further shows that all the subscales are negatively skewed with values ranging between -.66 and -1.35. The negative skewness of the values reflects that the distribution of the scores is clustered more to the right-hand side. The kurtosis provides information pertaining to the peakedness or flatness of the distribution (Pallant, 2010). In this particular study, the kurtosis values range between .25 and 1.85, thereby falling outside the -1 and above 1, indicating a non-normal distribution range recommended for these coefficients (Tredoux & Durrheim, 2013). In other words, all the five dimensions of personality traits have a positive kurtosis value which indicates that the distribution is peaked towards the centre.

Table 6.10 below presents the arithmetic mean and standard deviation as well as the kurtosis and skewness for the Utrecht Work Engagement Scale (UWES) among a sample of 1 063 participants.

Table 6.10

Descriptive statistics for the Utrecht Work Engagement Scale (UWES)

Items	Means	Std. Deviation	Kurtosis		Skewnss	
			Statistic	Std. Error	Statistic	Std. Error
Employee Engagement	**4.59**	**.76**	**1.29**	**.150**	**-.69**	**.075**
Work enthusiasm	4.70	.81	1.07	.150	-.77	.075
Work occupied	4.40	.85	.43	.150	-.41	.075

Note: N = 1 063

Visual examination shows that the mean score that ranges from 4.40 to 4.70 was observable for the overall engagement and its subscales. The majority of the sample participants perceived themselves to be highly engaged with their work roles ($M = 4.59$ and $SD = .76$), suggesting that participants are feeling engaged in their work. The table further suggest that regarding the levels of employee engagement, the standard deviations indicate that the variability for the overall employee engagement was small ($SD = .76$) relative to its dimensions with larger variability in work occupied ($SD = .85$) among the survey participants.

In addition, the highest mean score ($M = 4.70$; $SD = .81$) is observed for the work enthusiasm scale and the lowest mean score was for the work occupied scale ($M = 4.40$; $SD = .85$). This result suggests that participants have an energetic and affective connection with their work roles/activities and see themselves as able to deal completely with the demands of their jobs even when faced with difficulty and uncertainty. In addition, participants feel so engrossed that they find it difficult to detach

themselves from their work (Bakker et al., 2008). In other words, time is of no essence during their work roles, suggesting their involvement and fascination with their work. Bakker et al (2008) describe an engaged employee as energetic, mentally resilient, dedicated to the work, and one who enjoys the challenges at work, which reflect the attributes displayed by the survey participants.

The table further depicts that the overall engagement and its subscales are negatively skewed with values ranging between -.41 and -.77, indicating that participants scored lower on these subscales. The negative skewness of the values reflects that the distribution of the scores is clustered more to the right-hand side. The kurtosis values ranged between .43 and 1.07, thereby falling outside the -1 and above 1, indicating a non- normal distribution range recommended for these coefficients (Tredoux & Durrheim, 2013). Thus the two dimensions of employee engagement have a positive kurtosis value which indicates that the distribution is peaked towards the centre.

Taken together, in the case of a large sample size, Tabachnick and Fidell (2007) recommend that other tests for normality be used to inspect the shape of the distribution, as the skewness and kurtosis values are too sensitive and tend to cause problems with the interpretation of skewness and kurtosis values. They indicate that skewness will not make a substantive difference in the analysis and that positive kurtosis can result in an underestimation of the variance when larger samples are used.

6.5   PEARSON PRODUCT MOMENT CORRELATION

The interrelationship between variables was computed using Pearson's product moment correlations. The overall aim was to determine the direction and strength of the relationship between the variables. It should be noted that larger sample sizes often pose challenges when interpreting the results, as many of the correlations might demonstrate statistically significant, but with low practical effect size (Tabachnick & Fidell, 2007). As a result, the statistically significant and practical effect size should be interpreted with caution. Therefore, the general rule of thumb to set the cut-off point for the statistical significance at 95% interval confidence level ($p \leq .05$) and the

practical effect size at r ≥ .30≥ .50 (medium to large effect) (Tredoux & Durrheim, 2013) was applicable in this study.

Table 6.11

Pearson product moment intercorrelation analysis between Employee engagement, Work-life balance and Big Five personality

	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Employee Engagement	1													
2	Work enthusiasm	.957**++	1												
3	Work occupied	.862**++	.679**++	1											
4	Work-life balance	**.175****	**.102****	**.266****	1										
5	PWHI	.336**+	.349**+	.243**	.510**++	1									
6	NWHI	-.028	-.147**	.189**	.667**++	-.130**	1								
7	PHWI	.287**	.301**+	.203**	.583**++	.544**	-.075*	1							
8	NHWI	-.216**	-.228**	-.150**	.445**+	-.009	.297**	-.006	1						
9	**Personality score**	**.269****	**.295****	**.167****	**-.045**	**.149****	**-.173****	**.084****	**-.079***	1					
10	Agreeableness	.215**	.250**	.108**	-.059	.135**	-.203**	.107**	-.072*	.855**++	1				
11	Extraversion	.210**	.206**	.173**	.032	.128**	-.050	.070*	-.045	.691**++	.404**+	1			
12	Conscientiousness	.215**	.244**	.120**	-.057	.119**	-.151**	.039	-.062*	.810**++	.608**++	.456**+	1		
13	Resourcefulness	.201**	.215**	.135**	.015	.097**	-.059	.054	-.018	.709**++	.436**+	.516**+	.472**+	1	
14	Emotional Stability	.227**	.251**	.138**	-.084**	.117**	-.193**	.064*	-.101**	.887**++	.851**++	.457**+	.641**+=	.511**+	1

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

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

+. Correlation is practically significant (medium effect): r > .30

++. Correlation is practically significant (large effect): r > .50

NB: Irrespective of their statistical significance, correlations of 0.10 and under were not considered meaningful (Cohen, 1992) and were therefore omitted.

Visual inspection in Table 6.11 above shows a highly significant and in the predicted directions between coefficient values for the three variables and their composite scales. The observed significant intercorrelations for employee engagement range between $r \geq .86 \leq .96$ (large practical effect), work-life balance $r \geq .45 \leq .67$ (medium to large practical effect) and personality traits score $r \geq .40 \leq .88$ (medium to large practical effect). These measurement models formed the basis of the structural model used when computing structural equation modelling in the later section.

The results indicate that overall employee engagement was positively and highly correlated with work enthusiasm (r = .96; large effect; p ≤ .05) and work occupied (r = .86; large effect; p ≤ .05).

Additionally, the findings from the correlation matrix show that overall employee engagement was significantly correlated with three dimensions of the work-life balance variable. Specifically, it was found that overall employee engagement was positively and significantly associated with overall work-life balance (r = .18; small effect; p ≤ .05), PWHI (r = .34; medium effect; p ≤ .05), and PHWI (r = .29; small effect; p ≤ .05). Notable from the analyses was that the relationship between employee engagement, PWHI and PHWI has the most substantial correlation, with a medium effect size and a high significance level of p<.001, suggesting that the more participants experience positive spillover between work and home, the higher their levels of engagement in their work activities become.

Interestingly, a negative and significant correlation was observed between overall employee engagement and NHWI (r = -.22, small effect; p ≤ .05), suggesting that the more participants experience negative home-work interaction, the less engagement they experience towards their work.

Furthermore, the results also showed that overall employee engagement was positively and significantly correlated with all dimensions of the personality traits, namely, overall personality score (r = .27; small effect; p ≤ .05), agreeableness (r = .22; small effect; p ≤ .05), extraversion (r = .21; small effect; p ≤ .05), conscientiousness (r = .22; small

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effect; p ≤ .05), resourcefulness (r = .20; small effect; p ≤ .05) and emotional stability (r = .23; small effect; p ≤ .05). The correlation between the overall employee engagement and all dimensions of big five personality traits has a relatively weak practical effect, suggesting that the more participants exhibit any of the personality traits, the more engaged they become in their work activities and responsibilities.

Furthermore, the results also showed that a significant positive correlation was identified between work enthusiasm with PWHI (r = .35; medium effect; p≤ .05), and PHWI (r = .30; medium effect; p≤ .05), while a significant negative correlation was observable for work enthusiasm and NWHI (r = -.15; small effect; p≤. 05), and NHWI (r = -.23; small effect; p≤ .05) variables. It should be noted that the relationship between work enthusiasm and both PWHI and PHWI has the most substantial correlation, with a medium effect size and a high significance level of p<.001.

In addition to this, a positive significant correlation was also identified between work enthusiasm and overall personality score (r = .29; small effect; p ≤ .05), agreeableness (r = .25; small effect; p ≤ .05), extraversion (r = .21; small effect; p ≤ .05), conscientiousness (r = .24; small effect; p ≤ .05), resourcefulness (r = .22 small effect; p ≤ .05) and emotional stability (r = .25; small effect; p ≤ .05) variables. Evidently, the magnitude of the association is relatively small.

A significant positive correlation was identified between work occupied and overall work-life balance (r = .27; small effect; p≤ .05), PWHI (r = .24; small effect; p≤ .05), NWHI (r = .19; small effect; p≤ .05) and PHWI (r = .20; small effect; p≤ .05) while negative significant association was observable between work-life balance and NHWI (r = -.15; small effect; p≤ .05) variables. It is very apparent that the magnitude of the association is relatively small.

A positive significant correlation was also observed between work occupied and overall personality score (r = .17; small effect; p ≤ .05), agreeableness (r = .11; small effect; p ≤ .05), extraversion (r = .17; small effect; p ≤ .05), conscientiousness (r = .12; small effect; p ≤ .05), resourcefulness (r = .14 small effect; p ≤ .05) and emotional stability (r

= .14; small effect; p ≤ .05) variables. Similar to the above findings, the magnitude of the association is also relatively small.

Furthermore, the results also showed a high convergence between overall work-life balance with PWHI (r = .51; large effect; p ≤ .05), NWHI (r = .67; large effect; p≤ .05), PHWI (r = .58; large effect; p≤ .05) and NHWI (r = .45; medium effect; p ≤ .05) variables. In this instance, the dimensions were highly correlated.

A positive significant correlation was identified between PWHI with PHWI (r = .54; large effect; p≤ .05) variables. In addition, a positive significant correlation was also identified between PWHI with the overall personality score (r = .15; small effect; p ≤ .05), agreeableness (r = .14; small effect; p ≤ .05), extraversion (r = .13; small effect; p ≤ .05), conscientiousness (r = .12; small effect; p ≤ .05) and emotional stability (r = .12; small effect; p ≤ .05) variables. Evidently, the magnitude of the association is relatively small.

A positive significant association was observed between NWHI with NHWI (r = .30; medium effect; p ≤ .05) variables. Additional a negative significant correlation was also identified between NWHI with overall personality score (r = -.17; small effect; p ≤ .05), agreeableness (r = -.20; small effect; p ≤ .05), conscientiousness (r = -.15; small effect; p ≤ .05) and emotional stability (r = -.19; small effect; p ≤ .05) variables. Thus, the analysis revealed a relatively small magnitude of the association.

A positive and substantial significant relationship was observed between the overall personality score with agreeableness (r = .86; large effect; p ≤ .05), extraversion (r = .69; large effect; p ≤ .05), conscientiousness (r = .81; large effect; p ≤ .05), resourcefulness (r = .71 large effect; p ≤ .05) and emotional stability (r = .89; large effect; p ≤ .05) variables. This suggests a convergence between the overall big five personality traits and its dimensions.

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Agreeableness was found to positively correlate significantly with extraversion (r = .40; medium effect; p ≤ .05), conscientiousness (r = .61; large effect; p ≤ .05), resourcefulness (r = .44 medium effect; p ≤ .05) and emotional stability (r = .85; large effect; p ≤ .05) variables.

Furthermore, the results showed that extraversion correlates significantly with conscientiousness (r = .46; medium effect; p ≤ .05), resourcefulness (r = .52 large effect; p ≤ .05) and emotional stability (r = .46; medium effect; p ≤ .05) variables. Additional positive significant correlation was also identified between conscientiousness and resourcefulness (r = .47 medium effect; p ≤ .05) and emotional stability (r = .64 large effect; p ≤ .05) variables. A significant positive correlation was also found between resourcefulness and emotional stability (r = .51 large effect; p ≤ .05) variables.

A closer look at these correlations reveals that the relationships between employee engagement variables (work enthusiasm and work occupied) and work-life balance (NWHI, PWHI, NHWI and PHWI) are stronger compared to the relationships between employee engagement variables and the big five personality variables (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability).

Taken all together, Table 6.12 below presents the summary of the variables that acted as significant correlates of employee engagement.

Table 6.12

Summary of the variables that acted as significant correlations of employee engagement

Significant correlation independent variables: Big five personality traits and Work-life balance variables	Dependent variable: Employee engagement	
	Work enthusiasm	Work occupied
Agreeableness	Positive correlation	Positive correlation
Extraversion	Positive correlation	Positive correlation
Conscientiousness	Positive correlation	Positive correlation
Resourcefulness	Positive correlation	Positive correlation
Emotional Stability	Positive correlation	Positive correlation
Negative work-home interaction	Negative correlation	Positive correlation
Positive work-home interaction	Positive correlation	Positive correlation
Negative home-work interaction	Negative correlation	Negative correlation
Positive home-work interaction	Positive correlation	Positive correlation

To sum up, these findings offered preliminary support for all the direct hypotheses. Although, the results depict a small to medium practical effect size, definite interrelationships between the big five personality traits, work-life balance and employee engagement do exist. These findings support the research hypothesis H1: There are statistically significant interrelationships between personality, work-life balance and employee engagement.

6.6   INFERENTIAL (MULTIVARIATE) STATISTICS

Inferential (multivariate) statistics comprise of techniques that assist the researcher to study samples and then make generalisations about the populations from which the samples were drawn (Hair et al., 2010). The following sections describe (1) the canonical correlation analysis, (2) standard multiple regression analysis, (3) structural equation modelling, (4) hierarchical moderated regression analysis and (5) tests for significant mean differences.

6.6.1 Canonical correlation analysis

As an aspect of multivariate statistics, canonical correlation analysis is a popular technique used to analyse the linear relationship between a pair of multidimensional random vector (Hair et al., 2010; Tabachnick & Fidell, 2007). The goal of canonical correlation analysis was to determine the relationship between two sets of variables (a composite of independent variables against dependent variable). It is an effective way to find two appropriate subscales in which Pearson's correlation coefficients are maximised between projected random variables.

In this particular study, a canonical correlation analysis was performed to assess the overall relationship between all the dimensions of the big five personality aspects (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction) as a composite set of independent latent variables and employee engagement (work enthusiasm and work occupied) as a set of dependent latent variables. Table 6.13 shows the result of canonical correlation analysis, where the Wilks's λ represents the amount of variance not explained by variable sets.

Table 6.13

Canonical Correlation Analysis – Work-life balance and Big five personality aspects (Independent Variables) to Employee engagement (dependent variable)

Measures of overall model fit for canonical correlation analysis				
Canonical function	Canonical Correlation (Rc)	Overall squared canonical correlations (Rc^2)	F value	Pr > F
1	.496	.246	31.48	<.0001***
2	.421	.177	28.31	<.0001***
Multivariate tests of significance				
Statistic		Value	F Value	Pr > F
Wilks' Lambda		.621	31.48	<.0001***
Pillai's Trace		.423	31.37	<.0001***
Hotelling-Lawley Trace		.541	31.60	<.0001***
Roy's Greatest Root		.326	38.14	<.0001***

Note: N = 1063, ***p≤.001; Canonical function 1 & 2 represent the canonical roots numbers. All the test (Wilks Lambda, Pillai's Trace, Hotelling-Lawley Trace, Roy's Greatest Root) for testing significance of canonical correlations are significant p <0.01

It is evident from Table 6.13 that the canonical correlation analysis output displayed two canonical functions with canonical coefficients of 50% and 42%. Both the two canonical functions were statistically significant (p = .000). The full model r^2 type effect size (yielded by 1-. λ: 1-.62) was .38 (moderate practical effect), indicating that the overall model explained a moderate portion of approximately 38% of the variance shared between the two sets of variables.

Overall canonical correlation shows that the relationship between the two canonical variate constructs is relatively moderate (Rc = .50). The first model of the canonical function accounted for 25% of the variance (squared canonical correlation) shared between sets variables, while the second model explained only 18% of the variances. In principle, only the results of the canonical function 1 were considered to further scrutinise the nature of the overall statistical relationship between the big five personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction) as a composite set of independent latent variables and employee

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engagement (work enthusiasm and work occupied) as a composite set of dependent latent variables since the canonical function 1 is more superior and explained reasonable amount of variable sets as compared to canonical function 2 (Table 6.14).

The results in Table 6.14 show the redundancy index, which is the percentage of the overall variance of variables explained by the opposite canonical variate. This suggests that, although the big five personality traits and work-life balance canonical construct variables accounted for 25% (Rc^2 = .25; small practical effect) of the proportion of variance of employee engagement canonical construct variables, the big five personality traits and work-life balance construct variables were able to predict only 7% (small effect) of the variance in the individual employee engagement canonical construct variables.

The results further show that the structure coefficients, from which the standardised canonical coefficient, the communality coefficient, and the squared structured coefficient for function 1 can be interpreted, are greater than 3. Therefore, the structure coefficient canonical function 1 indicates that work enthusiasm (r_s = .96) and work occupied (r_s = .26) were interpretable contributors of the employee engagement variable. It appears that work enthusiasm (Rc = .96) exhibited the highest correlation with the canonical of the composites of the big five personality traits and work-life balance canonical construct variables and thus was the strongest predictor of employee engagement canonical construct variate as compared to work occupied.

On the other hand, the dimensions of the big five personality traits and work-life balance contributed significantly in explaining the two variance of employee engagement, namely work enthusiasm (96%) and work occupied (26%). Positive work-home interaction (47%), positive home-work interaction (35%), agreeableness (29%), conscientiousness (26%) and emotional stability (26%) exhibited the highest correlation with the canonical employee engagement construct variate. Positive work-home interaction (69%), positive home-work interaction (59%), agreeableness (54%), conscientiousness (51%) and emotional stability (51%) were the strongest predictors of work-life balance and personality traits respectively. Work enthusiasm (Rc = .96)

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exhibited the highest correlation with the canonical personality traits and work-life balance and was strongest predictor of employee engagement.

Table 6.14

Standardised Canonical Correlation Analysis Results for the First Canonical Function Variates

Variables/variates	Canonical coefficients (weights)	Structure coefficient (Canonical Loading) (Rc)	Canonical Cross-Loading (Rc)	Squared multiple correlations (Rc²)
Set of dependent variable (employee engagement)				
Work enthusiasm	1.17	.98	.96	.24
Work occupied	-.28	.51	.26	.06
Percentage of variance explained by their own canonical variate .61				
Set of independent variables (work-life balance and big five personality traits)				
NWHI	-.20	-.46	.21	.05
PWHI	.42	.69	.47	.12
NHWI	-.36	-.45	.20	.05
PHWI	.31	.59	.35	.09
Agreeableness	.18	.54	.29	.07
Extraversion	.04	.39	.15	.04
Conscientiousness	.18	.51	.26	.06
Resourcefulness	.17	.43	.19	.05
Emotional Stability	-.01	.51	.26	.07
Percentage of variance explained by their own canonical variate .27+++				
Overall model fit measures (function1):				
Overall Rc² = .25++ (percentage of overall variance in the big five and work-life balance canonical construct variables accounted for by employee engagement canonical construct variables).				
Redundancy index = .07				
F(p) = 31.48 (p < .0001); df = (18; 2104)				
Wilk's lambda (λ) = .62				
r² type effect size: 1 -. λ =. 38 (moderate effect)				
Overall proportion: .60				
Redundancy index (overall variance of the employee engagement explained or predicted by the work-life balance and big five personality variables): proportion = .15++				

Note. + Rc² ≤ .12 (small practical effect size); ++ Rc² ≥ .13≤ .25 (moderate practical effect size); +++ Rc²≥ .26 (large practical effect size); Note: N = 1 063.

To summarise, the results clearly show that the higher levels of positive work-home interaction, positive home-work interaction, agreeableness, conscientiousness and emotional stability are associated with work enthusiasm as a dimension of employee engagement. These findings support the research hypothesis H2: Big five personality traits and work-life balance as a composite set of independent latent variables are significantly and positively related to employee engagement as a composite set of dependent latent variables.

6.6.2   Standard multiple linear regression analysis

The standard multiple linear regression analysis was performed to test the hypothesis Ha3: To empirically assess whether or not the big five personality aspects (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability), and work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction) variables positively and significantly act as predictors of employee engagement (work enthusiasm and work occupied). The F-test was used to test whether there was significant regression between the independent (the big five personality traits and work-life balance) and dependent (employee engagement) variables.

The collinearity diagnostics was examined prior to conducting regression analysis in order to ascertain that zero-order correlations were below the level of multicollinearity concern ($r \geq .90$), that the variance inflation factors (VIF) did not exceed 10, that the condition index was well below 15 and that the tolerance values were close to 1.0 (Hair et al., 2010). The level of significant value was set at 95% confidence interval level ($Fp \leq .05$) in order to limit the probability of committing Type I error. The risk of Type I error within a study relates to the likelihood of finding a statistically significant result when one should not have done so (Hair et al., 2010). In this particular study, the value of the adjusted R^2 was used to interpret the results. In addition, the R^2 values of ≤ 12 (small practical effect) and $\geq 0.13 \leq 0.25$ (moderate to larger practical effect) was considered in the interpretation of the results (Cohen, 1992).

Table 6.15 summarises only the significant results of the multiple regression analyses that were conducted to assess whether the personality traits (agreeableness; extraversion; conscientiousness; resourcefulness and emotional stability) and work-life balance (negative work-home interaction; positive work-home interaction; negative home-work interaction and positive home-work interaction) acted as a significant predictor of two dimensions of employee engagement (work enthusiasm and work occupied). Visual inspection of the regression analyses shows that two regression models were performed, one model per each of the dimensions of employee engagement. The two models were statistically significant (F$p \leq .05$) and the models accounted for 25% ($R^2 = 25$ work enthusiasm) and 19% ($R^2 = 19$ work occupied) of the variance in the employee engagement. The results show a moderate practical effect.

Table 6.15

Multiple regression analysis: Big five personality and work-home interaction as predictor of employee engagement

Variables	Work enthusiasm				Work occupied			
	B	**SEB**	**β**	**t**	**B**	**SEB**	**β**	**t**
Agreeableness	.046	.034	.072	1.356	-.014	.037	-.020	-.368
Extraversion	.030	.025	.039	1.180	.068	.027	.085	2.491
Conscientiousness	.058	.026	.083*	2.223	.019	.028	.027*	.689
Resourcefulness	.057	.025	.078*	2.290	.023	.027	.030	.865
Emotional Stability	.014	.037	.020	-.251	.064	.039	.091*	1.623
NWHI	-.010	.040	-.007	-7.347	.459	.044	.313**	10.531
NHWI	-.389	.053	-.207**	6.982	-.446	.057	-.227**	7.813
PWHI	.294	.042	.226**	4.899	.271	.045	.200**	5.974
PHWI	.170	.035	.157**	.374	.117	.037	.104**	3.150
F (df; Mean square)	9; 37.782 = 18.782				(9; 28.334 = 16.422)			
R	.49				.42			
R^2	.24ᵃ				.20ᵃ			
ΔR²	.25++				.19++			

Notes: N = 1 063. **$p \leq 0.01$ *$p \leq 0.05$

+ $R^2 \leq 0.12$ (small practical effect size) ++ $R^2 \geq 0.13 \leq 0.25$ (moderate practical effect size) +++ $R^2 \geq 0.26$ (large practical effect size).

Unstandardised coefficients (B = beta, SEB = standard error), standardised coefficients (β = beta), *t* statistic is the coefficient divided by its standard error

a. Predictors: (constant), agreeableness, extraversion, conscientiousness, resourcefulness, emotional stability, negative work-home interaction, positive work-home interaction, negative home-work interaction, positive home-work interaction

As can be seen from Table 6.16, the multiple with the dimensions of the big five personality traits and work-life balance independent variables as predictors of the work enthusiasm (employee engagement) dependent variable produced a statistically significant regression model ($F_{(37.782)} = 18.782$; $p < .000$) accounting for approximately 25% ($\Delta R^2 = .25$; moderate practical effect). This model suggests that 25% of the total variance in the work enthusiasm (employee engagement) dependent variable is explained by two dimensions of the big five personality traits (conscientiousness and resourcefulness) as well as three dimensions of work-life balance (negative home-work interaction, positive work-home interaction and positive home-work interaction).

More essentially, when the standardised coefficients of the predictors were examined, conscientiousness ($\beta = .08$; $p = .000$) and resourcefulness ($\beta = .08$; $p = .000$), NHWI ($\beta = -.39$; $p = .000$), PWHI ($\beta = .29$; $p = .000$) and PHWI ($\beta = .17$; $p = .000$) contributed significantly in explaining the proportion of the variance in work enthusiasm, although the practical effect was relatively small to medium. This suggests that, in addition to these factors, there are also other factors which have an impact on employee engagement and its dimensions beyond the scope of the study. However, the values of the standardised beta coefficient suggest that work-life balance makes the strongest unique contribution to explaining work enthusiasm (employee engagement) when the variance explained by other variables is controlled.

The remaining three factors of personality traits, namely, agreeableness, extraversion and emotional stability, along with negative work-home interaction, did not significantly predict work enthusiasm as a dimension of employee engagement.

Further visual examination demonstrates that not all dimensions of the big five personality traits and work-life balance independent variables that acted as predictors of the work occupied (employee engagement) dependent variable produced a statistically significant regression model ($F_{(28.334)} = 16.422$; $p < .000$) accounting for approximately 19% ($\Delta R^2 = .19$; small practical effect). This model indicates that 19% of the total variance in the work occupied (employee engagement) dependent variable was explained by two dimensions of the big five personality aspects (conscientiousness

and emotional stability) and all four dimensions of work-life balance (negative work-home interaction, negative home-work interaction, positive work-home interaction and positive home-work interaction). However, the results show that negative home-work interaction was negative and statistically significantly acted as a predictor of the work occupied dependent variable.

More specifically, when the standardised coefficients of the predictors were examined, the regression model depicted conscientiousness ($\beta = .03$; $p = .01$), emotional stability ($\beta = .09$; $p = .000$), NWHI ($\beta = .31$; $p = .000$), NHWI ($\beta = -.23$; $p = .000$), PWHI ($\beta = .20$; $p = .000$) and PHWI ($\beta = .10$; $p = .000$) as contributing significantly in explaining the proportion of the total variance of the work occupied variable. However, the model also shows that NHWI ($\beta = -.23$; $p = .000$), negatively and significantly acted as predictor of work occupied. It is noted that all four dimensions of work-home interaction, namely NWHI, NHWI, PWHI and PHWI contributed the most in explaining the variance of the work occupied variable as compared to two dimensions of the big five personality aspects. The smaller values of coefficients of determination suggest that in addition to these factors, there are other factors beyond the scope of this study that have an influence on work occupied.

Surprisingly, agreeableness and extraversion are the only personality traits that were not found to act as significant predictors of employee engagement. This finding is unexpected as both personality traits have the tendency to social interact with other people and engaged employees are required to work with other employees as a team.

In addition, with respect to the collinearity statistics, the tolerance values were acceptable (close to 1.0) and the variance inflation factor (VIF) values were lower than the cut-off of > 4.0 as proposed by Hair et al (2010). In essence, the values presented suggest that the multicollinearity was ruled out in interpreting the results. Therefore, these results clearly provide support for research hypothesis H3: Personality traits and work-life balance positively and significantly act as predictors of employee engagement.

To sum up, the results show that not all dimensions of personality traits (agreeableness and extraversion) and work-life balance (negative work-home interaction) could be found to negatively and/or positively predict the dimensions of employee engagement. Table 6.16 presents a summary of the variables that acted as significant predictors of employee engagement.

Table 6.16

Summary of the variables that acted as significant predictors of employee engagement

Significant predictor (independent) Personality and Work-life balance variables	Criterion dependent variable: Employee engagement	
	Work enthusiasm	Work occupied
Agreeableness	NP	NP
Extraversion	NP	NP
Conscientiousness	Positive prediction	Positive prediction
Resourcefulness	Positive prediction	NP
Emotional Stability	NP	Positive prediction
Negative work-home interaction	NP	Positive prediction
Positive work-home interaction	Positive prediction	Positive prediction
Negative home-work interaction	Negative prediction	Negative prediction
Positive home-work interaction	Positive prediction	Positive prediction

Note: NP = not prediction

The results above provided partial supportive evidence for the research hypothesis Ha3: The big five personality traits (conscientiousness, resourcefulness and emotional stability) and work-life balance (negative work-home interaction, positive work-home interaction and positive home-work interaction) positively and significantly predict employee engagement.

6.6.3 Structural equation modelling

On the basis of the overall statistical relationship between the big five personality traits, work-life balance and employee engagement, this section seeks to determine whether there is a good fit between the elements of the empirically manifested structural model and the theoretically hypothesised model. That is, the section aims to test the full structural model that includes both the measurement model and the structural model that proposes the hypothesised relationships among the variables the proposed model was testing using structural equation modelling (SEM) analysis.

The SEM is constructed with the aim of understanding the deeper insight regarding whether the effects of the dimensions of the big five personality and work-life balance can be mediated by dimensions of employee engagement. Therefore, this section intends to examine whether or not agreeableness, extraversion, conscientiousness, resourcefulness, emotional stability, positive work-home interaction, negative work-home interaction, positive home-work interaction and negative home-work interaction mediated the effects of work enthusiasm and work occupied.

Specifically, the structural equation modelling is computed to determine a good model fit for the proposed theoretical model. In the measurement model, confirmatory factor analysis was applied to test the factorial validity of the measuring instruments. According to Hair et al (2010), "a confirmatory factor analysis is constructed within the SEM to determine the reliability and construct validity of the proposed theoretical model" (p, 708).

The following fit indices (goodness-of-fit tests) were considered to determine whether the pattern of variances and covariances in the data was consistent with the theoretical (paths) model identified in the empirical study (Tabachnick & Fidell, 2007). The indices include, the Chi-square (CMIN), the degree of freedom (*df)*, the relevant level of significance (*p*), the Goodness-of-fit index (GFI), the Adjusted Goodness-of-fit index (AGFI), the Incremental fit index (IFI), the Tucker-Lewis Index (TLI), a Comparative fit index (CFI) and the Roots Mean Squared Error of Approximation (RMSEA). For all

the indices, an acceptable fit at a value exceeding .90 was recommended. This excludes the RMSEA where a value of .08 and below was considered acceptable (Hair et al., 2010).

Table 6.17 below summarises the fit statistics of the various models tested. It was evident that four measurement models were tested. Model 1 consisted of all 11 latent variables, namely agreeableness, extraversion; conscientiousness; resourcefulness, emotional stability, negative work-home interaction; positive work-home interaction; negative home-work interaction and positive home-work interaction and employee engagement, measured by work enthusiasm and work occupied. The model did not provide a good fit with the data: CMIN 673.74 (42 df); CMIN/df = 16.042; p = .000; GFI = .89, AGFI = .83, IFI = .81; TLI =.81; CFI = .85 and RMSEA =.11. With the exception of the GFI and chi-square, all the other goodness of fit indices were not at the level recommended by Hair et al (2010), hence the model needed modification.

Table 6.17

Structural Equation Modelling Results: Fit Statistics

Model	CMIN	DF	CMIN/df	P	GFI	AGFI	IFI	TLI	CFI	RMSEA
1	673.744	42	16.042	.000	.89	.83	.81	.81	.85	.11
2	385.274	36	10.702	.000	.94	.88	.922	.88	.92	.09
3	310.911	28	11.104	.000	.94	.89	.935	.89	.93	.09
4	80.160	21	3.817	.000	.98	.96	.98	.97	.98	.05

CMIN = chi-square; *d*f = degrees of freedom; *p* = statistical significance; GFI = goodness of fit index, AGFI = adjusted goodness of fit index; IFI = incremental fit index; TLI = Tucker-Lewis index; CFI = comparative fit index and RMSEA = root mean square error of approximation;

Model 2 included all the latent variables, namely agreeableness, extraversion; conscientiousness; resourcefulness, emotional stability, negative work-home interaction positive work-home interaction; negative home-work interaction and positive home-work interaction, work enthusiasm and work occupied. All the latent variables were allowed to correlate with each other, but the model fit did not improve: CMIN 385.27 (36 df); CMIN/df = 10.702; p = .000; GFI = .94, AGFI = .88, IFI = .92; TLI =.88; CFI = .92 and RMSEA =.09.

An alternative model wás tested (model 3) on the basis of the theory and changes to the measurement and structural models were made on the basis of SEM modification indices. Firstly, agreeablesness and extraversion were linked with with resourcesfulness. Secondly, extraversion and conscientiousness were linked with resourcesfulness. Thirdly, negative home-work interaction was removed in order to improve the GOF indicators. It was evident that slight improvement was noticeable. The results revealed a clear significant chi-square and degrees of freedom (x^2/df) GFI = .94, IFI = .93 and CFI = .93, indicating an acceptable fit. Nonetheless the TLI was below the suggested cut-off (.90) and the RMSEA was above .08, which indicates a problem with fit.

Owing to the fact that the values obtained for TLI (.89) and RMSEA (.09) were somewhat below and above the appropriate acceptable fit of the model respectively, some modifications were effected in order to improve the model. Hair et al (2010) propose that a value of .05 or less for RMSEA is considered acceptable; however, a value of up to .08 indicates a reasonable fit of the model. Subsequently, Hair et al (2010) suggest a value of .90 or above as indicative of a moderate good model fit for TLI, while a value that equals .95 reflects a good model fit. Based on the above indices, it seems apparent that the structural model did not fit the empirical data.

Figure 6.17 portrays the final computations (model 4), where two variables from the work-life balance were deleted in order to improve model fit. For instance, negative home-work interaction was not significant and as a result, was removed for further analysis. In addition, when computing bootstrap, negative work-home interaction was

found to explain only 2% of the variance, and was also removed from further analysis. The path diagram and parameter estimates are illustrated in figure 6.8. Based on the modifications, the fit statistics for the measurement model was acceptable: CMIN 80.16 (21 df); CMIN/df = 3.817; p = .000; GFI = .98, AGFI = .96, IFI = .98; TLI =.97; CFI = .98 and RMSEA =.05. The recommended normed chi-square or relative chi-square (CMIN/df) often ranges from less than 2 (Tabachnick & Fidell, 2007). In addition, any value less than 5 (Wheaton et al., 1977) can be considered as acceptable for model fit.

The results suggest that the fit of the model accounted for approximately 26% the variance of the employee engagement, with 43% of the variance in work-life balance and 21% of the variance in big five personality traits resulting in more empirical support for the model fit. This implies that the big five personality traits and work-life balance definitely have a significant influence on the level of employee engagement.

Similar to the results observed in the canonical correlation analysis, agreeableness (.92), conscientiousness (.70), emotional stability (.92), positive work-home interaction (.81) and positive home-work interaction (.67) were the strongest predictors of the big five personality traits and work-life balance constructs respectively, with agreeableness and emotional stability explaining the variance in the employee engagement construct. The results of the best fit model are in line with the observation made in terms of the canonical correlation analyses with regard to the best predictors of each construct. In view of results, employee engagement was positively related to three of the dimensions of personality traits (agreeableness, conscientiousness and emotional stability) and two of the four dimensions of work-life balance (positive work-home interaction and positive home-work interaction).

The path diagram for the research model is illustrated below in Figure 6.8.
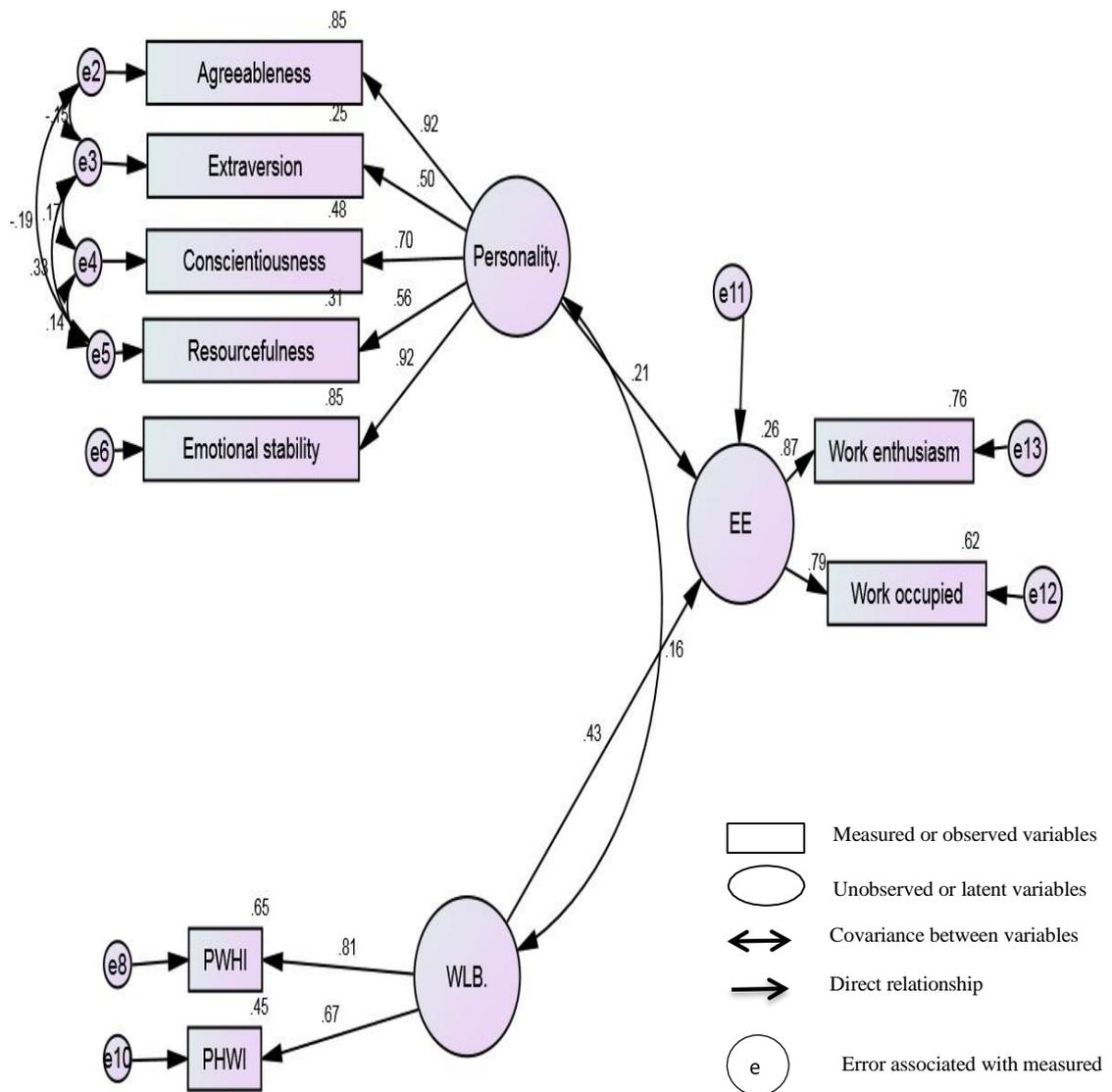
Note: All standardised path coefficients estimated *p≤.05.

Figure 6.8. Revised Standardised path coefficient between personality traits, work-life balance and employee engagement

Based on the results presented in Figure 6.8, it is clear that the measurement model indices were within the specified range associated with goodness of fit and that the estimated model reproduces the sample covariance matrix reasonably well. These results provide partial support for the research hypothesis H4: The theoretical

personality traits, work-life balance and engagement provide partial support for the good model fit with the empirically manifested structure model.

6.6.4   Hierarchical moderated regression analysis

On the grounds of the canonical correlation results and the best fit structural equation model presented in Table 6.14 and Figure 6.8 respectively, hierarchical moderated regression analyses was performed to test research hypothesis H5: The biographical variables (gender, generational cohorts, functional job level and selected economic sectors) acted as moderators in the relationship between the independent personality traits and work-life balance variables as a composite of agreeableness, extraversion, conscientiousness, resourcefulness, emotional stability, positive work-home interaction and positive home-work interaction and the dependent employee engagement variables *inter alia*, work enthusiasm and work occupied.

In order to test these hypotheses, a three step hierarchical moderated regression analyses were followed, whereby the control group such as gender, generational cohort, job level and economic sector were entered separately as step 1 and the independent variables were entered in the subsequent step. The F-test was used mostly to determine which of the added set of variables could lead to a significant increase in the R^2 (Tredoux & Durrheim, 2013). The f^2 gives the proportion of systematic variance accounted for by the interaction relative to the unexplained variance in the outcome variable. To avoid problems relating to higher multicollinearity in the interaction term, Aiken and West (1991) recommend that the variables be centered and an interaction term between independent and dependent variables be created for all computed analyses.

6.6.4.1   *Gender as a moderator*

No significant main and interaction (moderation) effects were observed on gender, suggesting that gender did not act as a significant moderating variable for the relationship between agreeableness, extraversion, conscientiousness, resourcefulness, emotional stability, positive work-home interaction, positive home-work interaction as

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composites of independent variables and work enthusiasm and work occupied as dimensions of employee engagement variable.

6.6.4.2 *Generational cohort as a moderator*

Generational cohorts are generally formed by shared historical experiences among a group of people of a similar age. In this particular study, three categories of generational cohorts were assessed namely, participants who were born between 1946 and 1964, those born between 1965 and 1977 and those born between 1978 and 2000. In terms of the hierarchical regression moderator analysis, a series of tests were conducted on the three levels of generational cohorts that acted as the moderator equations with regard to the dimensions of the big five personality traits and work-life balance as the independent variables and two dimensions of the employee engagement construct as the dependent variable.

In the section to follow, the generational cohort (1978 and 2000) were coded as 1 while the other generational cohorts (participants born between 1946 and 1964, those born between 1965 and 1977) were coded as 0 (dummy variable). The purpose was to assess the effect of generation cohort at level 1 (code 1 = participants born between 1978 and 2000) relative the other cohorts coded as 0 (dummy variable). Similar procedure was applied when computing the hierarchical moderation with more than three moderator variables. Therefore, the moderator variable, which is generational cohort, was entered in step1 and the independent variable were entered in step 2, the interaction between the independent variable, and the moderator variable were entered in step 3.

a) *Generational cohort as a moderator*

Table 6.18 summarises the findings of the final step of the results of the moderated regression analyses, with generational cohort as the moderator on the relationship between conscientiousness, emotional stability and work occupied (employee engagement). No significant interaction (moderating) effects were observed in terms of generational cohorts and the relationship among the variables agreeableness,

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extraversion, resourcefulness, positive work-home interaction and positive home-work interaction, suggesting that participants from the two generational cohorts as coded in this analysis could have related to the constructs in the same way.

Table 6.18

Results of the Moderated Regression Analysis: The effects of conscientiousness, emotional stability and generational cohort on work occupied

Predictor variables	Work occupied β	f²
Generational cohort	-.14***	
Conscientiousness	.15***	
Generational cohort x Conscientiousness	-.08**	.03
Model Statistics		
ΔR²	.036	
F	14.25***	
ΔF	6.58*	
Predictor variables	Work occupied β	f²
Generational cohort	-.14***	
Emotional stability	.17***	
Generational cohort x Emotional stability	-.07*	.04
Model Statistics		
ΔR²	.041	
F	16.14***	
ΔF	5.19*	

Note: N = 1 063. The results represent the final step in the regression model. Standardised regression beta weights (β) significant at***$p \leq$ .001, **$p \leq$ .01, *$p \leq$ .05. *f²* = Cohen's practical effect size.

As reflected in Table 6.18, in terms of the main effects, conscientiousness acted as a significant predictor of work occupied (β = .15; p ≤ .001), while generational cohort acted as a significant negative predictor of work occupied (β = -.14; p ≤ .001). In terms of the interaction effects, those born between 1978 and 2000 significantly moderated the relationship between conscientiousness and work occupied (ΔR² = .04; ΔF = 6.58; $p \leq$ .05). As reflected, the interaction effects are relatively small in practical effect size.

Visual inspection also shows that in terms of the main effects, emotional stability acted as a significant predictor of work occupied (β = .17; p ≤ .001), while generational cohort acted as a significant negative predictor of work occupied (β = -.14; p ≤ .001). In terms of the interaction effects, generational cohorts significantly moderated the relationship

between emotional stability and work occupied ($\Delta R^2 = .04$; $\Delta F = 5.19$; $p \leq .05$). As reflected, the interaction effects are relatively small in practical effect size.

The nature of the interactions was further explored with simple slope tests and by graphing the interaction using moderator levels coded as 1 and 0 (Cohen et al., 2013). Figures 6.9 and 6.10 (Appendix B) indicate that the moderator effect of generational cohort on the relationship between the personality traits conscientiousness, emotional stability and work occupied respectively, were stronger for participants in other generational cohorts as compared to those born between 1978 and 2000. In other words, the relationship between personality trait conscientiousness and emotional stability and work occupied was stronger for participants in other generational cohorts (0 = other generational cohorts) than in those participants born between 1978 and 2000. Participants in other generational cohorts who scored high on both conscientiousness and emotional stability had also significantly scored high on work occupied as compared to those participants who were born between 1978 and 2000.

b)   *Generational cohort (participants born between 1965 and 1977 and other) as a moderator*

In the section to follow, the generational cohort (1965 and 1977) were coded as 1 while the other generational cohorts (participants born between 1946 and 1964, those born between 1978 and 2000) were coded as 0 (dummy variable). The purpose was to assess the effect of generation cohort at level 1 (code 1 = participants born between 1965 and 1977) relative the other cohorts coded as 0 (dummy variable). Therefore, the moderator variable, which is generational cohort, was entered in step 1, the independent variable were entered in step 2, the interaction between the independent variable, and the moderator variable were entered in step 3.

Table 6.19 summarises the findings of the moderated regression analyses with generational cohort as the moderator of the relationship between conscientiousness and work occupied. No significant interaction (moderating) effects were identified among the variables agreeableness, extraversion, resourcefulness, emotional stability, positive

work-home interaction, positive home-work interaction, work enthusiasm and work occupied respectively.

Table 6.19

Results of the Moderated Regression Analysis: The effects of personality conscientiousness and generational cohort on work occupied

Predictor variables	Work occupied β	f²
Generational cohort	-.02	
Conscientiousness	.19***	
Generational cohort x Conscientiousness	-.10*	.01
Model Statistics		
ΔR²	.02	
F	6.94***	
ΔF	5.10*	

N=1 063. Standardised regression beta weights (β) significant at***$p \leq$ .001, **$p \leq$ .01, *$p \leq$ .05. f² = Cohen's practical effect size. All statistics are from the final step.

As reflected in Table 6.19, in terms of the main effects, conscientiousness acted as a significant predictor of work occupied (β = .19; p ≤ .001), while no significant effect was observable between generational cohort and conscientiousness. In terms of the interaction effects, generational cohort significantly moderated the relationship between conscientiousness and work occupied (ΔR² = .02; ΔF = 5.19; *p* ≤ .05). As reflected, the interaction effects are relatively small in practical effect size.

The nature of the interactions was further explored with simple slope tests and by graphing the interaction using moderator levels coded as 1 and 0 (Cohen et al., 2013). Figure 6.11 (Appendix B) indicates that the relationship between conscientiousness and work occupied was stronger for participants in other generational cohorts as compared to those participants born between 1965 and 1977.

c)   *Generational cohort (participants born between 1946 and 1964 and other) as a moderator*

The section to follow presents the generational cohort (1946 and 1964) that was coded as 1 while the other generational cohorts (participants born between 1978 and 2000, those born between 1965 and 1977) were coded as 0 (dummy variable). The purpose was to assess the effect of generation cohort at level 1 (code 1 = participants born between 1946 and 1964) relative the other cohorts coded as 0 (dummy variable). Similar procedure was applied when computing the hierarchical moderation with more than three moderator variables. Therefore, the moderator variable, which is generational cohort, was entered in step 1, the independent variable were entered in step 2, the interaction between the independent variable, and the moderator variable were entered in step 3.

Table 6.20 depicts the findings of the moderated regression analyses with generational cohort as moderators of the relationship among the variables conscientiousness, resourcefulness, emotional stability, work enthusiasm and work occupied. No significant relationship was detected in terms of generational cohort with regard to agreeableness, extraversion, positive work-home interaction, positive home-work interaction, work enthusiasm and work occupied respectively.

Table 6.20

Results of the Moderated Regression Analyses: The effects of conscientiousness, resourcefulness, emotional stability and generational cohort on work enthusiasm and work occupied

Predictor variables	Work enthusiasm β	f²	Work occupied β	f²
Generational cohort	.11***		.11***	
Conscientiousness	.17***		.03	
Generational cohort x Conscientiousness	.11*	.08	.15***	.04
Model Statistics				
ΔR²	.08		.04	
F	30.79***		15.32***	
ΔF	9.32*		15.87***	
Predictor variables	Work enthusiasm β	f²	Work occupied β	f²
Generational cohort	.13***		.12***	
Resourcefulness	.17***		.09*	
Generational cohort x Resourcefulness	.08*	.06	.08*	.03
Model Statistics				
ΔR²	.06		.04	
F	25.04***		13.40***	
ΔF	4.39*		4.27*	
Predictor variables	Work enthusiasm β	f²	Work occupied β	f²
Generational cohort			.12***	
Emotional stability			.06	
Generational cohort x Emotional stability			.10 *	.04
Model Statistics				
ΔR²			.04	
F			14.15***	
ΔF			6.70*	

N=1 063. Standardised regression beta weights (β) significant at***$p \leq$ .001, **p ≤ .01, *p ≤ .05. f² = Cohen's practical effect size. All statistics are from final step.

As reflected in Table 6.20, in terms of the main effects, conscientiousness acted as a significant predictor of both work enthusiasm (β = .17; p $\leq$ .001) and work occupied (β = .03; p $\leq$ .001), while generational cohort acted as a significant predictor of work enthusiasm (β = .11; p $\leq$ .001) and work occupied (β = .11; p $\leq$ .001). In terms of the interaction effects, generational cohort significantly moderated the relationship between conscientiousness and work enthusiasm (ΔR^2 = .08; ΔF = 9.32; $p \leq$ .05) and work occupied (ΔR^2 = .04; ΔF = 15.87; $p \leq$ .001).

The result suggests that, for participants who were born between 1946 and 1964, the relationship between conscientiousness and work enthusiasm as well as between conscientiousness and work occupied were stronger than for the other cohorts. Participants born between 1946 and 1964 scored higher in conscientiousness also achieved high score than other genetaional cohort on work enthusiasm and work occupied. Overall, interaction effects were relatively small in practical effect size.

In addition, an inspection of the table shows that in terms of the main effects, resourcefulness acted as a significant predictor of both work enthusiasm (β = .17; p $\leq$ .001) and work occupied (β = .09; p $\leq$ .05), while generational cohort acted as a significant predictor of work enthusiasm (β = .13; p $\leq$ .001) and work occupied (β = .12; p $\leq$ .001). In terms of the interaction effects, generational cohort significantly moderated the relationship between resourcefulness and work enthusiasm (ΔR^2 = .06; ΔF = 4.39; $p \leq$ .05) and work occupied (ΔR^2 = .03; ΔF = 4.27; $p \leq$ .05).

The result suggests that, for participants who were born between 1946 and 1964, the relationship between resourcefulness and work enthusiasm as well as between resourcefulness and work occupied were stronger than for the other cohorts. That is, participants who were born between 1946 and 1964 who scored high on resourcefulness also achieved high score than other generational cohort on work enthusiasm and work occupied. Overall, interaction effects were relatively small in practical effect size.

In terms of the main effects, emotional stability acted as a significant predictor of work occupied (ß = .07; p ≤ .05), while generational cohort acted as a significant predictor of work occupied (β = .12; p ≤ .001). In terms of the interaction effect, generational cohort moderated the relationship between emotional stability and work occupied (ΔR^2 = .04; ΔF = 6.70; p ≤ .05). The result suggests that, for participants who were born between 1946 and 1964, the relationship between emotional stability and work occupied were stronger than for the other cohorts. Overall, interaction effects were relatively small in practical effect size. No significant interactioin effects relating to the variables agreeableness, extraversion, positive work-home interaction, positive home-work interaction work enthusiasm and work occupied respectively were observed in terms of participants born between 1946 and 1964 and other cohorts.

Figures 6.12, 6.13, 6.14, 6.15 and 6.16 (Appendix B) indicate the nature of the interactions using simple slope tests and by graphing the interaction using values of the moderator levels coded as 1 and 0 (Cohen et al., 2013). As shown in the Figures to follow, the relationship between participants with higher levels of conscientiousness, resourcefulness, emotional stability, work enthusiasm and work occupied respectively was stronger among participants who were born between 1946 and 1964 than those other generational cohorts. This suggests that participants who were born between 1946 and 1964 who scored high on conscientiousness, resourcefulness and emotional stability also achieved a higher score than other generational cohorts on work enthusiasm and work occupied.

Taken together, the results provide evidence that the relationship between conscientiousness, resourcefulness and emotional stability and work enthusiasm as well as work occupied increased positively and significantly among survey participants born between 1946 and 1964 relative to other generational cohorts (those born between 1965 and 1977 as well as those born between 1978 and 2000). This simply implies that the relationship between personality trait conscientiousness, resourcefulness, emotional stability, work enthusiasm, and work occupied was stronger for participants born between 1946 and 1964 than other generational cohorts.

6.6.4.4   Functional job level as a moderator

The variable functional job level consists of aspects such as top management, executive management, managers and supervisors'/ employees categories. In terms of the hierarchical regression moderator analysis, a series of tests were performed on the four categories of functional job level (top management, executive management, managers and supervisors) with the variables agreeableness, extraversion, conscientiousness, resourcefulness, emotional stability, positive work-home interaction, positive home-work interaction, work enthusiasm and work occupied respectively.

The procedure was to create two dummy variables where functional job level were coded as 1 while the other functional job levels (executive management, managers and supervisors/employees) were coded as 0. The purpose was to assess the effect of functional job level (participants in top magement code = 1) against the other functional job levels coded as 0. In this instance, the moderator variable functional job level coded as 1 was entered in step 1 and the independent variable were entered in step 2, the interaction between the independent variable and the moderator were entered in step 3.

a)   Functional job level as a moderator

Table 6.21 summarises the findings of the moderated regression analysis with functional job level as the moderator variable on the relationship between positive work-home interaction and work enthusiasm. No significant interaction was detected between agreeableness, extraversion, conscientiousness, resourcefulness, emotional stability, positive work-home interaction, work enthusiasm and work occupied respectively.

Table 6.21

Results of the Moderated Regression Analysis: The effects of positive work-home interaction and functional job level on work enthusiasm

Predictor variables	Work enthusiasm β	f^2
Functional job level	.13***	
Positive work-home interaction	39***	
Functional job level x Positive work-home interaction	-.08*	.16
Model Statistics		
ΔR^2	.14	
F	58.44***	
ΔF	4.41*	

N=1 063. Standardised regression beta weights (β) significant at***$p \le$ .001, **$p \le$ .01, *$p \le$ .05. *f^2* = Cohen's practical effect size. All statistics are from final step.

As indicated in Table 6.21, in terms of the main effects, positive work-home interaction acted as a significant predictor of work enthusiasm (β = .39; p ≤ .001), while functional job level acted as a significant predictor of work enthusiasm (β = .13; p ≤ .001). In terms of the interaction effects, functional job level significantly moderated the relationship between positive work-home interaction and work enthusiasm (ΔR^2 = .14; ΔF = 4.41; *p* ≤ .05). As reflected, the interaction effects are relatively smaller in practical effect size. No significant interaction (moderating) effects were observed among the variables agreeableness, extraversion, conscientiousness, resourcefulness, emotional stability, positive home-work interaction and work occupied.

The nature of the interactions is further explored through simple slope tests and graphic interaction using moderator levels coded as 1 and 0 (Cohen et al., 2013). Figure 6.17 (Appendix B) shows that the relationship between positive work-home interaction and work enthusiasm were stronger for participants in top management relative to those in other functional job levels. Participants in top management level who scored higher on positive work-home interaction and work enthusiasm had also significantly scored higher than those in other functional job level on work enthusiasm.

In sum, the results provided evidence that the relationship between work-life balance positive work-home interaction and work enthusiasm increased positively and significantly for survey participants within top management level than the other participants in other functional job levels.

b)   *Functional job level (executive management and other) level as a moderator*

Two dummy variables were created where functional job level were coded as 1 while the other functional job levels (top management, managers and supervisors/employees) were coded as 0. The purpose was to assess the effect of functional job level (executive magement code = 1) against the other functional job levels coded as 0. In this instance, the moderator variable functional job level coded as 1 was entered in step 1 and the independent variable were entered in step 2, the interaction between the independent variable and the moderator were entered in step 3.

Table 6.22 summarises the findings of the moderated regression analysis with functional job level as the moderator of the relationship between conscientiousness and work enthusiasm. No significant interaction (moderating) effects were identified for the variables agreeableness, extraversion, resourcefulness, emotional stability, positive work-home interaction, positive home-work interaction and work occupied.

Table 6.22

Results of the Moderated Regression Analysis: The effects of personality conscientiousness and functional job level on work enthusiasm

Predictor variables	Work enthusiasm β	f^2
Functional job level	.06*	
Conscientiousness	.21***	
Functional job level x Conscientiousness	.07*	.08
Model Statistics		
ΔR²	.07	
F	25.44***	
ΔF	4.07	

N=1 063. Standardised regression beta weights (β) significant at***p≤ .001, *p ≤ .05. *f²* = Cohen's practical effect size. All statistics are from final step.

As indicated in Table 6.22, in terms of the main effects, conscientiousness acted as a significant predictor of work enthusiasm (β = .21; p $\leq$ .001), while functional job level acted as a significant predictor of work enthusiasm (β = .06; p $\leq$ .05). In terms of the interaction effects, functional job level significantly moderated the relationship between conscientiousness and work enthusiasm (ΔR^2 = .07; ΔF = 25.44; $p \leq$ .001). As reflected, the interaction effects are relatively smaller in practical effect size. As shown in Figure 6.18 (Appendix B) the relationship between conscientiousness and work enthusiasm was stronger for participants in the executive management level in comparison to those in other functional job levels.

The nature of the interactions was further explored with simple slope tests and by graphing interaction using moderator levels coded as 1 and 0 (Cohen et al., 2013). Figure 6.18 (Appendix B) presents the moderator effect of functional job level on the relationship between conscientiousness and work enthusiasm. These suggests that participants in the executive management scored high on conscientiousness and work enthusiasm relative to participants in other functional job levels.

c)   Functional job level (manager and other) as a moderator

Two dummy variables were created where functional job level were coded as 1 while the other functional job levels (top management, executive management and supervisors/employees) were coded as 0. The purpose was to assess the effect of functional job level (managers code = 1) against the other functional job levels coded as 0. In this instance, the moderator variable functional job level coded as 1 was entered in step 1 and the independent variable were entered in step 2, the interaction between the independent variable and the moderator were entered in step 3.

Table 6.23 reports on the final step of the result of the moderated regression analyses with functional job level as the moderator of the relationship among the variables conscientiousness, emotional stability, positive home-work interaction, work enthusiasm and work occupied respectively. No significant interaction (moderating) effects were detected in terms of managers' level and the relationship between the

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variables agreeableness, extraversion, resourcefulness positive work-home interaction and the two dimensions of employee engagement variable.

Table 6.23

Results of the Moderated Regression Analyses: The effects of conscientiousness, positive home-work interaction, emotional stability and functional job level on work enthusiasm and work occupied

Predictor variables	Work enthusiasm β	f^2	Work occupied β	f^2
Functional job level	-.16***		-.16***	
Conscientiousness	.28***		.17***	
Functional job level x Conscientiousness	-.09**	.09	-.11*	.04
Model Statistics				
ΔR²	.08		.04	
F	33.50***		16.70***	
ΔF	6.63**		8.92*	
Predictor variables	**Work enthusiasm β**	f^2	**Work occupied β**	f^2
Functional job level			-.16***	
Emotional stability			.16***	
Functional job level x Emotional stability			.08*	.05
Model Statistics				
ΔR²			.05	
F			4.25*	
ΔF			16.85***	
Predictor variables	**Work enthusiasm β**	f^2	**Work occupied β**	f^2
Functional job level	-.19***			
Positive home-work interaction	.27***			
Functional job level x Positive home-work interaction	.07*			
Model Statistics				
ΔR²	.13			
F	52.13***			
ΔF	3.95*			

N=1 063. Standardised regression *N*=1 063. Standardised regression beta weights (β) significant at***$p \leq$.001, **$p \leq$ .01, *$p \leq$ .05. f² = Cohen's practical effect size. All statistics are from final step.

As indicated in Table 6.24, in terms of the main effects, conscientiousness acted as a significant predictor of both work enthusiasm (β = .28; p $\leq$ .001) and work occupied (β = .17; p $\leq$ .001), while functional job level acted as significant negative predictor of both work enthusiasm (β = -.16; p $\leq$ .001) and work occupied (β = -.16; p $\leq$ .001). In terms of the interaction effects, functional job level significantly moderated the relationship between conscientiousness and both work enthusiasm (ΔR^2 = .08; ΔF = 33.50; $p \leq$ .001) and work occupied (ΔR^2 = .04; ΔF = 16.70; $p \leq$ .001). As reflected, the interaction effects are relatively smaller in practical effect size.

The analysis further shows that in terms of the main effects, emotional stability acted as a significant predictor of work occupied (β = .16; p $\leq$ .001), while functional job level acted as significant and negative predictor with work occupied (β = -.16; p $\leq$ .001). In terms of the interaction effects, functional job level significantly moderated the relationship between emotional stability and work occupied (ΔR^2 = .05; ΔF = 16.85; $p \leq$ .001). As reflected, the interaction effects are relatively smaller in practical effect size.

The analysis further shows that in terms of the main effects, positive home-work interaction acted as a significant predictor of work enthusiasm (β = .27; p $\leq$ .001), while functional job level acted as significant negative predictor of work enthusiasm (β = -.19; p $\leq$ .001). In terms of the interaction effects, functional job level significantly moderated the relationship between positive home-work interaction and work enthusiasm (ΔR^2 = .13; ΔF = 3.95; $p \leq$ .05). As reflected, the interaction effects are relatively smaller in practical effect size. No significant interaction (moderating) effects were observed among the variables agreeableness, extraversion, positive work-home interaction, work enthusiasm and work occupied respectively.

The nature of the interactions is further explored with simple slope tests and by graphing the interaction using moderator levels coded as 1 and (Cohen et al., 2013). Figures 6.19, 6.20, 6.21, and 6.22 (Appendix B) illustrate the moderator effect of functional job level (managers) on the relationship among the variables conscientiousness, emotional stability, positive home-work interaction, work enthusiasm and work occupied respectively.

d)   Functional job level (supervisors and employees and others) as a moderator

No significant main and interaction effects were observed among the variables agreeableness, extraversion, conscientiousness, resourcefulness, emotional stability, positive work-home interaction, positive home-work interaction, work enthusiasm and work occupied respectively, suggesting that participants in the supervisor/employee and those in other functional job levels were identical in their responses.

Taken together, the results provide evidence that the relationship between positive work-home interaction, conscientiousness and work enthusiasm increased positively and significantly for survey participants at top management and executive management levels respectively, relative to participants at managers' level.

6.6.4.5   Economic sectors as a moderator

The Standard Industrial Classification of all Economic Activities in South Africa consists of 11 economic sectors. For the purpose of this study and analysis specifically, a selected number of economic selectors were chosen. These include manufacturing, wholesale and retail trades, transport, storage and communication, financial, intermediation, insurance, real estate and business services and community, social and personal services sectors.

In terms of the hierarchical regression moderator analysis, a series of tests were conducted for each economic sector with all dimensions of the big five personality traits and work-life balance variables and two dimensions of the employee engagement variable. Two dummy variables were created where economic sector was coded as 1 while other sectors (wholesale and retail trades, transport, storage and communication, financial, intermediation, insurance, real estate, and business services and community, social and personal services sectors) were coded as 0. The purpose was to assess the effect of economic sectors coded as 1 against the other sectors (wholesale and retail trades, transport, storage and communication, financial, intermediation, insurance, real estate and business services and community, social and personal services sectors) coded

as 0. In this case, the moderator variable economic sector coded as 1 (participants in the manufacturing sectors) was entered in step 1 and the independent variable were entered in step 2, the interaction between the independent variable and the moderator were entered in step 3.

a)   Economic sector (participants in manufacturing sector) as a moderator

No significant main and interaction (moderation) effects were observed among the variables agreeableness, extraversion, conscientiousness, resourcefulness, emotional stability, positive work-home interaction, positive home-work interaction, work enthusiasm and work occupied, suggesting that participants in the manufacturing sector and those in other sectors were identical in their responses.

b)   Economic sector (wholesale and retail trades sector and other) as a moderator

No significant main and interaction (moderation) effects were observed among the variables agreeableness, extraversion, conscientiousness, resourcefulness, emotional stability, positive work-home interaction, positive home-work interaction, work enthusiasm and work occupied, suggesting that participants in the wholesale and retail trades sector those in other sectors were identical in their responses.

c)   Economic sector (transport, storage and communication sector and other) as a moderator

Table 6.24 summarises the results of the moderated regression analysis with economic sector as moderator of the relationship between, conscientiousness and work occupied. No significant interaction (moderating) effect was observed among the variables agreeableness, extraversion, resourcefulness, emotional stability, positive work-home interaction, positive home-work interaction and work enthusiasm.

Table 6.24

Results of the Moderated Regression Analysis: The effects of economic sector on conscientiousness and work occupied

Predictor variables	Work occupied β	f²
Economic sector	.02	
Conscientiousness	.15***	
Economic sector x Conscientiousness	-.07*	.02
Model Statistics		
ΔR²	.02	
F	6.89***	
ΔF	4.63*	

N=1 063. Standardised regression beta weights (β) significant at***p≤ .001, *p ≤ .05. f^2 = Cohen's practical effect size. All statistics are from final step.

As indicated in Table 6.24, in terms of the main effects, conscientiousness acted as a significant predictor of work occupied (β = .15; p ≤ .001), while no significant effect was observable between economic sector and conscientiousness. However, in terms of the interaction effects, economic sector acted as significant moderators of the relationship between conscientiousness and work occupied (ΔR² = .02; ΔF = 4.63; p ≤ .05). The results show that the moderating effect of economic sector is small in practical terms to effect any significant change.

The interaction is further explored with simple slope tests and by graphing the interaction using moderator levels coded as 1 and 0 (Cohen et al., 2013). As shown in Figure 6.23 (Appendix B), the relationship between personality, conscientiousness and work occupied was stronger for participants in other economic sectors as compared to participants in the transport, storage and communication sectors.

The survey participants who scored high on conscientiousness with respect to economic sector also achieved lower scores than in other economic sectors. The results suggest that the relationship between personality, conscientiousness and work occupied declined significantly for survey participants within the transport, storage and communication than in other economic sectors.

d)   *Economic sector (financial, intermediation, insurance, real estate and business services sector and others) as a moderator*

Table 6.25 summarises the results of the moderated regression analysis with economic sector as a moderator of the relationship among the variables conscientiousness, emotional stability, work enthusiasm and work occupied respectively. No significant interaction (moderating) effects were observed in terms of economic sector *inter alia* financial, intermediation, insurance, real estate and business services and the relationship between agreeableness, extraversion and resourcefulness and the two dimensions of employee engagement variable. Overall, all the interaction effects were relatively small in practical effect size.

Table 6.25

Results of the Moderated Regression Analyses: The effects of conscientiousness, emotional stability and economic sector on work enthusiasm and work occupied

Predictor variables	Work enthusiasm β	f^2	Work occupied β	f^2
Economic sector	-.05		-.07*	
Conscientiousness	.18***		.06	
Economic sector x Conscientiousness	.13***	.08	.12***	.03
Model Statistics				
ΔR²	.07		.03	
F	27.86***		10.62***	
ΔF	13.33***		11.19***	
Predictor variables	Work enthusiasm β	f^2	Work occupied β	f^2
Economic sector	-.04			
Emotional stability	.21***			
Economic sector x Emotional stability	.08*	.07		
Model Statistics				
ΔR²	.07			
F	26.27***			
ΔF	4.99*			

N=1 063. Standardised regression beta weights (β) significant at***$p \leq$ .001, *$p \leq$ .05. f^2 = Cohen's practicale ffect size. All statistics are from final step.

As reflected in Table 6.25, in terms of the main effects, conscientiousness acted as a significant predictor of both work enthusiasm (β = .18; p $\leq$ .001) and work occupied (β = .06; p $\leq$ .001), while economic sector acted as a significant and negative predictor of work occupied (β = -.07; p $\leq$ .05). In terms of the interaction effects, economic sector *inter alia* financial, intermediation, insurance, real estate and business services significantly moderated the relationship between conscientiousness and work enthusiasm (ΔR^2 = .07; ΔF = 13.33; $p \leq$ .001) and work occupied (ΔR^2 = .03; ΔF = 11.19; $p \leq$ .001). As reflected, the interaction effects are relatively smaller in practical effect size.

Emotional stability had a significant positive main effect with work enthusiasm (β = .21; p $\leq$ .001), while economic sector did not significantly acted as a predictor of work enthusiasm. No significant interaction (moderating) effects were observed in terms of financial, intermediation, insurance, real estate and business services and the relationship between emotional stability and work enthusiasm.

Figures 6.24, 6.25 and 6.26 (Appendix B) presents the nature of the interactions using simple slope tests and by graphing the interaction using values of the moderator levels coded as 1 and 0 (Cohen et al., 2013). As shown in the Figures to follow, the relationship among the variables conscientiousness, emotional stability, work enthusiasm and work occupied respectively was stronger among participants in the financial, intermediation, insurance, real estate and business services than the other economic sectors. Participants who scored high on conscientiousness had achieved also significantly higher scores in work occupied in comparison to other economic sectors.

Taken together, the results provided evidence that the relationship between conscientiousness, emotional stability and work enthusiasm and work occupied increased positively and significantly among survey participants within the financial, intermediation, insurance, real estate and business services relative to other participants in the other economic sectors. The survey participants who scored high on conscientiousness and emotional stability with respect to economic sector *inter alia* financial, intermediation, insurance, real estate, and business services sector also

achieved significantly higher scores than the other economic sectors. Although, the moderating financial, intermediation, insurance, real estate, and business services is small in practical terms.

e)   *Economic sector (community, social and personal services and other) as a moderator*

No significant main and interaction effects were observed for community, social and personal services, suggesting that economic sectors did not act as a significant moderating variable for the relationship between the dimensions of the big five personality trait attributes and the dimensions of the work-life balance as independent variables and work enthusiasm and work occupied as dimensions of the employee engagement variable.

f)   Summary of the Significant Moderators

Table 6.26 summarises the biographical subgroups that acted as significant moderators on the relationship between big five personality traits, namely, conscientiousness, resourcefulness and emotional stability and work enthusiasm and work occupied, as well as dimensions of work-life balance, namely, positive work-home interaction, positive home-work interaction and work enthusiasm.

It appears from Table 6.26 that not all subgroups of the biographical variable acted as significant moderators with regard to independent and dependent variables. For example, gender groups did not significantly moderate the relationship between the independent and dependent variables. The three levels of generational cohort were found to moderate the relationship between conscientiousness, resourcefulness, emotional stability, and work enthusiasm and work occupied (employee engagement). The different categories of functional job levels were found to significantly moderate the retaionship between Positive WHI, conscientiousness, emotional stability and Positive HWI and the dimensions of employee engagement (work enthusiasm and work occupied). Again, the different economic sectors were found to moderate the

relationship between conscientiousness, resourcefulness, emotional stability and employee engagement (work enthusiasm and work occupied). Overall, the interaction effects are relatively smaller in practical effect size.

Table 6.26

Summary of the Significant Moderators of the Relationship between the best fit big five personality traits (conscientiousness, resourcefulness and emotional stability) and work-life balance (positive work-home interaction and positive home-work interaction) as well as work enthusiasm and work occupied

Big five personality traits and work-home interaction attributes	Moderator	Work enthusiasm and work occupied
Agreeableness		
Extraversion		
Conscientiousness		
Resourcefulness	Gender	No interaction
Emotional stability		
Positive WHI		
Positive HWI		
Conscientiousness	Generational cohort (born between 1978 and 2000)	Work occupied
Emotional stability		
Conscientiousness	Generational cohort (born between 1965 and 1977)	Work occupied
Conscientiousness		Work enthusiasm/work occupied
Resourcefulness	Generational cohort (born between 1946 and 1964)	
Emotional stability		Work occupied
Positive WHI	Functional job level (Top management)	Work enthusiasm
Conscientiousness	Functional job level (Executive management)	Work enthusiasm
Conscientiousness		Work enthusiasm/work occupied
	Functional job level (Managers)	
Emotional stability		Work occupied
Positive HWI		Work enthusiasm
	Functional job level Supervisors/employees	No interaction
Conscientiousness	Economic sector (Transport, storage & communication)	Work occupied

Conscientiousness	Economic sector (Financial, insurance, real estate & business services)	Work enthusiasm/work occupied
Emotional stability		Work enthusiasm
Conscientiousness		
Resourcefulness	Economic sector (Manufacturing)	
Emotional stability		
Positive WHI	Economic sector (Wholesale and retail trades)	No interaction
Positive HWI		
	Economic sector (Community, social and personal services)	

6.6.5   Test for significant mean differences

On the one hand, the Mann-Whitney U test was used to test for significant mean differences between the male and female participants to determine the mean ranks for both independent variables (work-life balance and big five personality traits) and the dependent variable (employee engagement). On the other hand, the Kruskal-Wallis H test was computed for significant mean differences between the various generational cohort, functional job levels and economic sectors, and a cut-off point of $p \leq .05$ (95% interval confidence level) was applied to all computations. As previously mentioned, the Kolmogorov-Smirnov test was computed in order to test normality, using the data against a normal distribution with mean and variance equal to the sample mean and variance. The Kolmogorov-Smirnov test is often used as a non-parametric method for comparing two groups. The test is a non-parametric and distribution free as it does not depend on the underlying distribution function.

In terms of the mean differences, the following practical effect size were applied Cohen (1992):

$f2 = (R2 - R12)$

$f2$ = practical effect size (.02 = small. .15 = moderate; .35 = large effect size).

6.6.5.1   Test for significant mean differences with regard to big five personality traits and work-life balance

a)   Gender

Table 6.27 below provides the results of the Mann-Whitney U Test which was conducted in order to determine whether agreeableness, extraversion, conscientiousness, resourcefulness, emotional stability, positive work-home interaction and positive home-work interaction demonstrate a difference in terms of gender groups. The results indicate that there was a significant difference between the ranks of males and females with regard to emotional stability (z = -2.236; *p* = .025). When looking at the mean rank, it was apparent that emotional stability for the males was higher (*M* = 548.30) than female counterpart (*M* = 504.87), suggesting that males were better able to control their emtions as compare to females. Overall, the practical effect size was very small.

Visual inspection further revealed that gender groups did not differ significantly with regard to positive work-home interaction, positive home-work interaction, agreeableness, extraversion, conscientiousness and resourcefulness. These suggest no significant differences could be detected between gender groups and positive work-home interaction, positive home-work interaction, agreeableness, extraversion, conscientiousness, and resourcefulness, implying similarities between gender groups.

Table 6.27

Results of Mann-Whitney U Test for Gender in terms of positive WHI and positive HWI

Moderator variables	Gender	N	Mean	Mann-Whitney U	Z	p	d
Positive WHI	Male = 0	664	535.89	355829.50	-.537	.591 n/s	-.0329
	Female = 1	399	525.53	209686.50			
Positive HWI	Male = 0	664	521.66	346379.50	-1.425	.154 n/s	-.0875
	Female = 1	399	549.21	219136.50			
Agreeableness	Male = 0	664	544.38	361471.50	-1.698	.089 n/s	-.1043
	Female = 1	399	511.39	204044.50			
Extraversion	Male = 0	664	535.22	355388.50	-.442	.658 n/s	-.0271
	Female = 1	399	526.64	210127.50			
Conscientiousness	Male = 0	664	545.95	362514.00	-1.916	.055 n/s	-.1177
	Female = 1	399	508.78	203002.00			
Resourcefulness	Male = 0	664	532.88	353835.50	-.121	.903 n/s	-.0074
	Female = 1	399	530.53	211680.50			
Emotional stability	Male = 0	664	548.30	364072.00	-2.236	.025*	-.1475
	Female = 1	399	504.87	201444.00			

Note: n/s = not significant

b)   *Generational cohorts*

Table 6.28 presents the results of Kruskal Wallis H Test conducted in order to determine whether agreeableness, extraversion, conscientiousness, resourcefulness, emotional stability, positive work-home interaction and positive home-work interaction of participants demonstrated a significant difference in terms of generational cohorts at a significant level of .05. The results indicate an $X^2 = 15.536, p = .001$ between positive work-home interaction and generational cohorts were observed. When reflecting on the mean rank, it was evident that positive work-home interaction among participants born between 1946 and 1964 was significantly higher ($M = 576.39$) than participants born between 1965 and 1977 ($M = 511.59$) and those born between 1978 and 2000 ($M = 479.52$), although, the practical effect size was very small.

No statistical significant differences could be found between the three levels of generational cohorts with regard to positive home-work interaction, agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability.

Table 6.28

Results of Kruskal-Wallis H Test for Generational cohort in terms of positive WHI and positive HWI

Moderating variables	Generational cohort	N	Mean Rank	Chi-Square (X_2)	df	p	*d*
PWHI	Born between 1978 and 2000	154	479.52				
	Born between 1965 and 1977	498	511.59	15.536	2	.001	.0293
	Born between 1946 and 1964	411	576.39				
PHWI	Born between 1978 and 2000	154	515.53				
	Born between 1965 and 1977	498	522.25	2.380	2	.304 n/s	.0045
	Born between 1946 and 1964	411	549.98				
Agreeableness	Born between 1978 and 2000	154	569.02				
	Born between 1965 and 1977	498	508.98	5.905[ab]	2	.052 n/s	.0111
	Born between 1946 and 1964	411	546.02				
Extraversion	Born between 1978 and 2000	154	517.69				
	Born between 1965 and 1977	498	527.05	1.029[ab]	2	.598 n/s	.0019
	Born between 1946 and 1964	411	543.36				
Conscientiousness	Born between 1978 and 2000	154	499.15				
	Born between 1965 and 1977	498	524.35	4.121[ab]	2	.127 n/s	.0078
	Born between 1946 and 1964	411	553.58				
Resourcefulness	Born between 1978 and 2000	154	539.09				
	Born between 1965 and 1977	498	526.60	.303[ab]	2	.859 n/s	.0006
	Born between 1946 and 1964	411	535.89				
Emotional stability	Born between 1978 and 2000	154	543.91				
	Born between 1965 and 1977	498	514.05	3.247[ab]	2	.197 n/s	.0061
	Born between 1946 and 1964	411	549.29				

Note: n/s = not significant
a. The test statistic is adjusted for ties.
b. Multiple comparison are not performed because overall test does not show significant differences across sample

c)   *Functional job level*

Table 6.29 below presents the results of the Kruskal-Wallis H Test that was conducted in order to determine whether positive work-home interaction, positive home-work interaction, agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability of the participants demonstrated a significant difference according to the functional job level at a significance level of .05.

Table 6.29

Results of Kruskal-Wallis H Test for job level in terms of positive WHI and positive HWI

Moderating variables	Job level	N	Mean Rank	Chi-Square (X2)	Df	p	*d*
PWHI	Top management	393	571.64	15.956[a]	3	.001	.0300
	Executive management	301	535.51				
	Manager	278	496.75				
	Supervisor/Employee	91	456.87				
PHWI	Top management	393	506.37	7.349[a,b]	3	.062 n/s	.0138
	Executive management	301	527.18				
	Manager	278	555.89				
	Supervisor/Employee	91	585.63				
Agreeableness	Top management	393	555.77	5.956[ab]	3	.114 n/s	.0112
	Executive management	301	518.74				
	Manager	278	503.92				
	Supervisor/ Employee	91	559.01				
Extraversion	Top management	393	567.73	18.692[a]	3	.001	.0138
	Executive management	301	552.82				
	Manager	278	474.33				
	Supervisor/ Employee	91	485.04				
Conscientiousness	Top management	393	578.22	17.451[a]	3	.001	.0329
	Executive management	301	526.43				
	Manager	278	480.55				
	Supervisor/ Employee	91	508.00				
Resourcefulness	Top management	393	550.77	16.167[a]	3	.001	.0304
	Executive management	301	569.62				
	Manager	278	483.79				
	Supervisor/ Employee	91	473.77				
Emotional stability	Top management	393	562.67	11.417[a]	3	.010	.0215
	Executive management	301	540.29				
	Manager	278	482.74				
	Supervisor/ Employee	91	522.60				

Note: n/s = not significant
a. The test statistic is adjusted for ties.
b. Multiple comparison are not performed because overall test does not show significant differences across sample

It was evident that a significant difference ($p = .001$) was statistically observable for positive work-home interaction at the significance level of .01. The result revealed an $X^2 = 15.956, p = .001$ between positive work-home interaction and functional job level. When reflecting on the mean rank, it was evident that positive work-home interaction among participants at the top management level obtained significantly higher scores ($M = 571.64$) than executive management ($M = 535.51$), managers ($M = 496.75$) and supervisors/employees ($M = 456.87$). Overall, the practical effect size was fairly small and no statistical significant differences could be found between participants' functional job levels with regard to positive home-work interaction and employee engagement.

Significant difference was statistically observed for extraversion, conscientiousness, resourcefulness and emotional stability at the significance level of .01. The result revealed an $X^2 = 18.692, p = .001$ between extraversion and functional job level; $X^2 = 17.451, p = .001$ between conscientiousness and functional job level; $X^2 = 16.167, p = .001$ between resourcefulness and functional job level and $X^2 = 11.417, p = .010$ between emotional stability and functional job level. According to these results, it was apparent that extraversion, conscientiousness, resourcefulness and emotional stability demonstrated a significant difference in terms of participants' functional job levels. When reflecting on the mean rank, it was found that participants in the top management level had the greatest attributes in terms of extraversion, conscientiousness and emotional stability. Participants with the greatest characteristics of resourcefulness were observable among executive management. Participants at the manager level scored the lowest in terms of extraversion, conscientiousness and emotional stability. Overall, the practical effect size was fairly small for for the functional job levels in terms of extraversion, conscientiousness, resourcefulness, and emotional stability.

No significant differences could be obtained in terms of participants' functional job levels with regard to positive home-work interaction and agreeableness. This implies that the participants were identical in as far as their perception of positive home-work interaction and agreeableness was concerned.

d)   *Economic sectors*

Table 6.30 below presents the result of the Kruskal-Wallis H Test that was conducted in order to determine whether positive work-home interaction, positive home-work interaction, agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability of the participants demonstrated a significant difference according to economic sectors at a significance level of .05.

Table 6.30

Results of Kruskal-Wallis H Test for selected economic sectors in terms of positive WHI and positive HWI

Moderating variables	Economic sector	N	Mean Rank	Chi-Square (X_2)	df	p	*d*
PWHI	Manufacturing	148	460.35	9.055a	8	.338 n/s	.0171
	Wholesale and Retail Trade	102	442.06				
	Transport, Storage and Communication	117	455.25				
	Financial Intermediation, Insurance, Real Estate and Business Services	276	436.03				
	Community, Social and Personal Services	145	476.13				
PHWI	Manufacturing	148	487.91	10.371a	8	.240 n/s	.0195
	Wholesale and Retail Trade	102	437.54				
	Transport, Storage and Communication	117	478.53				
	Financial Intermediation, Insurance, Real Estate and Business Services	276	433.37				
	Community, Social and Personal Services	145	457.98				
Agreeableness	Manufacturing	148	458.83	7.436a	8	.490 n/s	.0140
	Wholesale and Retail Trade	102	501.54				
	Transport, Storage and Communication	117	425.06				
	Financial Intermediation, Insurance, Real Estate and Business Services	276	443.00				

	Community, Social and Personal Services	145	469.56				
Extraversion	Manufacturing	148	460.96				
	Wholesale and Retail Trade	102	520.03				
	Transport, Storage and Communication	117	467.08	15.552a	8	.049	.0293
	Financial Intermediation, Insurance, Real Estate and Business Services	276	416.28				
	Community, Social and Personal Services	145	480.14				
Conscientiousness	Manufacturing	148	465.29				
	Wholesale and Retail Trade	102	493.04				
	Transport, Storage and Communication	117	417.68	4.945	8	.763 n/s	.0093
	Financial Intermediation, Insurance, Real Estate and Business Services	276	456.81				
	Community, Social and Personal Services	145	465.20				
Resourcefulness	Manufacturing	148	451.86				
	Wholesale and Retail Trade	102	525.06				
	Transport, Storage and Communication	117	438.71	19.836a	8	.011	.0374
	Financial Intermediation, Insurance, Real Estate and Business Services	276	432.07				
	Community, Social and Personal Services	145	495.67				
Emotional stability	Manufacturing	148	465.99				
	Wholesale and Retail Trade	102	514.50				
	Transport, Storage and Communication	117	425.26	9.390a	8	.310 n/s	.0177
	Financial Intermediation, Insurance, Real Estate and Business Services	276	444.69				
	Community, Social and Personal Services	145	464.68				

Note: n/s = not significant
a. The test statistic is adjusted for ties.

The results show that a significant difference ($p = .05$) was statistically identified between the level of extraversion and the various economic sectors. The results revealed

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an $X^2 = 15.552$, $p = .049$ between extraversion and economic sectors. When reflecting on the mean rank, it was evident that participants within the community, social and personal services sector scored the highest on the extraversion characteristics ($M = 480.14$) compared to other economic sectors, although, the practical effect size was fairly small.

In addition, the results further show that a significant difference ($p = .05$) was statistically identified between the level of resourcefulness with regard to the various economic sectors. The results revealed an $X^2 = 19.836$, $p = .011$ between resourcefulness and the various economic sectors. When reflecting on the mean rank, it was evident that participants within the wholesale and retail trade sector scored the highest on the resourcefulness characteristics ($M = 514.50$) relative to the other economic sectors, although, the practical effect size was fairly small.

No statistically significant differences were found between agreeableness, conscientiousness, and emotional stability with regard to the other economic sectors. The result revealed no significant differences among the various economic sectors with regard to positive work-home interaction and positive home-work interaction could be detected.

6.6.5.2 Test for significant mean differences with regard to employee engagement

a) Gender

Table 6.31 provides the result of the Mann-Whitney U Test that was conducted in order to determine whether work enthusiasm and work occupied demonstrates a difference in terms of gender.

Table 6.31

Results of Mann-Whitney U Test for gender in terms of work enthusiasm and work occupied

Moderator variables	Control variables	N	Mean rank	Mann-Whitney U	Z	p	d
Work enthusiasm	Male = 0	664	535.89	367698.50	-2.984[a]	.003	-.1838
	Female = 1	399	495.78	197817.50			
Work occupied	Male = 0	664	539.94	358521.00	-1.090	.276 n/s	-.0669
	Female = 1	399	518.78	206995.00			

Note: n/s = not significant
a. The test statistic is adjusted for ties.
b. Multiple comparison are not performed because overall test does not show significant differences across sample

The result of the Mann-Whitney U Test in Table 6.31 indicates that a significant difference ($p = .003$) is statistically observable for gender at the significance level of .01. The results indicate that a significant difference between the ranks of male and female with regard to work enthusiasm ($z = -2.984$; $p = .003$) was observable. When reflecting on the mean rank, it was evident that perception of engaged and involved work roles was higher among male participants as compared to female participants. It was evident that the mean rank of work enthusiasm among males was ($M = 553.76$) while females obtained ($M = 495.78$) as the least mean rank, and a faily small practical effect size was detected. No statistical significant differences could be found between gender groups with regard to work occupied.

b)   *Generational cohorts*

Table 6.32 provides the result of the Kruskal-Wallis H Test that was conducted in order to determine whether work enthusiasm and work occupied demonstrates a difference in terms of three levels of generational cohorts.

Table 6.32

Results of Kruskal-Wallis H Test for Generational cohort in terms of work enthusiasm and work occupied

Moderating variables	Generational cohort	N	Mean Rank	Chi-Square (X_2)	df	p	*d*
Work enthusiasm	Born between 1978 and 2000	154	428.54				
	Born between 1965 and 1977	498	517.06	32.817[a]	2	.001	.0618
	Born between 1946 and 1964	411	588.86				
Work occupied	Born between 1978 and 2000	154	425.95				
	Born between 1965 and 1977	498	526.94	27.780[a]	2	.001	.0523
	Born between 1946 and 1964	411	577.86				

a. The test statistic is adjusted for ties.

Significant differences were statistically observable for both work enthusiasm and work occupied at the significance level of .01. The result revealed an $X^2 = 32.817, p = .001$ between work enthusiasm and generational cohorts and $X^2 = 27.781, p = .001$ between work occupied and generational cohorts, although, the practical effect size was fairly small. When reflecting on the mean rank, it was evident that participants born between 1946 and 1964 obtained significantly higher scores ($M = 588.86$) in terms of work enthusiasm than participants born between 1965 and 1977 ($M = 517.06$) and those born between 1978 and 2000 ($M = 428.54$). In addition, the mean rank further showed that participants who were born between 1946 and 1964 ($M = 577.86$) obtained significantly higher scores than participants born between 1965 and 1977 ($M = 526.94$) and those born between 1978 and 2000 ($M = 425.95$) in terms of work occupied.

c)   *Functional job level*

Table 6.33 below presents the result of the Kruskal-Wallis H Test that was conducted in order to determine whether work enthusiasm and work occupied of survey participants demonstrated a significant difference according to the functional job level at a stipulated probability level.

Table 6.33

Results of Kruskal-Wallis Test for functional job level in terms of work enthusiasm and work occupied

Moderating variables	Functional job level	N	Mean Rank	Chi-Square (X2)	df	p	*d*
Work enthusiasm	Top management	393	597.81				
	Executive management	301	561.39	56.777^{a}	3	.001	.1069
	Manager	278	448.08				
	Supervisor/Employee	91	406.92				
Work occupied	Top management	393	599.27				
	Executive management	301	561.11	60.023^{a}	3	.001	.1130
	Manager	278	451.37				
	Supervisor/Employee	91	391.49				

a. The test statistic is adjusted for ties.

Significant differences were evident in the work enthusiasm and work occupied at a stipulated probability level with regard to participants' functional job level. The result revealed an $X^2 = 56.777$, $p = .001$ between work enthusiasm and functional job level and $X^2 = 60.023$, $p = .001$ between work occupied and functional job level, although, the practical effect size was fairly small. When reflecting on the mean rank, it was evident that work enthusiasm among participants in top management level was significantly higher ($M = 597.81$) than that of executive management ($M = 561.39$), managers ($M = 448.08$) and supervisors/employees ($M = 406.92$). A similar trend was also observable among participants in top management whose score was the highest ($M = 599.27$) among executive management ($M = 561.11$), managers ($M = 451.37$) and supervisors/employees ($M = 391.49$) in terms of work occupied. These findings suggest that participants in top management level were more engaged in their work roles as compared to participants in other functional job levels.

d)   *Economic sectors*

Table 6.34 below presents the result of the Kruskal-Wallis H Test that was conducted in order to determine whether work enthusiasm and work occupied of survey participants demonstrated a significant difference according to economic sectors at a significance level of .05.

Table 6.34

Results of Kruskal-Wallis H Test for selected economic sectors in terms of work enthusiasm and work occupied

Moderating variables	Economic sector	N	Mean Rank	Chi-Square (X_2)	df	p	*d*
Work enthusiasm	Manufacturing	148	470.32				
	Wholesale and retail trade	102	505.64				
	Transport, storage and communication	117	470.50				
	Financial intermediation, insurance, real estate and business services	276	442.57	14.519^a	8	.069 n/s	.0273
	Community, social and personal services	145	424.22				
Work occupied	Manufacturing	148	462.41				
	Wholesale and retail trade	102	508.37				
	Transport, storage and communication	117	475.38				
	Financial intermediation, insurance, real estate and business services	276	434.90	18.766^a	8	.016	.0353
	Community, social and personal services	145	437.85				

Note: n/s = not significant
a. The test statistic is adjusted for ties.
b. Multiple comparison are not performed because overall test does not show significant differences across sample

Statistically significant differences were evident between the various economic sectors in terms of work occupied at a stipulated probability level. The result revealed an $X^2 = 18.766, p = .016$ between work occupied and the various economic sectors, although, the practical effect size was fairly small. When reflecting on the mean rank, it was

interesting to observe that participants employed in the wholesale and retail trade scored significantly higher ($M = 508.37$) than participants in other economic sectors in terms of work occupied. In addition, no significant difference was observable between the various economic sectors with regard to work enthusiasm.

To sum up, the results provided partial supportive evidence for research hypothesis H6: There are significant mean differences between the subgroup of biographical variables (gender, generational cohorts, job level and economic sectors) that act as significant moderators between the independent big five personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance (positive work-home interaction and positive home-work interaction) and the dependent employee engagement factors (work enthusiasm and work occupied). However, it should be noted that not all dimensions of the big five personality traits and work-life balance were significantly different to the subgroup of biographical variables as anticipated.

6.7   INTERPRETATION AND DISCUSSION OF RESEARCH RESULTS

This section provides the interpretation and discussion of the empirical results in terms of the personal characteristics, construct validity, descriptive statistics, correlations, canonical correlations, multiple regressions, structural equation modelling, hierarchical moderated regression and the test for significant mean differences.

6.7.1   Personal characteristics of the participants

The study was conducted among 1 063 employees, where 664 were male (62.5%) and 399 (37.5%) were female. The generational cohort of participants varied from those born between 1965 and 1977 (46.8%) and those born between 1946 and1964 (38.7%) to the lowest group born between 1978 and 2000 (14.5%). The participants were mostly married (78.2%) and have children (82.7%). The participants hold diverse job functions with the majority of them at the top management level 393 (37%) and 301 (28.3%) at executive management level. Almost half of the participants had been employed for 11

years and longer and 26.4% had been employed for between 6 and 10 years. The economic sector that made out the majority of the sample was financial, intermediation, insurance, real estate and business service which accounted for 276 (26%) of the participants, followed by the manufacturing sector (13.7%) and community, social and personal service (13.7%), respectively. However, a total of 146 (13.7%) of the participants did not indicate the economic sector that employs them.

6.7.2   Construct validity of measuring instruments

The main impetus regarding the evaluation of the measuring instruments construct validity was tested through a series of exploratory factor analysis using a simple principal axis factor analysis and maximum likelihood. The eigenvalues and scree plots were studies to determine the number of factors underlying each construct. In addition, the principal axis factor analysis with varimax rotation was conducted to determine if factors were not related (Tabachnick & Fidell, 2007). The section that follows provides the discussion of the construct validity of the measuring instruments.

6.7.2.1   *Interpretation of exploratory factor analysis for the SWING*

Inspection of the exploratory factor analysis for the SWING underscores several notable findings. Firstly, an exploratory factor analysis was conducted on the basis of whether the data from the empirical study could achieve the four factor structure of the SWING consisting of negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction. Indeed, the empirical findings extracted the four factor structure of the SWING. These findings are in line with those of other previous similar studies on work-home interaction in a South African context (Pieterse & Mostert, 2005; Rost & Mostert, 2007). For example, Pieterse and Mostert (2005) were the first researchers to actually report on the construct validity of the four factor structure of the SWING among a sample of English and non-English speaking people in South Africa.

In similar vein, Rost and Mostert (2007) also report a four factor structure in the study conducted among a sample of earthmoving equipment industry workers. They point out that the four factor model explains the associations between the items significantly better in comparison to the alternative models. Their findings also support the construct equivalence of the structure of the SWING in relevant subgroups such as language, ethnicity, gender, education, marital status and parental status. This suggests that a similar four-factor structure of the SWING could be achieved across different subgroups.

Secondly, the findings established the independence of positive and negative statements suggesting that the components are unrelated to measure two distinctive constructs. This emphasises that positive and negative aspects of work-home interface should be treated separately and made to operate independently from each other. For instance, negative work-home interaction occurs if there is incompatibility between the work and home environment. By contrast, positive work-home interaction occurs when an individual is able to utilise the resources and skills acquired from the work environment to function better in the home environment. These findings are in support of Rantanen et al (2013) who also confirms that work-family conflict and work-family enrichment are two distinct constructs that can be experienced in multiple combinations of beneficial, harmful, active and passive which differ meaningfully from each other.

Thirdly, the findings identified two problematic items which were then removed from the scale. Similar observations were noticeable in the study by Pieterse and Mostert (2005) who also established three statements (items) that were problematic and as a result were removed. It was assumed that participants in South Africa find it difficult to understand and interpret statements that were problematic.

Taken all together, it can be safely concluded that the SWING is indeed a reliable and valid instrument to evaluate the interaction between work and home in a South African context, on the basis that the survey participants comprised of working adults within the various economic sectors in South Africa. This study, therefore, adds new insights to

the construct equivalence of the work-life balance across different occupations in South Africa.

6.7.2.2 *Interpretation of exploratory factor analysis for the Big five personality*

The maximum likelihood showed that the adapted big five personality model by Martins (2000) indeed consists of five factors, namely agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability. This clearly shows that the big five personality traits are applicable to an extraordinarily wide range of personality concepts. These five factors provide strong support for the theoretical construct validity of the big five personality traits. This finding is consistent with other previous studies that have examined the factorability of the big five personality traits (Von der Ohe, 2014). For example, Von der Ohe (2014) also found evidence for the corresponding five factor structures of the personality aspects using a combined database of approximately 12 000 respondents.

Moreover, van der Berg and Martins (2013), conducted an exploratory study to determine the implied theoretical relationship between the dimensions of organisational trust construct (combined managerial practices and personality aspects) and quality of work life construct. The results confirm a positive relationship between dimensions of managerial practices and five dimensions of personality traits. This study further emphasises the applicability of the five factor structures of personality traits across different groups and studies.

Using structural equation modelling to assess the content validity of the conceptual model Martins (2000) conducted a study among a sample ranging from executive management to operational employees in South African companies. The study reported the following: the goodness of fit index (GFI) was .95, the adjusted goodness of fit index (AGFI) was .91 and parsimony goodness of fit index (PGFI) was .50. In actual fact, Martins (2000) achieved the factorability of the five factors of personality traits from the empirical study which corresponds to the original versions of the personality traits. Subsequently, Von der Ohe et al (2004) also confirmed the acceptable construct

validity of the five factor structures of personality traits in a study conducted to examine the credibility of employee-employer trust in organisations.

6.7.2.3   *Interpretation of exploratory factor analysis for the Utrecht Work Engagement Scale*

The original version of the UWES was developed and considered as a three factor structure, however the first exploratory factor analysis extracted only a single factor structure for the UWES construct. All items were retained and a second order principal axis factor analysis was conducted. The results of the second-order extracted two factor structures of the UWES. It was evident that two factor structures of the UWES were better than the initial three factor structure as anticipated by its developers. These findings concur with other previous studies that had also reported the two factor structures of engagement in a South African context (Brand-Labuschagne et al., 2012).

Notable from the extent of literature were studies that failed to produce the three factor structures, but instead achieved two factor structures (Coetzer & Rothmann, 2007; González-Romá et al., 2006. Montgomery et al., 2003; Mostert et al., 2006; Rothmann & Jorgensen, 2007) and one factor structure for the engagement construct (Rothmann et al., 2011, Mostert, 2006). For example, Rothmann et al (2011) failed to obtain the three factor structure for the UWES in a study conducted among selected South African organisations, but instead reported only a single factor structure of the UWES. Similarly, using a principal component analysis with a direct oblimin rotation, Jackson, Rothmann and Van der Vijver (2006) and Mostert (2006) reported one factor structure consisting of loadings from vigour and dedication in a study conducted among educators in South Africa.

On the one hand, a large proportion of studies (Coetzer & Rothmann, 2007; Rothmann & Jorgensen, 2007), have used the findings reported by others (González-Romá et al., 2006. Mostert et al., 2006; Montgomery et al., 2003) that stipulate that core dimensions of engagement were vigour and dedication thereby and excluding the absorption dimension from of the UWES.

On the other hand, these findings are in disagreement with those other studies that confirmed the three factor structure of the original UWES as legitimate in a number of countries including South Africa (Barkhuizen & Rothmann, 2008; Storm & Rothmann, 2003). For example, Storm and Rothmann (2003), in a study conducted among a sample of South African Police Officers (SAPA), obtained sufficient reliability coefficient for the three dimensions of engagement thereby confirming the three factor structure of UWES in a South African context.

Based on the findings in this study, it is apparent that there are some inconsistencies within the extant of the literature in as far as the UWES was concerned in South Africa. Previous studies have reported mixed results of the factor structure of the engagement construct. However, the present study concurs with those studies that have reported two factor structures of engagement among South African samples. These findings support previous studies that the original UWES is not a compatible instrument to assess the level of engagement among a South African sample with its diverse cultures and languages. Therefore, on the basis of these findings, it seems that the theoretically-based three-factor structure of the original UWES is not supported by the survey participants in this study.

6.7.3   Descriptive statistics: interpretation of the results

Tables 6.9, 6.10, 6.11 are of relevance in this section.

6.7.3.1   The mean and standard deviation for the SWING

The higher mean score on positive WHI in comparison to positive HWI suggests that positive load reaction such as skills, positive mood and knowledge acquired from the working environment facilitates functioning/spillover to the home environment. These findings suggest that whatever skills and/or knowledge which originate from the work environment is transferred to the home environment. The possible explanation could be that the working environment not only interferes with the home/family life, but acts as positive consequential for the functioning at home environment. It appears that the

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survey participants use the skills, positive mood and acquired knowledge for the betterment of their home environment, implying a positive spillover between the work and home environment.

The theory underlying positive spillover or role enhancement rests on the assumption that energy or skills mobilised or developed in the work environment might also improve functioning in the home environment (Pieterse & Mostert, 2005). In addition, Baral and Bhargava (2011) demonstrated that individual employees' work life and family life can provide reciprocal enrichment because the resources and rewards, social capital and material resources inherent in one domain improve the performance in the other domain.

Furthermore, the role enhancement theory is based on the assumption that participation in both the work and home environment provides great opportunity and benefits for employees because the experiences, skills, flexibility acquired in one role could improve better functioning in another role. Greenhaus and Powell (2006) assert that work-family enrichment capture the mechanism of the bi-directional nature of the work-family interface which they define as "the extent to which experiences in one role improve the quality of life in the other role" (p. 72). Other related concepts such as work-family enrichment/facilitation and work-family positive spillover indicate experiences and resources in either the work or family/home domain that can be transferred (spillover) to the other domain (family/home or work) (Baral & Bhargava, 2011; Greenhaus & Powell, 2006).

Unexpectedly, the findings showing high scores of positive WHI as compared to positive HWI were prevalent among participants. These findings contradict other previous studies (Geurts et al., 2005; Marais et al., 2009) which reveal that positive HWI are more prevalent (due to sufficient recovery and support from home) than positive WHI. For instance, Marais et al (2009) found that occurrences of PHWI are more prevalent than positive WHI in that positive spillover most often originates from the family/home than from the work environment. This is also confirmed by Geurts et

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al (2005), who found that positive influence appeared to originate more often from the home than from the work environment.

Further inspection of the descriptive statistics demonstrates a high prevalence of negative WHI which is the negative load reaction built up at the work environment which hampers functioning at the home environment. The negative WHI implies that pressures arising from the work environment negatively influence the home environment due to limited time and depleted resources (Mostert & Oldfield, 2009; Rost & Mostert, 2007). Work-family conflict also known as negative work-home interaction is defined by Greenhaus and Beutell (1985) as "friction in which role pressures from the work and family domains are mutually incompatible" (p. 77).

In addition, the mean score of negative WHI in comparison to the score of negative HWI clearly demonstrates that the former is more prevalent and describes occurrences where work-related demands hinder the well-being and performance in the family domain (work-to-family conflict). Possible explanation of the finding could imply that survey participants are more focused on their work responsibility, thereby neglecting to invest more time and energy towards the family/home responsibility. Another possible explanation could be that the majority of the survey participants comprise of people at management level, which could make it easier for them to neglect home duties in favour of work responsibility. This study is consistent with other previous studies whose findings show that negative WHI are more prevalent than negative HWI, (Demerouti et al., 2012; Geurts et al., 2005; Rost & Mostert, 2007).

6.7.3.2   *The mean and standard deviation for the big five for the personality traits*

The overall big five personality traits have been scored positively by the survey participants. The highest mean scores observable were conscientiousness, extraversion and emotional stability, which reflect that most participants consider themselves as hardworking, dependable, thorough, sociable, friendly, active, calm and self-confident enough to produce meaningful work roles. The lowest scores obtained were

resourcefulness (imaginative, creative, broad-minded and intelligent) and agreeableness (cooperative and forgiving).

In general, the survey participants showed high levels of conscientiousness, reflecting the tendency to be purposeful, organised, goal-setting, persistent and able to control their impulses as compared to participants with lower conscientiousness who are considered lazy and irresponsible (Martins, 2002; Von der Ohe, 2014). Therefore, with a high score on extraversion, the participants could be described as sociable, a tendency for social interaction with others (Costa & McCrae, 2008; Fischer & Boer, 2014). Such people are generally optimistic about the future and less susceptible to distractions as compared to their introvert counterparts. High levels of emotional stability reflect people who are less emotionally reactive, calm and stable, as well as and free from negative feelings.

Although, agreeableness and resourcefulness were scored the lowest relative to the other three dimensions of personality traits, a high level of agreeableness provides the quality of interpersonal relationships among people. Accordingly, agreeable people are driven towards helping and cooperating with that significant other with whom they have personal contact (Bjørkelo et al., 2010; Parks-Leduc et al., 2014).

Conversely, participants who display a high level of resourcefulness have an imaginative, creative personality and are able to think symbols and abstracts. Cheung et al (2008) maintain that high a level of resourcefulness denotes people with a high level of tolerance for ambiguity and who are able to handle any situations because of their broad-minded personality.

Taken all together, the survey participants' personality characteristics which exibit a high level of conscientiousness, extraversion and emotional stability can be representative of an appropriate personality profile for the majority of the participants at management levels. These results are certainly consistent with what has been reported by previous studies (Akhtar et al., 2015; Inceoglu & Warr, 2012; Ongore, 2014) where

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high displays of extraversion, conscientiousness and emotional stability have been reported.

6.7.3.3   *The mean and standard deviation for employee engagement*

The overall, employee engagement and its dimensions (work enthusiasm and work occupied) were evaluated positively by the survey participants. This suggests a positive level of engagement in and a feeling of connectedness to their work role. In addition, engaged participants feel so engrossed that it becomes difficult to detach them from their work (Bakker et al., 2008). In other words, time is of no essence during their work roles, suggesting their involvement in and fascination with by their work. Bakker et al (2008) describes an engaged employee as energetic, mentally resilient, dedicated to the work, and one who enjoys the challenges at work.

According to Bakker and Demerouti (2008), an engaged employee is someone who possesses a high level of energetic, enthusiastic and positive concentration in their work role as well as tends to be very productive and helpful to others. This is in line with the COR theory (Hobfoll, 2011) which is based on the principle that individuals are continuously motivated to persevere, protect and expand their resources (objects, personal characteristics, conditions or energies) to reduce the levels of disengagement. The COR theory proposes that individuals invest resources in ways that will maximise their returns and in a manner that is most fitting with the specific resource invested, and in that way build resource caravans (Hobfoll, 2011).

6.7.4   Research aim 1: Interpretation of the correlation results

The research aim was to empirically assess the nature and strength of the statistical interrelationship between the big five personality traits, namely agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability and work-life balance measured by negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction as the independent

variables and employee engagement as the dependent variable among a selected sample of participants in the various economic sectors of South Africa.

Table 6.12 is of relevance to this section.

The Pearson correlation analysis revealed a highly significant relationship and in the predicted directions, amongst the composite scales of employee engagement, the big five personality traits and work-home interaction. Specifically, all personality traits were positively related to employee engagement with a small magnitude as compared to the work-home interaction which showed practical effect size ranging between small to moderate magnitudes. Additionally, a significantly negative correlation was observable between employee engagement and its dimensions and negative home-work interaction with a smaller magnitude. It is clear from the analysis that although a positive association was established between employee engagement and its dimensions with all five dimensions of personality traits and work-life balance and its dimensions, a relatively weak practical effect size was achieved. This implies that as the level of the personality characteristics and the work-life balance increases, so does the level of engagement. It suggests that a high level of personality traits and work-life balance does have a profound effect in terms of how participants perceive, interpret and react to their work roles.

The correlation coefficient values for overall engagement and its dimensions (work enthusiasm and work occupied) was positively significant and with a large magnitude ranging between r = .68 and .96 which indicate highly related concepts. This finding suggests that participants who scored high in both work enthusiasm and work occupied were energetic, resilient and enthusiastic about their work. They were willing to invest effort and persist in adverse situations, as well as experience significance or purpose in their work roles. Therefore, individuals who are energetic, vigorous and enthusiastic, inspired as well as happily absorbed in their work roles exhibit features that reflect a tendency to be engaged in their work roles (Schaufeli & Bakker, 2010).

The correlation between work enthusiasm and work occupied indicated that the higher the work enthusiasm, the greater the work occupied. This implies that participants who are enthusiastic, energetic and inspired are deeply engrossed in their work roles to such extent that times flies without them noticing thereby clearly demonstrating the traits of a highly engaged employee. Unlike the workaholics who are persistently thinking about work and reluctant to disengage themselves, an engaged employees are very much content and enjoy their work, they consider work to be fun and are intrinsically motivated to work harder and take on challenges at work. Engaged individuals have a sense of energy, enthusiasm and pride and positive connection to their work and tend to be very productive and helpful to others (Bakker & Demerouti, 2008).

Visual examinations of the correlation between engagement and work-home interaction show a positively and statistically significant relationship between variables. However, the magnitude of the relationship was relatively small, suggesting a somewhat pleasant relationship between participants' involvement and engagement in both the work and home environment. The finding indicates that participants are better able to harmoniously balance activities of both the home and work in an effective manner and also to utilise the acquired optimal skills for both domains; they feel more in charge of their situation (Rothmann & Baumann, 2014). Another possible explanation for the findings could be that participants are more focused on their work role responsibilities to such an extent that family matters suffer as a result of reduced time and energy invested in family domains.

It is apparent that participants' overall engagement yielded a moderate relationship (r = .34) with the positive work-home interaction variable. The nature of the relationship appeared to be statistically significant, suggesting that participants are able to amicably juggle both the work and home domains. This finding is consistent with findings from other previous studies examining the correlation between positive WHI and engagement (Marais et al., 2009; Rothmann & Baumann, 2014). It should be noted that work and family constitute the dominant life roles for most employed adults (Montgomery et al., 2003), therefore achieving a healthy balance may serve as vital to personal well-being. In other words, employees who experience positive interaction between work and

family are more satisfied, committed and engaged in their work roles (Montgomery et al., 2003; Mostert et al., 2006, Rothmann & Baumann, 2014).

With regard to a statistically significant and positive correlation between overall engagement and positive home-work interaction (r = .29), the results suggest a positive spillover between the work and home domains, where each domain (work or home) positively influences another. This is in line with the proposed instrumental and affective pathway by Carlson et al (2006) where synergy exists to provide a pleasant relationship between the work and home domains, given the availability of resources in either domain. Accordingly, participants exhibit the proclivity to benefit from positive resources, experiences and emotions generated which, in turn, enhance their self-beliefs and self-perspectives to complete tasks and accomplish goals, and ultimately contribute to their ability to successfully respond to multiple role demands.

According to Greenhaus and Powell (2006), work-family enrichment best captures the mechanism of the positive work-family interface. It is defined as 'the extent to which experiences in one role improve the quality of life in the other role' (p. 72). Both the concepts work-family enrichment and work-family positive spillover incorporate the notion that experiences or resources in one domain (work or family) can be transferred (spilled over) to the other domain (family or work) (Baral & Bhargava, 2011; Greenhaus & Powell, 2006). The theoretical implication is that highly engaged employees generally adapt easily to changing circumstances (between work and home) and are less likely to experience negative emotions. They do not concentrate on issues that would distract their attention.

The data indicates a statistically significant correlation between engagement and negative home-work interaction (r = -.22). The negative correlation between employee engagement and negative home-work interaction implies that participants who experience increased negative home interaction with work also experience an increase in the level of engagement in their work roles. This finding is in line with research conducted by Mostert (2006) who reported that negative home-work interaction is related to lower levels of engagement, due to the limited time and energy available to

perform other responsibilities. NWHI refers to a situation in which negative load reaction builds up at work, hampering a person's functioning at home (De Klerk & Mostert, 2010; Geurts et al., 2005).

Interestingly, the association between negative work-home and home-work interaction as well as between positive work-home and home-work interaction were highly correlated. This finding is consonant with that by Marais et al. (2009), which clearly confirm the intercorrelation of the four dimensions of the work-home interaction as proposed by Guerts et al (2005). The interactions between work and home and their effect on the individual were best presented in the Effort Recovery Theory (ERT) which postulates how work and private life may interact and the type of mechanisms which are likely to affect well-being (Geurts et al., 2003, Mostert et al., 2006). The ERT acknowledges the intertwine of work and home domains and emphasises that time, energy and effort are related to specific load reaction that builds up in the individual, where recovery is eminent in order to reverse and stabilise the negative load reactions. Van Aarde and Mostert (2008) extrapolate that high demands from either work or home do not have unfavourable consequences provided the individual accumulates sufficient recovery after work activities.

Surprisingly, the association between negative work-home interaction (also known as work-family conflict) and engagement was found not to be significant. It should be pointed that when employees perceive that their work involvement causes friction with their home/family time, they tend to psychologically detach from their work roles, thereby decreasing the level of their engagement in the work roles. This fact is also supported by Mostert (2006) who found that negative work-home interaction predicts low level of engagement. These attitudes and behaviours are often driven by the need to reduce the physiological and psychological strain that results from negative work-home interaction (Greenhaus & Beutell, 1985).

A clear positive and significant relationship was established between engagement and all the dimensions of the big five personality traits. It should be noted that the magnitude of practical effects also is confirmed to certain degree, by other previous studies that

have examined the relationship between engagement and personality traits. Therefore, the section to follow reflects on the discussions and possible suggestions as well as the theoretical implications of the associations among all the dimensions of personality traits and employee engagement.

The data indicates a statistically significant correlation between overall engagement and agreeableness (r = .22). This is in line with the findings reported by Mostert and Rothmann (2006) who found a correlation of r = .26 between engagement and agreeableness. In addition, Woods and Sofat (2013) conducted a study among a sample of UK working adults and reported that agreeableness (r = .24, p < .01) was positively correlated with engagement. Similar results are also observed in the study conducted by Akhtar et al (2015) based on a sample of adult workers in a wide range of sectors. The positive correlation between engagement and agreeableness suggests that participants have the proclivity to care, help and cooperate with others.

Moreover, agreeableness further influences the kind of behaviour towards other people in social encounters and plays a role in people's ability to become members of a group. Those who score high in agreeableness tend to be compliant, pleasant, cooperative, and to care strongly about the well-being of family and friends (Matzler et al., 2011; Parks-Leduc et al., 2014). Thus, agreeableness is described as encapsulating attributes that a person has, such as being good-natured, warm, tolerant and co-operative as opposed to being irritable, uncooperative, inflexible, unpleasant, and disagreeable (Laher, 2010).

The statistically significant and positive correlation observed between participants' overall engagement and extraversion (r = .21) variables clearly supports the findings of other previous studies with similar magnitudes of the correlations (Morgan & De Bruin, 2010; Ongore, 2014). This finding suggests that people who are highly assertive and sociable are most likely to work with great enthusiasm and inner drive to pursue others. Given the potential association between extravert and engagement, a stronger correlation was expected between the variables, considering the fact that extravert people are most likely to effectively motivate others, thereby relying on their high

energy and assertiveness as well as positive emotions to complete their work activities (Eswaran et al., 2011). They are less susceptible to situation that will distract them.

However, the findings contradict other previous studies that reported a strong correlation between extraversion and engagement (Langelaan et al., 2006), in the sense that extravert people are mostly energised by social interaction with others, which positively impacts on work enthusiasm and the connection with others. Additionally, extraverts also rely on the feedback and support received from others during their interaction.

A statistically significant and positive correlation was observable between overall engagement and conscientiousness (r = .22) variables. This is supported by other studies (Kim et al., 2009; Mostert & Rothmann, 2006) which obtained similar findings. In particular, the results imply that participants who are highly conscientious, hardworking and responsible are more likely to apply effort and attention to their work with the purpose of achieving their end results, which is to complete their work task. Such individuals are also diligent in their work activity and less likely to assign a portion of their work to other individuals in the workplace. According to John et al (2008) they mostly prefer to do a thorough job and persevere until the task is finished.

In essence, conscientious people are more likely to have high levels of achievement orientation and are less likely to be affected by external factors (Kim et al., 2009), thus investing more energy and time towards achieving a goal. A person who possesses the characteristics of conscientiousness is dependable, careful, responsible, plans fully, is hardworking, persevering and achievement-oriented (Martins, 2000), as opposed to being lazy, irresponsible, and impulsive (Laher, 2010, Martins, 2000). Such people are intrinsically motivated to pursue their goals, therefore achieving higher levels of performance (Luthan & Youssef, 2007).

A statistically significant association was observed between overall engagement and resourcefulness (r = .20). This finding is consonant with that by Woods and Sofat (2013) who reported positive and a statistically significant correlation between openness to

experience and engagement (r = .28, p < .01) with a relatively small practical size. The positive correlation between engagement and resourcefulness suggests that participants are willing to try new ways, are creative and adapt to changes easily. Such people are flexible, creative and intellectually oriented, they actively pursue novel and cognitively stimulating experiences. Cheung et al (2008) are of the opinion that open people have a higher level of tolerance for ambiguity and have the ability to adapt to any situation. They have the tendency to be imaginative and curious as opposed to being concrete-minded and narrow thinking (Laher, 2010). They are innovative and open-minded and thereby able to stimulate the level of employee engagement.

The data indicates a statistically significant correlation between overall engagement and emotional stability (r = .23) variables. Although the strength of the association was relatively weak, this finding supports those from previous studies that have also reported similar correlations between the variables (Langelaan et al., 2006). The positive correlation between employee engagement and emotional stability suggests that participants who are calm and self-confident are more likely to contribute significantly to their work and organisation as opposed to anxious and insecure individuals with low emotional stability (Vogt & Laher, 2009). Emotional stability is generally viewed as the absence of anxiety, depression, anger and insecurity (Martins, 2000), and reflects a person who is stable, even tempered, relaxed and calm. People with high levels of emotional stability are presumed to be able to complete their work tasks in a less stressful manner and they seem to enjoy and have fun during work roles.

In essence, the research findings suggest that agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability are all significantly and positively related to employee engagement. Similar results were found in other studies (Inceoglu & Warr, 2012; Kim et al., 2009; Woods & Sofat, 2013).

It should be noted that not all dimensions of personality traits were examined at the same time among the various previous studies with the exception of Kim et al (2009). This however, led to inconsistent findings and uncertainty regarding which of the five dimensions of personality best impact on the levels of engagement. Bakker et al (2008)

assert that previous studies have a tendency to only focus on specific personality traits such as extraversion, emotional stability and conscientiousness as the three psychological states that can be related to engagement. Hence, with the exception of a study by Kim et al (2009), comprehensive information on the wider range of the personality traits which exert an influence in engagement is still lacking,

In support of the above, Ongore (2014) also found that three of the big five personality traits (extraversion, neuroticism, conscientiousness) were statistically significant (p < .01) and positively correlate with three dimensions of psychological conditions (meaningfulness, availability and safety). Equally important, Inceoglu and Warr (2011) and Langelaan et al (2006), also found that low levels of neuroticism and high levels of extraversion predicted engagement. In a study conducted among a large sample of South African Police Officers (SAPS), Mostert and Rothmann (2006) also report similar findings, where three of the five personality traits, namely emotional stability, conscientiousness and extraversion exert significant unique effects on the two core dimensions of engagement, namely vigour and dedication.

The correlation between the dimensions of the big five personality traits and work-life balance were found to be relatively weak, but definite relationships do exist. This suggests that lower scores of agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability could possibly suggest that participants are less likely effectively and efficiently experience the occurrences of either conflict or facilitation of both work and home environments. In the same vein, Baltes, Zhdanova and Clark (2011) maintain that personality variables do influence the way people perceive, interpret and react to different situations. They go further to state that people with certain personality traits may find participating in two roles stressful and ultimately experience negative work-home interaction.

Taken all together, clear evidence emerged that support some correlation between personality traits and levels of employee engagement, even though the relationship was not very strong. One common understanding in the dimensions of engagement was the internal drive and willingness as well as energetic and enthusiasm to work and complete

work-related tasks. Therefore, since individuals are achievement-driven, assertive, self-confident and imaginative, higher levels of engagement through the internal motivation process should be tailored accordingly to unleash such potential for the effectiveness of the organisation. It could also be of great value for organisations to align specific work-related activities according to person-environment fit. This implies that focus should be on those people whose personality values and characteristics are well-aligned with the culture and values of the organisation.

Overall, the study succeeded in establishing a statistically positive relationship between the variables of big five personality traits, work-life balance and employee engagement among survey participants. The results suggest that the higher the level of the big five personality traits and work-life balance, the higher the level of employee engagement.

6.7.5. Research aim 2: Interpretation of the canonical correlation analysis results

Table 6.14 and 6.15 is of relevance to this section.

The research aim was to empirically assess the nature of the overall statistical relationship between the big five personality traits, and work-life balance construct as a composite set of independent latent variables and the engagement construct as a composite set of dependent latent variables.

Overall, the results suggest that the dimensions of the personality traits, in particular agreeableness, extraversion, conscientiousness, resourcefulness, emotional stability and work-life balance including negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction contribute significantly towards explaining the participants' level of engagement in terms of their work activities and/or roles, specifically work enthusiasm and work occupied.

The tendency towards agreeableness and extraversion describes participants who are friendly towards others, always in social interaction, caring, trusting and cooperative.

In general, both agreeableness and extraversion reflect people that are involved in social interpersonal relationships with other people which best reflects the attributes of engaged employees involved in teamwork to the benefit of the organisation. Additionally, the association between highextraversion and high emotional stability (lower neuroticism) has been supported by extensive research (Langlaan et al., 2006).

The results further suggest that positive work-home interaction and positive home-work interaction positively influence participants' work enthusiasm and work occupied. This indicates that the resource, knowledge and skills acquired in the work environment spillover to the home environment, thereby enhancing engagement levels. This is in line with the assumption of the Conservation of Resources Theory (Hobfoll, 2011) which postulates that people strive to attain, retain and protect what is considered valuable, such as time and personal energies (which is similar to Sonnentag and Fritz, 2007 mastery and control strategies). Mastery and control experiences are off-job activities that offer opportunity to build up new internal resources such as skills, competencies, positive mood and self-efficacy, thereby enhancing recovery (Sonnentag & Fritz, 2007).

The study also found that negative work-home interaction and negative home-work interaction negatively influence work enthusiasm and work occupied. This implies a decline in the level of engagement as people in this situation are too preoccupied with the interference of both work and home environment to perform meaningful work. These finding coincide with the scarcity role theory or negative spillover on the basis that if demands outside work are higher, the amount of physical, cognitive and emotional resources required to deploy at work may become depleted, resulting in an individual experiencing home interference with the work environment (Geurts et al., 2005).

Overall, results appear to suggest that participants who possess some levels of positive work-home interaction, positive home-work interaction, agreeableness, conscientiousness and emotional stability can foster a high level of engagement in the workplace.

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6.7.6 Research aim 3: Interpretation of the multiple regression analysis results

Table 6.16 is of relevance to this section.

The research aim was to empirically assess whether or not the big five personality traits namely agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability and work-life balance measured by negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction positively and significantly predict employee engagement including work enthusiasm and work occupied.

6.7.6.1 *Big five personality traits and work-life balance as a predictor of work enthusiasm and work occupied*

The results showed that characteristics of personality (conscientiousness, resourcefulness and emotional stability) and dimensions of work-life balance (positive work-home interaction, and positive home-work interaction) significantly and positively predicted employee engagement. The results further show that negative work-home interaction and negative home-work interaction significantly and negatively predict employee engagement in terms of work enthusiasm and work occupied. The results suggest that individual differences in terms of responsibility, creativity, openness, and self-confidence do matter in explaining employees' behaviour and attitudes in the workplace.

These findings that conscientiousness predicts engagement has been expected as a considerable number of studies found that conscientiousness influences the extent to which individuals perceive their work and the organisation that employs them. Individuals high in conscientiousness are predisposed to be organised, disciplined, diligent, dependable, and purposeful and are more likely to correctly perform work tasks, take initiative in solving problems, remain committed to work performance and comply with organisational policies (Matzler et al., 2011). Specifically, conscientiousness has been shown to significantly predict not only performance

(Barrick & Mount, 1991) across occupational groups but also engagement (Mostert & Rothmann, 2006). Conscientious people are motivated to achieve the end goals even if it means that the completion should be conducted outside the domain of the workplace.

Similarly, Costa and McCrae (1992) note that "individuals who score high on this facets have high aspiration levels and work hard to achieve their goals … very high scorers, however, may invest too much in their careers and become workaholics" (p. 19). On the contrary, Kim et al (2009) examined all five dimensions of personality, reporting that conscientiousness was the most dominant personality trait influencing engagement. They consider the association of conscientiousness to the achievement-striving tendency of individuals high in the dimension and maintain that conscientious people are more likely to invest extra energy into completing their work task and even going beyond.

The findings revealed that emotional stability positively and significantly predicts engagement among participants. This finding is in line with previous studies which have found support for the association between neuroticism and engagement. It is apparent that lower neuroticism was found to negatively predict engagement (Opie & Henn, 2013). People with low levels of emotional stability (higher level of neuroticism) tend to be defensive and guarded, have a negative view of themselves, worry about others' opinions of them, and tend to make stable, internal, global attributions about negative events (Barrick et al., 2013).

The findings indicate that resourcefulness significantly and positively predicts employee engagement (work enthusiasm). It is not surprising that people who are resourceful and open to new ideas, who internalise their inner drives and opportunities to learn and to develop, tend to be profoundly engaged in their work task. Therefore, people who are open to new experiences typically are flexible, creative and intellectually oriented as well as actively pursue novel and cognitively stimulating experiences. Bjørkelo et al (2010) maintain that people with low resourcefulness tend to be unadventurous, behaviourally rigid, socially conforming and conventional in their reasoning.

The findings indicate that positive work-home interaction and positive home-work interaction significantly and negatively predict employee engagement. The engagement dimensions were high, and positive correlation was found between engagement and home-work interaction. This suggests that the home domain is mainly a source of positive influence due to support received from partner and family (home domain).

The findings indicate that negative work-home interaction and negative home-work interaction significantly and negatively predict employee engagement. This suggests that employees who experience emotional or physical pressure from either their work or home find it difficult unleashing their potential as they are busy preoccupied with work or home domain issues. By implication, participants who perceive their home environment as unfavourable due to the lack of support or family problems are more likely to feel disengaged in their work. According to Rothmann and Baumann (2014) low psychological availability associated with a lack of positive work-home interaction and negative home-work interaction is associated with an inability to personally engage at work as it is presumably believed that employees are preoccupied and distracted by home environment issues.

The results of the hypothesis indicate that engagement partially mediates the relationship between work-life balance and big five personality traits. This contributes to the research on engagement as very few studies have actually tested engagement as a mediator between those personality characteristics and work-life balance.

One possible explanation for these results is that the connection between personality traits (conscientiousness, resourcefulness and emotional stability) and engagement is closer than the association between work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and personal home-work interaction). It is generally believed that a positive psychological state coupled with attitudes and mind-sets leads to productive and approach-related behaviours, while negatively-oriented mindsets lead to unfavourable and withdrawal-related behaviours. This study suggests that participants with positive affect and proactive personality are

more likely to display higher levels of engagement because of their level of energy, enthusiasm and dedication to achieve and complete their work-related roles.

6.7.7 Research aim 4: Interpretation of the structural equation modelling results

Table 6.18 and Figure 6.8 are relevant to this section

The research aimed to theoretically determine whether there is a good fit between the elements of the empirically manifested structural model and the theoretically hypothesised model of the big five personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance (measured by negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction positively) variables and how they significantly predict employee engagement including work enthusiasm and work occupied.

The results of the structural equation modelling (Figure 6.8) reveal that three of the big five personality traits and two of the four dimensions of work-life balance contribute positively to the level of employee engagement, specifically, work enthusiasm and work occupied. In particular, the findings suggest that agreeableness, emotional stability and conscientiousness as dimensions of personality traits and positive work-home interaction and positive home-work interaction may be useful predictors of employee engagement behaviour. The findings show that the variance of big five personality and work-life balance explains approximately a 25% proportion of the variance in employee engagement behaviour, whereas the remaining 75% was beyond the scope of this study. In this regard, the findings highlight that personality traits and work-life balance variables may improve the predictive validity of engagement behaviour.

A closer inspection of the results underscores several notable findings. Firstly, both positive work-home interaction and positive home-work interaction have a direct effect on engagement behaviour (work enthusiasm and work occupied). This suggests that participants who could harmoniously integrate the work and home environment with

less interference are more likely to feel energised, enthusiastic and preoccupied when completing their responsibilities. The findings further suggest that participants feel engaged in activities that could positively spillover from the work to home or from home to work environment thereby using the energy, resources, skills and knowledge acquired in either environment to facilitate the other environment. The study conducted by Rothmann and Baumann (2014) reports that positive work-home interaction impacts directly on employee engagement and indirectly on psychological meaningfulness and psychological availability.

Moreover, Greenhaus and Powell's (2006) conceptual model of work-family enrichment best captures the essence of the positive work-family interface as "the extent to which experiences in one role improve the quality of life in the other role" (p. 72). The theoretical implication is that highly engaged employees would generally adapt well to changes in their work environment and are less likely to experience negative emotions. Engaged employees are also likely to motivate and inspire the achievement of work-life balance in the organisation, fostering further engagement and performance in the organisation (Richman et al., 2008). Their study found that supportive work-life practices and perceived flexibility have a strong, independent, and positive relationship with employee engagement and retention. Workplace flexibility is a type of work-life balance practice offering employees flexibility in when and where work is done.

Other studies have also found support for the partial mediating effect of positive work-home interaction between job resources and engagement (Mostert, 2006; Mostert et al., 2006). Recently, Mostert, Peeters and Rost (2011) reported similar mediation of positive work-home interaction on the relationship between job resources and work engagement among employees working in the construction industry in South Africa.

Secondly, although all dimensions of personality traits exert an effect on employee engagement, the findings reveal that agreeableness, conscientiousness and emotional stability exhibit the strongest influence on engagement behaviour. For instance, a high score of 92, 70 and 92 was observable for agreeableness, conscientiousness and emotional stability respectively. The personality traits of agreeableness and

conscientiousness as well as emotional stability are considered as instrumental personality traits (McCrae & Costa, 2003), in that individuals high in agreeableness are typified as friendly, empathetic and cooperative, while conscientious individuals are hardworking, responsible and dutiful as well as achievement-striving and emotionally stable people are described as calm, warm, relaxed and self-confident (Martins, 2000; McCrae & Costa, 2003).

These findings suggest that participants who are friendly, sympathetic, cooperative, organised, hardworking, responsible, calm, stable and self-confident will definitely effect a level of engagement due to the fact that participants are perceived to be involved and connected with their work in such a manner that work motivates them to exert more effort than what is expected from them, to perform optimally and retain their jobs. Engaged employees are assumed to have a sense of energetic and effective connection with their work activities and they see themselves as able to deal completely with the demands of work (Bakker et al., 2008; Montgomery et al., 2003). Highly engaged employees are mostly happy and satisfied people who have a significant influence both inside and outside the workplace, as well-being at work directly correlates to happiness in one's life at home and vice versa.

In essence, highly conscientious people tend to be higher performers, hardworking, thorough and self-disciplined, thereby enhancing a positive effect on engagement behaviour. Barrick and Mount (1991) explain that conscientiousness is one personality trait that uniformly predicts how high a person's performance will be across a wide variety of jobs. It is because conscientious people are associated with achievement-oriented behaviour and orderliness. Macey and Schneider (2008) observe that conscientious people are likely to be associated with engagement because they are hardworking, which implies the capacity for dedication and absorption at work.

Individuals with a high level of agreeableness are better able to develop good working relationships with other employees and are more likely to regulate their angry feelings. Such individuals have a tendency to motivate and cooperate with people in order to achieve mutual goals and complete the prescribed work tasks. On the contrary, people

with less agreeableness lack a concern for others and find it difficult to cooperate and work with other people.

6.7.8 Research aim 5: Interpretation of the hierarchical moderators' results

Tables 6.19, 6.20, 6.21, 6.22, 6.23, 6.24, 6.25 and 6.26 are relevant to this section.

The aim was to empirically assess whether or not biographical characteristics (gender, generational cohort, job level and economic sector) significantly moderate the relationship between the big five personality traits, namely agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability and work-life balance measured by negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction positively and significantly predict employee engagement including work enthusiasm and work occupied.

6.7.8.1 Gender as a moderator

The results indicated that no significant moderators were observable between gender groups with regard to positive work-home interaction, positive home-work interaction, agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability. This implies that male and female participants were identical and experienced similar characteristics in the same way. Baral and Bhargava (2011) assert that gender groups is generally perceived in terms of how people see, attribute, acquire and utilise resources such as social support and job characteristics in their work and family environment, which could have a significant influence on the level of work-family enrichment. It is thus imperative to examine gender groups because of the implication they may have for bias in decision-making procedures (Laher & Croxford, 2013).

This finding is in contradiction with previous studies which report that balancing work-home interaction poses a greater challenge for females as compared to males (Langballe, Innstrand, Aasland, & Falkum, 2011, Van Aarde & Mostert, 2008) as a result of the double responsibilities (home and work responsibilities) performed by

females. In addition, Kinnunen, Geurts and Mauno (2004) found that participation in family responsibilities and demanding work was more stressful for women than men in terms of work-family balance. For example, using the E-R model, van Aarde and Mostert (2008) found that females experience negative interaction between work and family life when they are exposed to high job pressure, work overload, time demands, have little or no autonomy and no supervisor and instrumental support.

In a study conducted to understand the underlying gender bias in personality measurement in the South African context, Laher and Croxford (2013) report significant gender differences for all personality scales and its subscales. Their study revealed that women scored the highest in most of the scales except for assertiveness and ideas where men dominated.

6.7.8.2 *Generational cohort as a moderator*

Generational cohorts appear to significantly moderate the relationship between some of the dimensions of the big five personality traits and engagement. The moderation effect of generational cohort was observed on the relationship between conscientiousness, emotional stability and resourcefulness and engagement. It should be noted that a series of moderated regression analyses were undertaken independently with each of the three levels of generational cohorts with regard to the independent (conscientiousness, emotional stability and resourcefulness) and the dependent variables (work enthusiasm and work occupied). The idea was to assess one group of the cohorts against the other two groups (coded as other in the graphs – see Appendix B).

The findings revealed that generational cohort (participants born between 1978 and 2000) moderated the relationship between conscientiousness and emotional stability and work occupied. These suggest that participants born between 1978 and 2000 had the strongest relationship with regard to conscientiousness and emotional stability and employee engagement relative to participants in other generational cohorts (those born between 1965 and 1977 as well as 1946 and 1964). As indicated in the graph, it is apparent that work occupied is lower among participants born between 1978 and 2000

with lower level of conscientiousness relative to other generational cohorts. It suggests that participants in other generational cohorts tend to be more focused, hardworking and goal-oriented relative to those born between 1978 and 2000. One possible explanation is that individuals who feel fulfilled and energised by their work, coupled with a strong focus on their work activities, are more likely to exert effort and perform beyond what is minimally required of them to help their colleagues, supervisors and organisation to succeed.

In addition, the moderating effect of generational cohort (participants born 1978 and 2000) on the relationship between emotional stability and work occupied were detected. It was apparent that work occupied and emotional stability were lower among participants born between 1978 and 2000 relative to other generational cohorts. This could suggest that participants in other generational cohorts were more satisfied and confident with their work roles within the organisation relative to participants born between 1978 and 2000 whom could be prone to worry, anxious, moody, irritable and depressed (Costa & McCrae, 1992).

The findings showed that generational cohort (participants born born between 1965 and 1977) moderated the relationship between conscientiousness and work occupied. These implies that participants born between 1965 and 1977 had the strongest moderate relationship between personality conscientiousness with regard to work occupied relative to participants in other cohorts. It appeared that work occupied and conscientiousness were higher among participants born between 1965 and 1977 relative to participants in other generational cohorts.

The findings showed that generational cohort (participants born born between 1946 and 1964) moderated the relationship between conscientiousness and work occupied. These suggest that participants born between 1946 and 1964 exhibited the strongest relationship between conscientiousness and engagement (work enthusiasm and work occupied). It appeared that work enthusiasm was lower while conscientiousness was higher among participants born between 1946 and 1964 relative to participants in other generational cohorts. That is, individuals with high level of conscientiousness are

generally well-organised, deliberate, dependable, and efficient (Barrick & Mount, 1991).

The research findings show that generational cohort (participants born between 1946 and 1964) acted as a significant moderator on the relationship between resourcefulness and employee engagement (work enthusiasm). The resourcefulness personality trait reflects individuals' general range of interests, comfort with change and fascination with innovation. This findng is intriguing, given that individuals with greater resourcefulness have a predisposition to ponder ideas, think creatively and innovatively. Curtis et al (2015) maintain that older adults who engage in more activities may have more efficient processing abilities, and may have a greater cognitive ability than less active older adults who are closed-minded and narrow thinkers. As such, it seems that work enthusiasm was lower while resourcefulness was higher among participants born between 1946 and 1964 relative to other generational cohorts.

The research findings show that generational cohort (participants born between 1946 and 1964) acted as a significant moderator on the relationship between emotional stability and employee engagement (work occupied). These show that participants born between 1946 and 1964 exhibited the strongest relationship between conscientiousness with regard to engagement (work enthusiasm and work occupied). These suggest employee engagement and emotional stability were the highest among participants born between 1946 and 1964 relative to participants in other generational cohorts. It could be assumed that participants born between 1946 and 1964 tend to be more relaxed and have more stable moods as compared to the other cohort groups. In addition, participants who show strong attributes of emotional stability are better able to adjust to their environment and can better handle dynamic task-related activities.

Taken together, the results provided evidence that the relationship between conscientiousness, resourcefulness and emotional stability and work enthusiasm as well as work occupied respectively increased positively and significantly among survey participants born between 1946 and 1964, relative to other generational cohorts. However, the moderating effect of the generational cohort (born between 1946 and

1964) is relatively small in practical terms, implying that participants who were born between 1946 and 19654 tend to be engrossed in their work roles as compared to the other generational cohorts. Noted in the discussion above is that participants who exhibit efficiency and deliberate often tend to their significant other as way of enhancing their engagement.

6.7.8.3   Functional job level as a moderator

The findings showed that functional job level (participants in top management) moderated the relationship with regard to positive work-home interaction and work enthusiasm. The findings revealed that functional job level (participants in the top management level) had the strongest relationship with positive work-home interaction and engagement than participants in other functional job levels. It appears that work enthusiasm and positive work-home interaction were higher among participants in top management relative to participants in other functional job levels. The findings provided evidence that the relationship between positive work-home interaction and engagement increased positively and significantly among participants at the top management level. These findings suggest that participants at the top management level find it easier to integrate work- and home-related responsibilities with minimum interference as a result of the dual support received from colleagues and family members.

Alternatively, this could probably imply that support received from family members could possibly allow participants in top management roles the opportunity to continue with work-related activities without any worry, thereby enhancing performance at work. When employees have enough resources in terms of family/colleague support, they are able to balance the demands from the work and home environment, thereby foster positive interaction between the two environments, leading to higher levels of engagement (Mostert, 2006).

Consistent with findings by Carlson et al (2009), it could be possible that highly engaged employees can work long hours and have fewer hours available for home

activities, but perceive no adverse consequences of unequal roles. This implies that employees can still perceive their work-life to be balanced because they enjoy a small proportion of time spent at home.

The findings showed that functional job level (executive management level) moderated the relationship on conscientiousness and work enthusiasm. The findings revealed that participants in the executive management level were stronger than their counterparts at other functional job levels. These findings provide evidence that the relationship between conscientiousness and work enthusiasm increased positively and significantly among survey participants at the executive management level. It appears that work enthusiasm was slight lower while conscientiousness was higher among participants in the executive management level as compared to participants in other functional job levels.

A possible explanation could be that participants in executive management roles have the necessary skills, knowledge and ability to execute their work activities. Consistent with Kahn's (1990) original conceptualisation of engagement, executive management feel psychologically safe in their level and they are willing to fully invest and express themselves in their work roles because they are actively involved in the work tasks. In a similar vein, Coetzee and De Villiers (2010) maintain that by merely providing employees with safety in terms of social support and feedback, employees feel more secure and safe in their jobs.

The findings showed that participants at managers' level significantly moderated the relationship between conscientiousness, emotional stability and positive home-work interaction with work enthusiasm and work occupied. The findings revealed that employee engagement (work enthusiasm and work occupied) and conscientiousness, emotional stability and positive home-work interaction were the highest among participants in other functional job level as compared to participants at managers' level. It seems that participants at managers' level lack dependability, are lazy and lack confidence in their ability (personal resources) to execute their core functions. These findings contradict previous studies (Welbourne, 2007) which show that managers were

regarded as change agents and exemplars among subordinates (employees in lower post grades) with regard to supporting engagement-enhancing initiatives within the workplace.

The results showed that participants at managers' level significantly moderated the relationship between emotional stability and the different dimensions of engagement (work enthusiasm and work occupied). It is apparent that work occupied and emotional stability were higher among participants in other functional job level relative to participants in the managers' levels. However, managers seemed to benefit from lower scores in emotional stability, suggesting that participants at the managers' level were anxious and insecure in their work responsibility. A possible explanation could be that managers lack the capacity to plan and organise their work tasks accordingly, which could invade their emotional behaviour at work. People experiencing low emotional stability tend to be defensive, depressed, and angry. They have a negative view, worry about others' opinions of them, and tend to make stable, internal, global attributions about negative events (Barrick et al., 2013).

However, managers need to be encouraged to actively redesign or "craft" their work by choosing tasks, negotiating different job content and assigning meaning to their tasks or jobs to foster engagement. Job crafting is defined as physical and cognitive changes individuals make in their tasks or relational boundaries (Wrzesniewski & Dutton, 2001). These self-initiated changes could lead to a work environment that is aligned with specific characteristics of managers in particular, and could enhance as well as motivate them to exert more effort in the work task. The essence of job crafting provides employees with the added autonomy and variety of skills, as well as meaning to redesign their work roles, thereby increasing their involvement and engagement.

In addition, the findings revealed that interference between the home and work environment was prominently experience by participants at other functional job levels relative managers. The findings support the position that positive influence often originates more from the home environment than from the work environment. This suggests that participants in managers' level are better able to use their energy and

resources to recuperate, which reduces the effect of the negative load reactions experienced at home on interfering or spilling over to the work environment.

No significant main and interaction effects were observed for supervisor and employees, suggesting that supervisors and employees did not act as moderators of the relationship between agreeableness, extraversion, conscientiousness, resourcefulness, emotional stability, positive work-home interaction, positive home-work interaction, work enthusiasm and work occupied.

6.7.8.4 *Economic sectors as a moderator*

The findings show that participants employed in the transport, storage and communication sector moderate the relationship between conscientiousness and engagement. The work occupied level was higher while conscientiousness was lower among participants in the transport, storage and communication as compared to participants in other economic sectors. One possible explanation for the lower level of work occupied among participants in the transport, storage and communication could be related to the nature of their job which requires employees to work extensively long hours relative to the other economic sectors.

The findings revealed that participants in the financial, intermediation, insurance, real estate and business service sectors moderated the relationship between conscientiousness and dimensions of engagement (work enthusiasm and work occupied). Employee engagement was lower while conscientiousness was higher among participants in the financial, intermediation, insurance, real estate and business service sectors than participants in other economic sectors. The survey participants with employee engagement in the financial, intermediation, insurance, real estate, and business service sectors also achieved significantly high level of conscientiousness than the other economic sectors on work enthusiasm. This reflects the characteristics of people working in the financial, intermediation, insurance, real estate, and business service who are required to be careful and diligent.

No significant main and interaction effects were observed for supervisor and employees, suggesting that manufacturing, wholesale and retail trades and community, social and personal services sectors did not act as moderators of the relationship between agreeableness, extraversion, conscientiousness, resourcefulness, emotional stability, positive work-home interaction positive home-work interaction, work enthusiasm and work occupied. These findings contradict other studies that have reported that personality attributes are often used as valid predictors of diverse job-related criteria (Rothmann & Coetzer, 2003). They further contradict various studies and meta-analyses that have shown that the five dimensions of personality are related to job performance.

Taken together, the results provided evidence that the relationship between personality conscientiousness and emotional stability and employee engagement inclusive of work enthusiasm and work occupied increased positively and significantly among survey participants within the financial, intermediation, insurance, real estate and business services, although, the moderating effect is small. The survey participants who scored high on conscientiousness and emotional stability with respect to financial, intermediation, insurance, real estate and business services sector also achieved significantly higher scores than the other economic sectors.

6.7.9 Research aim 6: Interpretation of test for significance differences

The aim was to empirically assess whether or not significant differences exist between the subgroup of personal characteristics (gender, generational cohort, job level, economic sector) that acted as significant moderators between the big five personality traits, namely, agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability and work-life balance measured by positive work-home interaction and positive home-work interaction, positively and significantly predict employee engagement including work enthusiasm and work occupied as manifested in the sample of participants.

6.7.9.1 *Interpretation of the tests for significant mean differences results in terms of the big five personality traits and work life balance*

Tables 6.28, 6.29, 6.30, and 6.31 are relevant to this section.

a) *Gender*

The results indicated that there was a significant difference between males and females in terms of their attributes towards emotional stability. It is apparent that male participants scored high on emotional stability had also scored high on work enthusiasm. These findings suggest that the perception of emotional stability is more prevalent for male participants to such extent that they are able persevere even in an unpleasant situation as compared to female counterparts.

No significant differences could be found between gender groups with regard to positive work-home interaction, positive home-work interaction, agreeableness, extraversion, conscientiousness and resourcefulness. This implies that gender roles did not compare well among the different personality characteristics and work-life balance. These results collaborate findings by De Klerk and Mostert (2010) who point out that the dynamics of work and family boundaries operate in a similar fashion for both men and women in South Africa, with effect to the promulgation of various legislations, among others, the Employment Equity Act and Affirmative Action Act (Marais et al., 2009; Rost & Mostert, 2007) which provided an increasing number of women the opportunity to enter the labour market as employees.

Taken from a different angle, these results contradict previous results such as those by Grzywacz and Marks (2000) who report that younger men were more inclined to higher negative spillover between work and home (in both directions) and are less likely to experience positive spillover from home to work than older men among a subsample of employed adults. Their study further indicated that younger women reported more positive spillover from work to home and more negative spillover from home to work than older women. In similar vein, Mostert and Oldfield (2009) found significant

differences between males and females in that males experienced higher levels of positive work-home interaction than their female participants.

b)   *Generational cohorts*

The findings indicate that there is a significant difference between the generational cohorts in terms of positive work-home interaction. It seems that participants born between 1946 and 1964 are better able to transfer the skills and resources acquired during the daily at the work environment to facilitate performance at the home environment as compared to the other generational cohorts. These findings are consistent with the study reported by Marais and Mostert (2010) who also found that age appears to have been a robust predictor of both positive WHI and positive HWI. Their study found that younger participants were more prone to experience statistically significantly higher levels of negative WHI/HWI, whereas older participants experienced statistically significantly higher levels of positive WHI/HWI. A possible explanation could be that younger participants might not have mastered or acquired the necessary skills for harmoniously integrating home and work responsibilities as compared to older participants who have been in the workplace for a long time and have gained extensive experience in dealing with work-home challenges amicably well.

By contrast, these findings contradict with some studies that have found no relationship between different age groups (Mostert & Oldfield, 2009; Pieterse & Mostert, 2005). However, the study conducted by Grzywacz and Marks (2000) found that younger men tended to report more negative spill-over between work and home (as well as between home and work) and less positive spill-over from family to work, than did older men.

c)   *Functional job level*

Functional job levels appear to significantly moderate the relationship between the big five personality traits, work-life balance and engagement. A significant interaction effect was observed for functional job level in terms of the relationship between the big five personality traits (extraversion, conscientiousness, resourcefulness and emotional

stability), work-life balance (positive work-home interaction) and engagement (work enthusiasm and work occupied). This suggests that participants at various functional job levels may influence perception of positive work-home interaction which in turn influences their level of engagement in the work environment, especially, their energy, enthusiasm, inspiration, pre-occupation, and full concentration by being emotionally involved in their work activities.

In terms of functional job level, the results revealed a significant difference with respect to positive work-home interaction, extraversion, conscientiousness, resourcefulness and emotional stability. It is apparent that participants at management level experience more positive work-home interaction, extraversion, conscientiousness and emotional stability relative to the other functional job levels. That is, participants at management level who have control over their work and are able to organise and schedule their daily activities ahead experience more positive and less negative spillover effects from their work to their home environment.

No significant differences were observed in terms of functional job level with regard to positive home-work interaction and agreeableness. These findings suggest that the different job levels did not compare well with regard to positive home-work interaction and agreeableness. This suggests that agreeable people have the tendency to interact and cooperate with others and to care strongly about the well-being of family and friends (Matzler et al., 2011; Parks-Leduc et al., 2014).

d)   Economic sectors

Significant differences were evident between economic sectors in terms of extraversion and resourcefulness. It is apparent that participants within the wholesale and retail trades scored the highest in terms of extraversion and resourcefulness. Employees scoring high on these traits are deemed to be better suited for the retail jobs involving high social interaction. They are more likely to perform better at rapport and relationship building as well as social networking.

No significant differences were observed in participants in the manufacturing, transport, storage and communication, financial, intermediation, insurance, real estate and business services and community, social and personal services sectors with regard to positive work-home interaction, positive home-work interaction, agreeableness conscientiousness and emotional stability. These findings suggest that the different economic sectors did not compare well with the variables.

6.7.9.2 Interpretation of the tests for significant mean differences results in terms of employee engagement

Tables 6.32, 6.33; 6.34 and 6.35 are relevant to this section.

a) Gender

The results revealed significant difference between engagement (work enthusiasm) and gender. The results showed that males scored the highest on work enthusiasm as compared to their female counterparts. This is in line with the study reported by Coetzee and De Villiers (2010) who found statistically significant differences between male and female participants with regard to the level of engagement variables, especially dedication and absorption.

These findings can also be compared with research reported by Moshoeu (2012), who found that male participants scored significantly higher on engagement than female participants, implying that males are generally more engaged in their work roles as compared to their female counterparts. In addition, Schaufeli and Bakker (2003) also established that men scored significantly higher than women on all three dimensions of engagement. Mostert and Rothmann (2006) also found that gender influenced engagement among a sample of South African Police Officers (SAPS).

Therefore, a possible explanation could be attributed to typical traditional gender roles where males are socialised to give priority to their responsibilities as breadwinners of the household, whereas females are more responsible for the caring and nurturing of the

family. Another possible explanation could be the fact that males still dominate the working environment.

No significant difference was observed between gender groups with regard to work occupied. This implies that participants do not differ in their expression work occupied, implying that both males and females are equally occupied during their work roles.

b)   Generational cohorts

According to the findings, generational cohorts revealed significant differences with regard to work enthusiasm and work occupied. This finding indicates that participants who were born between 1946 and 1964 scored the highest on both work enthusiasm and work occupied than those participants in other generational cohorts. Highly engaged, resilient and enthusiastic participants who are preoccupied with their work are considered to be older people as compared to younger people. These findings can be compared with the research reported by Schaufeli and Bakker (2004b) and Schaufeli et al (2006) who established that older workers were found to be more engaged in their work roles than younger employees

In addition, Mostert and Oldfield (2009) also reported that participants between the ages of 50 and 69 years experienced statistically significant higher levels of positive WHI, while participants between the ages of 22 and 39 experienced the lowest levels of positive WHI. In this regard, Coetzee and De Villiers (2010) also reported that participants in the age groups 26 to 40 years and older than 40 years scored significantly higher than those younger than 25 years in terms of absorption.

Park and Gursoy (2012) conducted a study to determine the varying degrees of engagement among employees of three generational cohorts in the hotel industry. Their study found that employees of younger generations have a lower level of engagement than do older generations. Kahn (1990) argue that people need to have sufficient physical, emotional and psychological resources in order to be engaged at work. This implies that older people have acquired the necessary skills and knowledge (personal

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resources and energy) to perform and complete the required tasks, which drive them to respond with a high level of engagement.

c)   Functional job level

The results reveal significant differences between engagement (work enthusiasm and work occupied) and functional job level. Participants at top management level scored high on both work enthusiasm and work occupied. These findings are congruent with the research conducted by Schaufeli and Bakker (2003) who found that employees at high occupational levels are relatively more engaged than employees at low occupational levels. Similarly, Martins (2016) as well as Nienaber and Martins (2014) found that participants in professional job categories such as the top management level were more engaged, relative to other functional job levels. Engaged employees are assumed to be able to deal with the demands of their positions, particularly when they feel in control of their situations.

d)   Economic sector

The results reveal a significant mean difference between engagement (work occupied) and participants in the wholesale and retail trade sector. Participants within the wholesale and retail trade sector scored higher on work occupied as compared to participants in other economic sectors. It could be assumed that participants in the wholesale and retail trade feel engaged and absorbed in their work roles because their engagement levels are tailored to the objectives and organisational culture which outlines boundaries and generates commitment. In a longitudinal study, Martins (2016) reported that participants in the wholesale and retail trade sector were more positive and significantly engaged in their work activities as compared to participants in mining, quarries, water, electricity and construction. Given that engagement is described as a positive affective-motivational state that does not focus on a particular object, event, person or behaviour (Bakker & Demerouti, 2008), people employed in wholesale and retail trade sectors act as an important indicator of occupational well-being.

6.8   CONCLUSIONS RELATING TO THE RESEARCH HYPOTHESES

Table 6.35 summarises the empirical research aims and their corresponding research hypotheses, research findings and the decisions to either support, partially support or reject the research hypotheses. Based on the outcomes of the analyses and the discussion thereof, four of the six research hypotheses were fully supported by the data, whereas two were partially supported. It should be noted that even though the practical effect size was relatively small, results of the empirical research clearly indicate that there is statistical effect between the big five personality traits, work-life balance and employee engagement as manifested in the survey participants. These effects have been supported by a number of studies. The next chapter presents the conclusions, limitations and recommendations for both practice and future research.

Table 6.35

Summary of research aims, research hypotheses, research results and decisions

Research aims	Research hypotheses	Research results	Decision
Research aim 1: To empirically assess the nature of the statistical interrelationship between personality traits, work-life balance and employee engagement among a selected sample of participants in the various economic sectors	H1: There are statistically significant interrelationships between personality traits, work-life balance and employee engagement.	Significant Positive Relationship	Supported
Research aim 2: To empirically assess the nature of the overall statistical relationship between personality traits and work-life balance as a composite set of independent latent variables and employee engagement as a composite set of dependent latent variables.	H2: Personality traits and work-life balance as a composite set of independent latent variables are significantly and positively related employee engagement as a composite set of dependent latent variables.	Significant Positive Relationship	Supported

Research aim 3:			
To empirically assess whether or not personality traits and work-life balance positively and significantly predict employee engagement.	H3: Personality traits and work-life balance positively and significantly predict employee engagement.	Positive Relationship	Partially supported
Research aim 4:			
Based on the overall statistical relationship between personality traits, work-life balance and employee engagement to determine whether there is a good fit between the elements of the empirically manifested structural model and the theoretically hypothesised model	H4: The theoretical personality traits, work-life balance and engagement model has a good fit with the empirically manifested structure model.	Good model fit	Partially supported
Research aim 5:			
To empirically assess whether or not biographical characteristics (gender, generational cohort, job level and economic sector) significantly moderate the relationship between personality traits, work-life balance and employee engagement.	H5: The biographical variables (gender, generational cohort, job level and economic sector) do significantly and positively moderate the relationship between the independent personality traits. work-life balance and the dependent employee engagement.	Significant and positive relationship	Partially supported

Research aim 6:			
To empirically assess whether or not significant differences exist between the subgroup of biographical characteristics that acted as significant moderators between personality traits, work-life balance and employee engagement as manifested in the sample of participants	H6: There are significant mean differences between the subgroup of biographical variables that act as significant moderators between the independent personality traits, work-life balance and the dependent employee engagement.	Significant mean differences	Partially supported

6.9   CHAPTER SUMMARY

This chapter reported on and interpreted the findings of the empirical investigation into the nature of the statistical interrelationships and overall relationships between the big five personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance (negative WHI, positive WHI, negative HWI and positive HWI) as a composite set of independent variables and employee engagement (work enthusiasm and work occupied) as composite set of dependent variables as manifested among working adults within the South Africa economic sectors.

Standard multiple regression analyses were conducted to identify whether the work-life balance and the big five personality variables significantly explain or predict the portion of the total variance in the scores of the dependent variable (employee engagement variable). The F-test was used to test whether there was a significant regression between the independent and the dependent variables, and in addition, the value of the adjusted R^2 was used to interpret the results. The Mann-Whitney U test was used to test for significant mean differences between the male and female participants, while the Kruskal-Wallis test was performed to test for significant mean differences between the various biographical variables.

Taken all together, significant findings emerge from the analyses which support the research hypotheses, although the magnitudes of the effects were relatively small for practical effects. Valuable conclusions emerge from this investigation and these will be discussed in the next chapter.

CHAPTER 7: CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

7.1   INTRODUCTION

The aims of this chapter are to discuss the conclusions and limitations of the research and to make recommendations in terms of personality traits, work-life balance and employee engagement. The chapter starts with conclusions achieved with regard to the literature review, empirical study and the research hypotheses of the study. Thereafter, an overview of the limitations presented and suggestions for further research are discussed. Recommendations for the field of Industrial and Organisational Psychology and further research are provided. The chapter concludes with evaluations at theoretical, empirical and practical levels.

7.2   CONCLUSIONS

The section to follow provides conclusions in terms of the literature review and the empirical investigation.

7.2.1   Conclusions regarding literature review

The general aim of this study was to construct and test a model of personality traits and work-life balance as determinant of employee engagement. The research also aimed to investigate which biographical characteristics (gender, generational cohort, functional job level and economic sectors) significantly moderate the relationship between personality traits, work-life balance and employee engagement.

The following sections present the conclusions drawn for each specific research aim in terms of the literature review.

7.2.1.1　　　*First aim: To conceptualise personality traits variables consisting of agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability*

The first aim, namely, to conceptualise the five factor of personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) was achieved in chapter 2. The following conclusions were drawn:

- Trait psychology considers personality traits as the primary point of focus in defining personality and views human nature in terms of individual differences.

- Personality is defined as an individual's consistent patterns of thought, emotion, and behaviour which influence the selection and self-selection into jobs (McCrae & Costa, 2003; Parks-Leduc et al., 2014; Valchev et al., 2011). Personality is assumed to influence how people interact with others and how they evaluate and reward or punish them. In addition, it affects how individuals experience work events and work conditions, and how they emotionally and behaviourally react to them.

- The five factors of personality traits have been defined by McCrae and Costa (2008) as static dispositional characteristics that change up to maturity (30 years) and thereafter stay relatively stable.

- The taxonomy of the five factors of personality traits represents a broad summary of superordinate trait dimensions of personality. It is clear that the five dimensions are classified as the highest level of the personality hierarchy. Each of these five basic dimensions are thus followed by another level of six key elements called facets, which describe and separate the dimensions of individual personality, as well as the differences in patterns of thoughts, feelings, and behaviour. These facets are psychologically narrower aspects of the broader traits and strongly correlate with each other within a trait.

- Personality is viewed as a system defined by personality traits and linked to other aspects through dynamic processes which portray the way in which an individual functions socially as well as in a work context (McCrae & Costa, 2003; 2008).

- In his trust model, Martins (2000) adapted the five basic personality traits and used slightly different labels for the five factor model and facets measures of personality in terms of five broad domains, namely: Conscientiousness, Agreeableness, Emotional Stability, Resourcefulness and Extraversion (Martins, 2000). These five personality aspects are considered the most relevant taxonomy which captures, at a broad level of abstraction, the commonalities amongst human differences (John et al., 2008; McCrae & Costa, 2008) and thus providing an integrative model of research.

- Conscientiousness consists of a sense of purpose, a strong will, punctuality and reliability. It is the dimension that relates to being "organised and hardworking as well as dependable, trustworthy and responsible, with the opposite pole as being carelessness or irresponsible" (Martins, 2000, p. 758).

- Agreeableness reflects the behavioural tendency to being liked, courteous, good-natured, cooperative, forgiving and soft-hearted. The opposite pole echoes attributes sucah as cold, rude, unkind and independent (Martins, 2000). Agreeable people are oriented towards helping others and cooperating with them.

- Emotional stability is described as "the absence of anxiety, depression, anger, worry and insecurity, while the opposite pole is known as neuroticism" (Martins, 2000, p. 759; McCrae & Costa, 2003). Neuroticism represents a predisposition to focus on the negative aspects of the self, others and the world as well as a tendency to experience a high level of stress. The inverse, neuroticism, consists of the general tendency to experience negative affect such as fear, sadness and anger (McCrae & Costa, 2003).

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- Resourcefulness is defined as imaginativeness, creativeness, broad-mindedness and intelligence, with the opposite pole as being narrow-mindedness, unimaginative and conventionality" (Martins 2000, p. 759; McCrae & Costa, 2003). It is generally confused with terms such as intelligence, intellectance and culture, which are deemed unsuitable in encompassing the entirety of such a diverse dimension (Cheung et al., 2008; Congard et al., 2012).

- Extraversion reflects "sociability, cheerfulness, talkativeness and activity, while the opposite pole dimension is introverted, quiet, shy and reserved" (Martins 2000, p. 759; eSilva & Laher, 2012).

- Personality is viewed as a system composed of basic human tendencies, charateristics adaptations, self concept, objective biography and external influences, all linked through a dynamic process which affects the way in which people interact with each other on a social basis, as well as in work context (McCrae & Costa, 2003; 2008a; McCrae, 2011).

- The Five Factor Theory (FFT) provides the theoretical framework explaining the concepts of personality traits and personality measure that can provide insightful information about an individual's strengths and areas of weakness in a work context.

7.2.1.2   *Second aim: To conceptualise work-life balance and its dimensions, namely, negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction within the context of the contemporary world of work*

The second aim, namely, to conceptualise the nature of work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction) in the context of the contemporary world of work was achieved in chapter 3. The following conclusions provide an understanding of the concept of work-life balance:

- It appears from the literature that there is a lack of consensus on how work-life balance should be defined, measured and researched (Grzywacz and Carlson, 2007). The precise meaning and clarity of the concept has been distorted, perhaps by the many labels attached to it, such as positive work-home spillover, work-family facilitation and work-family enrichment. Potgieter and Barnard (2010) affirm that its complexity is based on the lack of consensus as to what it really entails.

- Work-life balance was coined by the positive psychology movement that facilitates the positive side of participating in multiple roles (work and home environment) with less conflict between the environments (Carlson et al., 2006; Wayne et al., 2006). Positive psychology is the advocacy of experiences of happiness, enjoyment, aspiration and positive aspects in human's life. The goal of positive psychology has been to shift away from the conceptual role scarcity and negative consequences that emphasise role incompatibility towards a more positive work-home interaction and role enhancement where work can actually facilitate performance in the home domain. Positive work-home interaction and role enhancement is based on the assumption that fulfilling multiple roles can produce resources that facilitate functioning in both the work and home domain (Geurts et al., 2005, Rothmann & Baumann, 2014) with limited interference from either domain.

- Work-life balance refers to well-functioning interaction between work and home and family life, suggesting a mutual influence with possible limited interference between the two domains.

- The definition of home and work is central to the understanding of the work-home interaction. Intuitively, work and home (non-work) are conceived as two interdependent aspects of human living (Van Aarde & Mostert, 2008) which have a significant impact on individual behaviour in terms of how daily activities and energy are structured. Work-home interaction is defined as "an interactive process in which employees' functioning in one domain such as the

home is influenced by positive load reactions that have built up in the other domains such as the work" (Geurts et al., 2005; Mostert & Oldfield, 2009; Van Aarde & Mostert, 2009).

- The definition of work-home interaction also consists of four dimensions that can be distinguished as negative work-home interaction, positive work-home interaction negative home-work interaction and positive home-work interaction. They are described below.

  - Negative work-home interaction (NWHI) refers to a situation in which negative load reaction builds up at work, hampering a person's functioning at home (De Klerk & Mostert, 2010; Geurts et al., 2005).

  - Positive work-home interaction (PWHI) is defined as positive load reaction which builds up at work that facilitates functioning at home (De Klerk & Mostert, 2010; Geurts et al., 2005).

  - Negative home-work interaction (NHWI) refers to those negative load reactions which develop at home, that fetter a person's functioning at work (De Klerk & Mostert, 2010; Geurts et al., 2005).

  - Positive home-work interaction (PHWI) occurs when positive load reactions developed at home facilitate functioning at work. (De Klerk & Mostert, 2010; Geurts et al., 2005).

- In addition, the definition of the work-home interaction is based on a theoretical framework of the Effort-Recovery (E-R) model developed by Meijman and Mulder (1998) which was designed to enhance and extend the existing knowledge of work-home interaction (Van Aarde & Moster, 2009). The E-R model describes how work and private life may interact, and which mechanisms may affect well-being during this process (Geurts et al., 2003; Mostert & Oldfield, 2009). Specifically, the model emphasizes the importance of recovery after energy has been wasted from the psychological and behavioural load

reaction at work. Accordingly, if employees are unable to recover during break-time or after work, negative load reaction could develop and spillover into other domain (family/home) s thereby rendering such a domain ineffective to actively perform the required tasks and responsibilities.

- The principle of the effort recovery model can also be applicable to the positive work-home interaction, where effort expenditure can be accompanied by positive load reactions (Geurts et al., 2005; Rost & Mostert, 2007; van Aarde & Mostert, 2008) that make functioning in either the work or home environment more efficient and effective. Therefore, when individuals are able to utilise their opportunities for control (such as taking short respite) and support from significant others (such as colleagues, supervisor and family), energy resources are recharged rather than depleted.

- In principle, the effort-recovery theory is consistent with the conservation of resources which emphasises that individuals strive to obtain, retain, protect and foster those things that they value" (Hobfoll, 2001, p. 341). Resources include aspects such as objects resources (tools for work), condition resources (supportive work relationship, seniority at work), personal resources (key skills and personal traits) and energy resources (knowledge) (Hobfoll, 2001; 2011). These resources can be threatened, particularly under demanding conditions, which eventually can make resource gain difficult to maintain due to fewer available resources to boost an individuals' wellbeing. However, those with greater resources become less vulnerable to resource loss under demanding conditions and are more capable to resource gain (Hobfoll, 2001). This implies that job resources gain their motivational potential, particularly when employees are confronted with high job demands. In this instance, energy may become replenished and mobilised to facilitate an individual's functioning at home rather than being depleted.

7.2.1.3   Third aim: To conceptualise employee engagement and its dimension

The third aim, namely, to conceptualise the nature of employee engagement (vigour, dedication and absorption) was achieved in chapter 4. The following conclusions were drawn:

- Employee engagement is a relatively new concept within the academic communities. It is viewed by practitioners as positive work-related outcomes that an organisation needs to instil in order to reap the benefits such as increase in productivity and profitability and decrease in turnover. It should be noted that the Gallup conceptualisation of employee engagement focuses more on the connection with both the organisation and revenues, thereby ignoring the human capital which drives such a connection.

- A common theme among these definitions is that employee engagement goes beyond job satisfaction, organisational commitment, job involvement, and organisational citizenship behaviour, that engaged employees give their best and are enthusiastic; they invest extra effort which goes beyond their given role.

- The concept of engagement resonates with the area of positive organisational behaviour aimed at enhancing wellbeing at work. Employee engagement is conceptualised as a persistent and pervasive affective motivational state that is not focused on any particular object, event, individual, or behaviour. It is characterised by three dimensions, namely, vigour, dedication and absorption (Schaufeli et al., 2002).

    - Vigour is characterised by high levels of energy and mental resilience, the willingness to put effort in one's work, and having persistence even in times of difficulties. Shirom (2003) defines vigour as an individual's feeling that they possess physical strength, emotional energy and cognitive liveliness. Shirom's (2003) definition of vigour refers to an affective state that an individual attributes to their job and workplace. This dimension can also be drawn from the view that individuals share a basic

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motivation to obtain, retain and protect the things they value, such as resources (Hobfoll, 2011).

+ Dedication is characterised by feelings of significance, enthusiasm, inspiration, pride and challenges. The motivational process guiding dedication includes working hard and giving the best that one can at work as well as taking initiatives at work for solving problems.

+ Absorption is characterised by being fully concentrated on and deeply engrossed in one's work. Time passes quickly and such people experience difficulty in detaching themselves from their work. This dimension has been conceptualised as a motivational construct that resembles flow, the holistic sensation that people feel when they act with total involvement.

7.2.1.4 Fourth aim: To conceptualise the nature of the relationship between personality traits, work-life balance and employee engagement

The fourth aim, namely, to determine the nature of the theoretical relationship between personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interactions) as determinants of employee engagement (work enthusiasm and work occupied) was achieved in chapter 4.

The following conclusions were drawn:

Within the context of the review of the literature, both personality traits and work-life balance (measured by work-home interaction) were, to certain degree, found to relate positively to employee engagement. There are mixed results in terms of which personality traits really have an impact on the level of employees' cognitive abilities to commit and exert effort in their work activities. Langelaan et al (2006) and Kim et al (2009) have shed some light in terms of which personality dimensions can actually

influence engagement at work. For instance, employee engagement has been conceived to predict the primary function of some personality factors, namely, neuroticism and more energised forms of extraversion and conscientiousness (Langelaan et al., 2006; Mostert & Rothman, 2006; Sonnentag et al., 2008). Individual personality attributes such as an autotelic personality and, conscientiousness play a vital role in terms of improving, motivating and persuading employees' behaviour towards a particular goal attainment (Macey & Schneider, 2008; Xanthopoulou et al., 2007). Arguably, understanding key indicators that could drive certain employees to actively engage while others disengage is relevant for an individual's personal growth and development as well as the organisational effectiveness in particular. In other words, understanding personality traits and their relationship with employee engagement is important because it contributes to the theoretical basis of the construct.

On the contrary, there appears to be an abundance of research examining the negative consequences of work-home interference as compared to the positive work-home interface. The positive work-home interface emerges as a result of the positive psychological movement which shifted focus to examining the interference of both the work and home environment. Work-life balance is described as anything from achieving a state of equilibrium in both the time and emotional demands between work and personal life, to finding meaningful daily achievement and enjoyment in all parts of one's life (Guest, 2002). This implies that people's life can be considered unbalanced, particularly when the amount of time spent at work causes some sort of conflict or stress in other areas of life.

Conversely, Meijman and Mulder (1998) argue that work and family demands are not necessarily negative for individuals, provided the opportunity to recover from the effort expended to meet those demands are made avaiable. This implies that recovery in the form of complete psychological detachment from any work activities takes place at home in order to allow an individual to recuperate from stressful situations experienced during the day at work. Such a state of recovery can enable employees to become mentally resilient and fully immersed in their work the next day.

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7.2.1.5   Fifth aim: To propose a conceptual model of employee engagement, work-life balance and personality traits in the organisational context

The fifth aim, namely, to propose a hypothetical theoretical relationship between personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interactions) as the determinants of employee engagement (vigour, dedication and absorption) was achieved in chapter 4.

It is imperative that the theoretical model for the relationship between personality traits, work-life balance and employee engagement be incorporated into human resource systems, as an understanding of employees' personality attributes and the work-home interface can be used as strategies to inform employee engagement within the workplace, taking into account the acceleration of information technology (digital workplace) as well as the new job incumbents' lifestyles as key factors that can drive employee engagement.

As previously mentioned employee engagement has been associated with an increase in productivity and loyalty and lower levels of turnover. Therefore, failing to address issues that can advance engagement in the workplace can most possibly lead to greater disengagement and alienation, which can have implications for organisational revenues in terms of recruitment, placements and selection of a new talent pool.

7.2.2   Conclusions regarding the empirical study

The study was designed to empirically investigate the following aspects:

1.   To empirically determine the nature of the statistically interrelationship between personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance (negative work-home interaction, positive work-home interaction, negative home-work

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interaction and positive home-work interactions) as the determinants of employee engagement (vigour, dedication and absorption). This was achieved by empirically testing research hypotheses H01 and Ha1.

2.   To empirically determine the nature of overall statistical relationship between personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interactions) as a composite set of independent latent variables and employee engagement (vigour, dedication and absorption) as the dependent variable. This was achieved by empirically testing research hypotheses H02 and Ha2.

3.   To empirically determine whether or not the variables of personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interactions) positively and significantly predict the employee engagement variable (vigour, dedication and absorption). This was achieved by empirically testing research hypotheses H03 and Ha3.

4.   To empirically determine whether or not the theoretical personality traits and their dimensions (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance and its dimensions (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interactions) as well as employee engagement and its dimensions (vigour, dedication and absorption) model has a good fit between the elements of the empirically manifested structural model and the theoretically hypothesised model. This was achieved by empirically testing research hypotheses H04 and Ha4

5.   To empirically determine whether or not the various biographical characteristics (gender, generational cohort, job functional level, economic sector) significantly moderated the relationship between personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and employee engagement and its dimensions (vigour, dedication and absorption), as well as work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interactions) and employee engagement and its dimensions (vigour, dedication and absorption). This was partially supported by empirically testing research hypotheses H05 and Ha5.

6.   To empirically determine whether or not significant differences exist between the sub-groups of the various biographical variables that acted as significant moderators between personality traits and its dimensions (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance and its dimensions (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interactions) as well as employee engagement and its dimensions (vigour, dedication and absorption) as manifested in the survey participants. This was partially supported by empirically testing research hypotheses H06 and Ha6.

7.   To formulate recommendations and implications in terms work-life balance, the big five personality traits and employee engagement and for future research. This aspect is addressed in this chapter.

7.2.2.1   *First empirical aim: To empirically investigate the nature of the*
                statistically interrelationship between personality traits (agreeableness,
                extraversion, conscientiousness, resourcefulness and emotional
                stability) and work-life balance (negative work-home interaction,
                positive work-home interaction, negative home-work interaction and
                positive home-work interactions) as the determining factors of employee
                engagement (vigour, dedication and absorption) as manifested in a
                survey of participants employed in various economic sectors in South
                Africa.

The empirical results provide supportive evidence for research hypotheses Ha1. Based on the significant relationships found between the participants' personality traits and work-life balance and employee engagement, the following specific conclusions were drawn:

- Participants who scored high on work enthusiasm and work occupied indicate their enthusiasm, energy, resilience and are deeply engrossed in their work roles to such extent that time flies without them noticing. Such participants clearly demonstrate the attributes of a highly engaged employee. According to Bakker et al (2008) resilience is considered as the main key indicator for employee engagement on the basis that individuals who are resilient are able to successfully control their environment, which gives the tendency to pursue their goals. Such individuals are also willing to go the extra mile and persist in adverse situations to complete their tasks. In addition, participants with a high level of energy and enthusiasm are generally preoccupied with their work to such extent that they do not notice the passing of time. Engaged employees generally feel a sense of pride in being associated with their organisation.

- The results indicated a significant and positive relationship between positive work-home interaction and the employee engagement variable, suggesting that participants who perceive a favourable relationship between their work and home are able to increase their discretionary effort at work. A positive

perception towards positive work-home interaction and engagement demonstrates that participants are better able to transfer the resources and skills acquired from the work environment to facilitate functioning of the home environment with limited friction. According to Hanson et al (2006) the transfer of positively valenced affect, skills, behavior and values can promote better role performance in the directed domains, leading to greater satisfaction and engagement. Participants exhibit the proclivity to benefit from positive resources, experiences and emotions generated which enhance their self-beliefs and self-perspective to complete tasks and accomplish goals, and ultimately contribute to their ability to successfully respond to multiple role demands.

- The significant negative relationship observed between negative home-work interaction and employee enagement demonstrates that home environment negatively impact on the functioning of the work environment. The negative home-work interaction involves aspects of the home domain that impair performance and productivity at work as a result of limited time and energy to amicably juggle both domains (Rothmann & Baumann, 2014). In addition, Rantanen et al (2011) indicate that ignoring one's spouse's emotional concerns and avoiding private life responsibilities such as caring and nurturing children can escalate into constant intereference which can ultimately negatively affect job performance as a result of worsening moods.

- The results indicated a significant and positive relationship between positive home-work interaction and the employee engagement variable, suggesting that participants who perceive a favourable relationship between their home and work are able to increase their discretionary effort at work. A positive perception towards positive home-work interaction and engagement indicates that participants are better able to transfer the resources and skills acquired from the work environment to facilitate functioning of the home environment with limited friction.

- The significant and positive relationship observed between agreeableness and engagement suggests that participants who care for others' well-being are able

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to handle conflict. In terms of fostering employee engagement, key drivers of engagement need to find their job challenging enough to motivate others.

- A significant and positive association was found between extraversion and engagement. The results suggest that participants who are assertive, talkative, cheerful and sociable are naturally energetic, enthusiastic and action oriented. Extravert people can generally influence and motivate other people in a particular direction. It is often hypothesised that cheerful and assertive individuals can improve the working environment, while at the same time increase the work productivity and quality.

- A positive relationship was observed between conscientiousness and engagement that reflects people who are most likely to apply discretionary effort in order to complete prescribed tasks. Such individuals are diligent in their work activity and less likely to assign any portion of their work to other individuals in the workplace. As such, engaged employees are those who give full discretionary effort at work, and are highly vigorous and dedicated to their job. This differs from those that feel disengaged and disconnected from their work responsibility (Bakker et al., 2008) and who are lazy and careless in terms of meeting the deadlines. The relationship between conscientiousness and engagement is also reported by Bakker, Demerouti and Ten Brummelhuis (2011) as a quality of the main affects on performance.

- The result indicated a positive significant relationship between resourcefulness and engagement, suggesting that participants are innovative and adapt easily to changing demands at work. Such people are flexible, creative and intellectually oriented as well as actively pursue novel and cognitively stimulating experiences. Certainly participants with imatinative personality and analytical thinking are able to craft and redesign their own work thereby increasing their engagement at work.

- Individuals who scored high on emotional stability and engagement demonstrate that they are calmer, confident and satisfied in their work. Although engagement goes beyond satisfaction with work roles, emotionally stable participants who are content with their work and the well-being of their organisation are less likely to resign or look for alternative jobs elsewhere. Instead, they are persistent to complete their work tasks in a less stressful manner because they enjoy their work.

Conclusion: The constructs personality traits and work-life balance significantly and positively relate to employee engagement. This implies that higher levels of personality traits and work-life balance could imply higher engagement levels, which could prompt organisations to pay more attention to factors such as person-job fit and social support, notwithstanding taking into consideration other factors such as gender, generational cohorts and functional job level. In addition, a significant negative association between negative home-work interaction and engagement was also observed, suggesting that the home environment interferes with the functioning of the work environment. It should be noted that the correlation does not imply causation, but merely gives some insight into key strategic areas which organisations could consider as potentially impacting on enhanced employee engagement.

7.2.2.2 *Second empirical aim: To determine the overall statistical relationship between personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interactions) as a composite set of independent latent variables and employee engagement (vigour, dedication and absorption) as the dependent variable.*

The empirical results provide supportive evidence for research hypotheses Ha2. The following overall conclusions were drawn:

- Of the five personality traits, agreeableness, conscientiousness and emotional stability appeared to strongly correlate with employee engagement. In addition, all four dimensions of work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction) exhibited the highest correlation with employee engagement. The following overall conclusions were drawn in this regard:

- A high score of agreeableness reflects a person who is interested in serving others and has a tendency to challenge the status quo. Such people are most likely to effectively motivate and encourage others thereby fostering teamwork, which predisposes participants to reflect on their inner drives, thus ultimately engaging in their work roles. Tendency towards agreeableness clearly shows that individuals prefer to work in a collectivistic environment with others towards common goals. Personality characteristics associated with being kind to others, cooperative, trustworthy and sympathetic could be linked with an engaged employee.

- Participants who scored high on conscientiousness are inclined towards task completion and are achievement-orientated. Such people are generally organised, disciplined, diligent, dependable, and take initiative in solving problems, remain committed to work performance and comply with policies (Matzler et al., 2011, McCrae & John, 1992). Personality characteristics such as organising ability and being achievement driven may be viewed as aspects that facilitate engagement at work. An engaged employee is viewed as someone who often shows excellent performance and is more creative in his/her work (Bakker et al., 2008; Mäkikangas, et al., 2014; Schaufeli & Bakker, 2004a; 2010).

- Individuals who score high on emotional stability are generally confident and satisfied when applying their mind to work-related tasks, inspite of unpleasant circumstances or challenges they are confronted with; they are persistent in

order to succeed in their tasks. In addition, individuals with high emotional stability are not easily distracted by external factors as compared to those with low emotional stability who are often nervous and worried about others' opinions as well as defensive when performing their work-related activities (Barrick et al., 2013; Robbins & Judge, 2015).

- A positive perception towards positive work-home interaction and positive home-work interaction points to the fact that participants find synergies in participating and transferring resources and knowledge as well as energy to better perform functions related to the work and home domains with limited interference. This in turn may enhance performance in both the work and home environment. In addition, positive spillover between work and home could also imply those individuals are most likely to receive the necessary social support from colleagues and at home. Prior studies have established that supportive work-life practices and perceived flexibility have a strong, independent, and positive relationship with employee engagement and retention (Richman et al., 2008).

Conclusion: The dimensions of personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interactions) of individuals are significantly positively and negatively related to the dimensions of employee engagement (vigour, dedication and absorption). Specifically, agreeableness, conscientiousness, emotional stability, positive work-home interaction and positive home-work interactions exhibited the strongest predictors of personality traits and work-life balance.

7.2.2.3 *Third empirical aim: To empirically assess whether or not the personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interactions) positively and significantly predict employee engagement behaviour (vigour, dedication and absorption).*

The empirical results provide supportive evidence for research hypotheses Ha3. The following overall conclusions were drawn:

⚜ The results indicate that positive work-home interaction plays an important role in explaining employees' level of engagement at work due to the presumed support received from both colleagues and supervisors. In addition, employees who exhibit more positive work-home interaction are able to transfer the knowledge and skills acquired from the work environment to better facilitate home-related activities.

⚜ The results indicate that negative work-home interaction plays an important role in showing that engaged employees do get tired, 'drained' and 'used up' after a working day due to exposure to high job demand and low control/resources that increase an individual's need for recovery, which in turn, leads to subjective health complaints. In addition, the negative work-home interaction entails negative load effects (behavioural, physiological, emotional reaction to work demands and their magnitude is contingent upon decision latitude and work potential) that are built up from the work environment (fatigue after work) and interfere with responsibilities in the home environment.

⚜ The results indicate that positive home-work interaction plays an important role in explaining employees' level of engagement due to the support employee receive from the home environment. This in turn, is also likely to be associated

with extra resources such as skills and opportunities that might improve or facilitate functioning in the work environment.

 The results indicate that negative home-work interaction refers to the negative load effects (behavioural, physiological, emotional reaction to work demands and their magnitude is contingent upon decision latitude and work potential) that are built up from the home environment which interfere with the functioning and performance in the work environment. This, in turn, means that if an employee has had insufficient opportunities for recovery, she or he will start the day suffering from residual work-induced fatigue which may result in inactive engagement at work.

 The results indicate that conscientiousness plays an important role in explaining the level of employee engagement. Participants who score high on conscientiousness are better able to plan and organise themselves, as well as take control of the amount of time (energy and resources) required to complete certain tasks, especially to increase efficiency, effectiveness and productivity. In other words, time management is of paramount importance to conscientious people because they need to structure and plan the work ahead. Conscientious people are predetermined to do thorough work and persevere in order to finish tasks at the allotted time.

 The results indicate that resourcefulness plays an important role in explaining the level of employee engagement. The behavioural tendency to be resourceful or open to new ideas plays an important role in explaining employees' level of engagement. This tendency allows people to be creative in terms of structuring their work-related activities. In addition, people who score high on resourcefulness are better able to craft or redesign their own work, thereby increase their engagement.

 The results indicate that emotional stability plays an important role in explaining employees' level of engagement in the sense that it gives people the ability to

remain calm and have confidence in their work-related activities, so as to avoid making mistakes. Emotional stability, in turn, echoes positive psychology which emphasises the importance of healthy people who are able to assist their organisations to reap benefits such as increased job satisfaction, organisational commitment, motivation and low turnover.

Conclusion: The constructs personality traits and work-life balance variables positively and significantly predicted employee engagement behaviour. In addition, work-life balance, in particular, negative home-work interaction, was found to negatively and significantly predict the employee engagement behaviour as manifested by the survey participants. This suggests that certain home-related aspects, or lack of sufficient recovery at home following the work demands of the previous day, interfers with the optimal functioning of the individual in the work environment.

7.2.2.4   Fourth empirical aim: Based on the overall statistical relationship between personality traits and its dimensions (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance and its dimensions (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interactions) and employee engagement and its dimensions (vigour, dedication and absorption) to assess whether there is a good fit between the elements of the empirically manifested structural model and the theoretically hypothesised model

The empirical results provide supportive evidence for research hypotheses Ha4. The following overall conclusions were drawn:

✦   The results indicate that employee engagement behaviour can be influenced by work-life balance, particularly positive work-home interaction and positive home-work interaction, in the sense that the knowledge, skills and learning acquired from each domain could facilitate performance in the other domain. For example, resources generated from work such as time management and

planning skills could be transferred effectively through scheduling practices at home.

♣ The results indicate that employee engagement behaviour can be influenced by the all dimensions of personality traits, namely, agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability. Personality traits are conceived as relatively stable and long-lasting aspects that have a strong influence on human behaviour (Ewen, 2010; Barrick et al., 2013). Individual personality is considered more or less enduring and stable charateristics and patterns of thinking, feeling and acting manifest themselves across time and situations (McCrae & Costa, 2003).

Conclusion: The constructs personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance (positive work-home interaction and positive home-work interactions) constitute a model that may be used to foster levels of employee engagement in the work context. The model includes elements of work-life balance and personality traits that must be considered when designing work characteristics.

The path diagram for the research model is illustrated below in Figure 7.1.
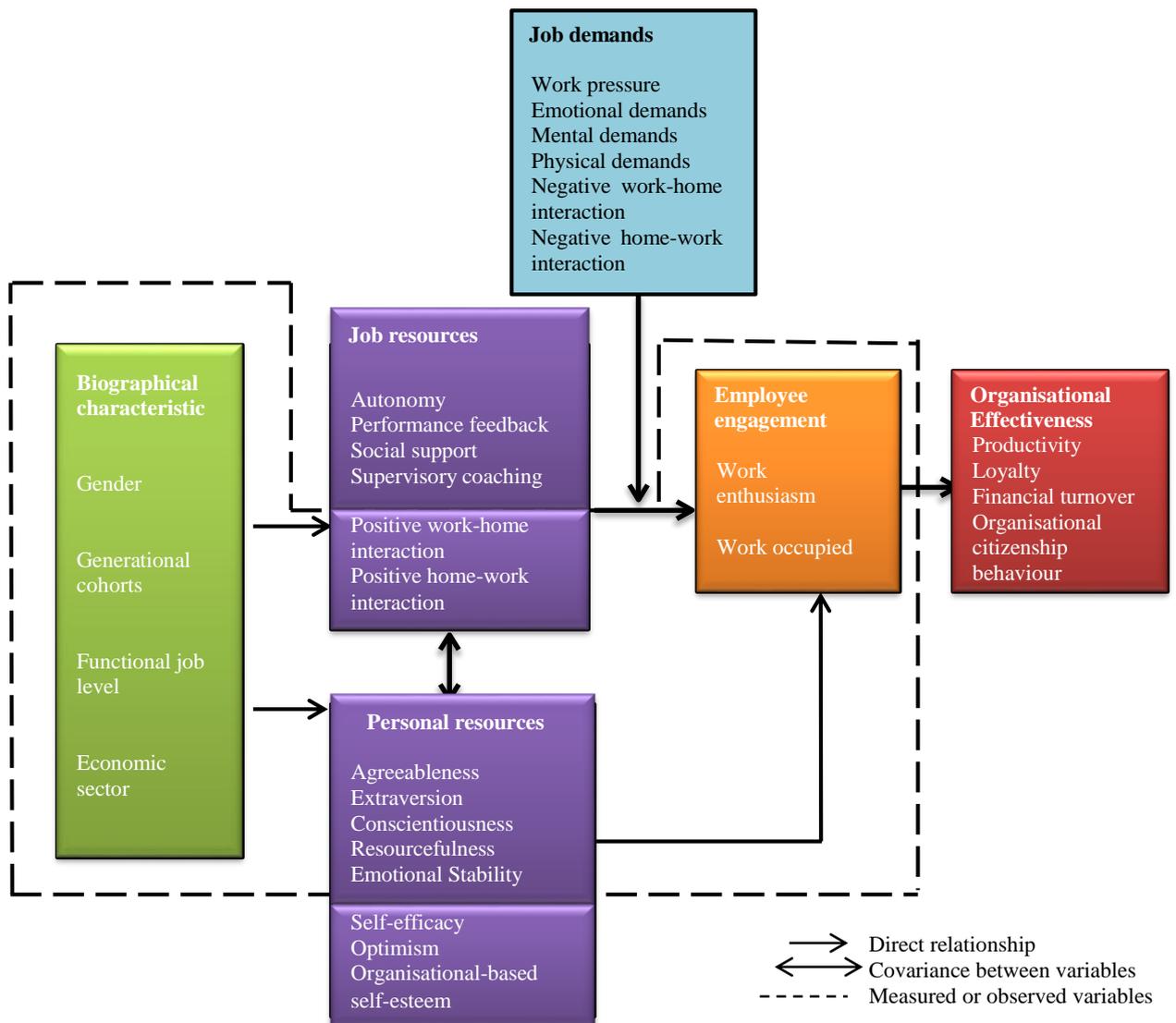
Figure 7.1.   *Model of the overall statistical relationship between personality traits and its dimensions (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance and its dimensions (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interactions) and employee engagement and its dimensions (vigour, dedication and absorption)*

As depicted in Figure 7.1, work-related well-being of an employee can be explained with reference to the job demand and job resources as proposed by Bakker and Demerouti (2007; 2008) as a useful framework to understand how employee engagement can be fostered within the organisation. Accordingly, job demand-resources have been used to explain how job resources affect an employee's level of

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engagement. In addition, the model has been expanded to include personal resources. Based on the expansion of the JD-R model, employee engagement inherently emanates from the motivating nature of resources distinguished by job and personal resources. Job resources are aspects of the job that are functional in achieving work goals, stimulating personal growth and development and reducing job demands (Bakker & Demerouti, 2007; 2008; Schaufeli, 2013).

Therefore, the job resources entail aspects such as autonomy, performance, social support and supervisor coaching, as well as positive work-home interaction and positive home-work interaction. For instance, the social support employees receive from the work (supervisors and colleagues) and home environment (spouse and family) enables them to be mentally resilient and fully immensed in their work activities. Hobfoll (2002) maintain that job resources are not only necessary for dealing with job demands and getting things done, but are instrumental in fostering individual growth, learning and development. They play an extrinsic motivational role that helps individuals achieve working goals. Furthermore, available and accessible resources are associated with positive organisational outcomes through employee engagement. On the contrary, the absence of sufficient job resources to perform the job effectively could threaten and trigger an increase in the amount of stress employees experience during work activities, resulting in disengagement.

Personal resources relate to aspects of the self that are associated with resilience. They refer to the individual's sense of the ability to control and influence his or her environment successfully ((Bakker & Demerouti, 2008; Ouweneel et al., 2012; Schaufeli, 2013). These personal resources are also responsible for stimulating personal growth and development, achieving goals and protecting an individual from threats and the associated physiological costs. Perceptions of personal growth, learning and development tend to empower employees in that they feel they can succeed in job roles, leading to feelings of self-efficacy, intrinsic motivation and engagement. In this study, the personal resources that were tested include the big five personality traits, namely, agreeableness, extraversion, conscientiousness, resourcesfulness and emotional

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stability. All the five dimensions of personality traits have been empirically found to affect the level employee engagement.

Job demand refers to aspects of the job that require sustained physical and/or psychological effort and are, therefore, associated with physiological and/or psychological costs. Voydanoff (2005) refers to job demands as structural and psychological claims associated with role requirements, expectations and norms, which individuals are required to respond to by utilising physical and mental aspects of an individual. Typical aspects related to the job demands include, among others, work pressure, emotional demands, mental and physical demands, negative work-home and home-work interaction (Bakker et al., 2010; Mauno et al., 2007). It has been stated previously that job demands do not necessarily relate to negative outcomes, but could turn into job stressors when employees fail to meet the demands of both the work and home environment (Meijman & Mulder, 1998; Moshoeu, 2016). In addition, job demands can become stressors as a result of limited recovery from the effort expended to meet the demands of the work and home environment.

The biographical characteristics which include gender, generational cohorts, job level and economic sectors identified specific variables that can have an influence on the level of employee engagement.

Other related aspects not measured in the current study includes self-efficacy, optimism and organisational-based self-esteem thatwhich are encapsulated in the self-concepts (personal resources) and have been recognised as fundamental components of individual adaptability (Xanthopoulou et al., 2007). Self-efficacy refers to the individual's perceptions of their ability to meet demands in a broad array of contexts (Xanthopoulou et al., 2007). It holds strong beliefs in an individual's ability to execute tasks in order to achieve the desired goals. Optimism refers to the tendency to believe that an individual will generally experience good outcomes in life, which increase the propensity to take action and deal with threats. (Xathopoulou et al 2007). Organisational-based self-esteem (OBSE) refers to self-appraisal of being competent, meaningful and important, which manifests itself in participating in activities of the

employed organisation. Pierce, Gardner, Cummings and Dunham (1989) define OBSE as the degree to which organisational members believe that they can satisfy their needs merely by participating in roles within the context of the organisation. In line with the job demand-resources model, resources energise individuals, encourage their persistence and make them focus on their efforts.

Another aspect not measured in the current study includes organisational effectiveness. There is an abundance of literature that shows that employee engagement predicts employee outcomes, organisational success and financial performance (Baumruk, 2004, Harter et al., 2002). It has been established that the positive impact of employee engagement can manifest itself through increased productivity and loyalty as well as discretionary efforts. Harter et al (2002) maintain that highly engaged employee consistently deliver beyond the expectations. This is due to the fact that engaged employees have high levels of energy, are enthusiastic about their work and they are often fully immersed in their job so that time flies (Macey and Schneider, 2008; May et al., 2004), they are less likely to voluntarily leave the organisation or absent themselves from work.

In addition, it has been established that employee engagement increases organisational revenues. As previously mentioned, Schwartz (2010) indicated that, organisations with high employee engagement have the propensity to increase their operating income relative to organisations with low levels of employee engagement. A study conducted by Harter et al (2009) among 955 000 respondents clearly shows that engagement accounted for an estimated 78% of the variance in profitability across 17 339 business units.

7.2.2.5   *Fifth empirical aim: To empirically assess whether or not the various biographical variables (gender, generational cohort, functional job level, economic sector) significantly moderate the relationship between personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and employee engagement and its dimensions (vigour, dedication and absorption) as well as work-life balance (positive work-home interaction and positive home-work interaction) and employee engagement and its dimensions (vigour, dedication and absorption)*

The empirical results provide supportive evidence for research hypotheses Ha5. The following overall conclusions were drawn:

(a)   Conclusions regarding differences in terms of gender differences:

The results indicate that gender does not act as a significant moderating variable for the relationship between agreeableness, extraversion, conscientiousness, resourcefulness, emotional stability, positive work-home interaction, positive home-work interaction as composites of independent variables and work enthusiasm and work occupied as dimensions of employee engagement variable. This finding implies that experiences of work-home interaction, whether positive or negative were identical for male and female participants. In addition, the finding implies that male and female participants share similar characteristics when engaged at work.

(b)   Conclusions regarding differences in terms of generational cohorts:

* The results indicate that generational cohorts may significantly moderate the relationship between personality traits and employee engagement. Individuals who were born between 1946 and 1964 were more engaged at work relative to those born between 1965 and 1977 and those born between1978 and 2000.

- The results indicate that generational cohorts may influence an individuals' conscientiousness. Participants in all generational cohorts scored the highest on conscientiousness which reflects the attributes of being responsible, dependable and goal-directed to complete specific tasks associated with engagement. Conscientiousness has been associated with job performance, particularly, contextual performance in all occupational settings with the intention of achieving prescribed goals (Barrick & Mount, 1991; Sutherland et al., 2007; Templer, 2012).

- The results indicate that generational cohorts may influence the tendency towards new ways of doing things (resourcefulness). Participants born between 1946 and 1964 show willingness and a tendency to learn and adapt to new ways of working, such as usage of digital devices or information technologies that enable work-related tasks to be conducted anywhere other than the organisational central offices.

- The results indicate that generational cohorts may influence an individuals' emotional stability because participants who were born between 1946 and 1964 seemed to be highly engaged in their work activities in comparison to those born between 1965 and 1978 and those in 1977 and 2000. This finding has been confirmed by a remarkable number of studies. It could be inferred that participants, among those born between 1977 and 2000, who are not engaged or are actively disengaged can create serious challenges within the organisation, particularly with regard to recruitment and the retention of highly skilful talents.

(c)   Conclusions regarding differences in terms of functional job level:

Functional job level significantly moderates the relationship between work-life balance (positive work-home interaction and positive home-work interaction) and personality traits (conscientiousness and emotional stability) and employee engagement.

- The results indicate that top management level significantly moderates the relationship between individuals' perception of positive work-home interaction and employee engagement. When employees have enough resources in terms of family/colleague support, they are better able to balance the demands from the work and home environment, thereby foster positive interaction between the two environments, leading to higher levels of engagement (Mostert, 2006). In addition, Rothmann and Baumann (2014) found that fulfilling multiple roles may produce resources such as energy mobilisation, skill, and greater self-esteem that facilitate functioning in both the work and home domains. Therefore, balancing home and work can be an effective way of optimally assisting top management to structure their resources (time and energy) accordingly.

- The results indicate that the executive management level significantly moderates the relationship between conscientiousness and level of engagement experienced. This finding suggests that executive managers scoring high on conscientiousness have the behavioural tendency to achieve.

- The results indicate that managers may influence individuals' perception of emotional stability, conscientiousness and, in turn, may impact on individuals' perception of positive home-work interaction. It should be noted that managers are constantly being confronted with challenges regarding how precisely organisations can engage the workforce, although literature points towards the background knowledge and expertise of managers to drive and enhance initiatives that would foster engagement in the workplace. Gibbons (2006) states that there is general consensus that first-line supervisors and managers have a great influence on employee engagement.

(d) *Conclusions regarding differences in terms of economic sectors*:

Economic sectors significantly acted as a moderate on the relationship between personality traits (conscientiousness and emotional stability) and employee engagement.

✚ The results indicate that participants in the transport, storage and communication and the financial, intermediation, insurance, real estate and business service sectors significantly moderated the relationship between conscientiousness and employee engagement. However, although a significant interaction in terms of conscientiousness and employee engagement was observed for participants in the transport, storage and communication, other economic sectors such as those in the the financial, intermediation, insurance, real estate and business service scored higher than them. This suggests that conscientiousness is not the strongest attribute for participants in the transport, storage and communication as compared to those participants in the financial, intermediation, insurance, real estate and business service sectors.

✚ Furthermore, the results indicate that participants in the transport, storage and communication significantly moderated the relationship between emotional stability and level of employee engagement. Participants in the transport, storage and communication had a higher level of emotional stability, which indicates their general level of tolerance for stress, resulting from the nature of their job.

7.2.2.6   *Sixth empirical aim: To assess whether significant differences exist between the sub-groups of the various biographical characteristics that acted as significant moderators between work-life balance and its dimensions (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interactions) and big five personality traits dimensions (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and employee engagement and its dimensions (vigour, dedication and absorption) as manifested in the survey participants.*

The empirical results provide supportive evidence for research hypotheses Ha6. The following overall conclusions were drawn:

(a)   Gender

The empirical analysis indicated that gender contributed to differences in the scores of emotional stability, suggesting that male participants in various industries were calmer and more satisfied with their work activities as compared to their female counterparts.

The empirical analysis indicated that gender contributed to differences in terms of the scores of employee engagement, suggesting that males were more engaged than females in their work roles.

The results indicate that gender does not differ between work-life balance (positive work-home interaction and positive home-work interaction) and personality traits (agreeableness, extraversion, conscientiousness and resourcefulness).

Conclusion: Significant mean differences exist in terms of gender and the relationship between personality traits and employee engagement.

(b)   Generational cohorts

The findings indicate that participants born between 1946 and 1964 were highly engaged in their work roles as compared to other participants in the generational cohorts. It could be speculated that older people have the necessary skills and knowledge (personal resources and energy) to perform and complete the required task, and possibly are able to transfer such skills and knowledge to better perform functions in the home environment.

The findings indicate that participants born between 1946 and 1964 contributed to differences in the scores of positive work-home interaction. This suggests that participants born between 1946 and 1964 are better able to balance the responsibilities and requirements of both the work and home domains with minimum conflict. It could be that participants have well-established emotional support from their collegaues to such extent that they can delegate some load reaction to others.

Conclusion: Significant differences exist in terms of generational cohorts and the relationship between work-life balance and employee engagement.

(c)   Functional job level

The results indicate that participants at top management levels scored higher on positive work-home interaction than other functional job levels. This suggests that participants who possess a high degree of autonomy such as top management, are able to regulate their level of effort by controlling the pace of work and switching to less demanding tasks. In other words, job autonomy can be used to schedule work in an efficient way, thereby allowing participants sufficient time to perform other responsibilities.

The results also indicate that participants at executive management levels have a strong perception of conscientiousness. Conscientiousness has been positively associated with job performance (Barrick & Mount, 1991). In similar vein, Luthans and Youssef (2007) maintain that individuals with a goal self-concordance personality are intrinsically

motivated to pursue their goals and as a result, trigger high performance and satisfaction.

The results indicate that participants at managers' level scored lower on emotional stability as compared to participants at other functional job levels. This finding demonstrates that particiapnts at managers' level are insecure and worried. They lack the confidence to carry out their duties independently.

The results indicate that there is interaction effect among participants at managers' level in terms of the relationship between positive home-work interaction and employee engagement. If the home demands are high, the amount of physical, cognitive and emotional resources required to execute work activities can become depleted and thereby decrease the feeling of engagement.

Conclusion: There is significant interaction effect in terms of functional job level and the relationship between personality traits (extraversion, conscientiousness, resourcefulness and emotional stability) work-life balance (positive work-home interaction) and engagement (vigour, dedication and absorption).

(d)   Economic sectors

The empirical analysis indicates that economic sector differences contribute to differences in the score of participants in the wholesale and retail trade industries. The results indicate that participants with the tendency to socialise and interact with each other are more likely to direct their energy towards pursuing their goals and are better suited for the retail jobs involving high social interaction.

The results indicate that participants within the wholesale and retail trade scored the highest in terms of resourcefulness. Employees scoring high on these traits are deemed to be better suited for the retail jobs involving high social interaction. They are more likely to perform better at rapport and relationship building as well as social networking.

Conclusion: Significant differences exist between economic sectors and personality traits and employee engagement.

7.2.3 Conclusions regarding the central hypothesis

The constructed and tested model explains the relationship between personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability), work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction) and employee engagement (vigour, dedication and absorption). Furthermore, individuals of different biographical variables such as gender, generational cohorts, functional job level and economic sectors have different levels of work-life balance, personality traits and employee engagement. In view of the statistical significant in the empirical results for the central hypothesis thereof, the hypothesis is, therefore, partially accepted.

7.2.4 Conclusions about the contribution of the study to the field of industrial and organisational psychology

The general conclusions are drawn on the basis of the literature review, empirical study and employee engagement construct.

7.2.4.1 Conclusions in terms of the literature review

The findings in the literature review contributed to the field of industrial and organisational psychology, particularly with respect to employee engagement. The literature provided new insights in terms of the associations between employee engagement (vigour, dedication and absorption) and work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction) and personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability).

The literature reviews also provided relevant information on employee engagement, thereby contributing a new understanding on this construct. The current study added significant value by advancing the existing literature through its provision of new insights into the way in which employee engagement (vigour, dedication and absorption) and work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction) and personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) are related. As a result, the outcomes of the literature, a theoretically constructed model indicated which aspects of personality traits and work-life balance that must be considered when designing the employee engagement strategies.

7.2.4.2 *Conclusions in terms of the empirical study*

The statistical relationship identified between personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction) and employee engagement provided advanced knowledge in terms of employee engagement in the workplace.

- The correlational analyses revealed that individuals' perception of work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction) and characteristics of personality (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) are significantly related to employee engagement behaviour (vigour, dedication and absorption). This suggests that certain attitudinal and behavioural aspects relating to work-life balance (positive work-home interaction and positive home-work interaction) and personality traits respectively (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) should be incorporated into any intervention strategies that promote engagement in the workplace.

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- The canonical correlation analysis, which is the extension of the Pearson moment correlation coefficients, confirmed the overall relationship between work-life balance and personality traits variables and employee engagement. Specifically, the canonical correlation analysis identified key indicators that exhibited the strongest influence on the overall relationship with employee engagement variables such as positive work-home interaction, negative home-work interaction and positive home-work interaction (work-life balance) and agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability (personality traits).

- The standard multiple linear regression analysis further confirmed the statistical effects of work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction) and personality traits (conscientiousness, resourcefulness and emotional stability) variables that acted as the most significant predictors of employee engagement behaviour.

- The structural equation modelling analysis assisted in the empirically constructed model and tested the best model fit for the constructed personality traits and work-life balance that can be used to develop strategies to enhance employee engagement behaviour. The structural model (empirically tested personality traits and work-life balance) emphasises that agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability (personality traits) and positive work-home interaction and positive home-work interaction (work-life balance) should be considered when formulating engagement intervention strategies, particularly in the recruitment and retaining highly skilful talents.

- Hierarchical moderated regression analyses and the test for significance mean differences were able to match the selected biographical variables with personality traits, work-life balance and employee engagement. The statistical significant results identify the central core variables such as conscientiousness,

emotional stability, resourcefulness, positive work-home interaction and positive home-work interaction and biographical variables such as generational cohorts, functional job level (top and executive management) and economic sectors (transport, storage and communication and financial, intermediation, insurance, real estate and business services sectors) that could be relied upon to increase employee engagement at work.

7.2.4.3 Conclusions for the field of industrial and organisational psychology

- With respect to personality traits, work-life balance and employee engagement, both the literature and empirical results have contributed new knowledge to the field of industrial and organisational psychology, particularly in terms of advancing the employee engagement construct. The literature review provided insights into understanding individual perception of personality traits and work-life balance in general. The interrelationship between personality traits, work-life balance and employee engagement provided new knowledge on the psychological states of engagement which could be used to streamline recruitment and staffing within the industries.

- Engagement is an important variable of interest to organisations due to its association with employee outcomes and organisational performance. Previous studies (Gallup research in SA) have shown that approximately 91% of employees are either not engaged or are actively disengaged. Although Public Display Technologies (2015) conduct longitudinal research on engagement away from SA, they reach the same conclusion. Although an abundance of research has been conducted that shows correlation of other work-related attitudes with the engagement construct, no research has investigated the relationship between employee engagement, work-life balance and personality traits simultaneously in single study.

- Therefore, the current study intends to contribute to the literature in many ways. From a theoretical perspective, no published research has investigated the

relationship between employee engagement, work-life balance and personality traits within a single model. Identifying personality characteristics predictive of employee engagement could help organisations to more effectively identify job candidates who are likely to engage in work-related roles. Similar patterns will also apply to the relationship between employee engagement and work-life balance.

- This study can help practitioners, academics and policy-makers working in different industries and organisations to find out the most important factors that could impact on employee engagement in South Africa. This new knowledge or understanding of individual personality characteristics and work-life balance can be used to develop staffing, recruitment and selection as well as retention practice strategies within the industries in South Africa.

- The results of the current study have proved to be a source of confirmation of results of the few relationships tested earlier by the researchers in different parts of the world. Employee engagement remains one of the crucial concerns for the management of organisations. Many studies emphasise the importance of maintaining and enhancing employee engagement for the betterment of organisations. The study is also significant in filling the existing knowledge gap regarding the role of personality traits and work-life balance to leverage employee engagement. This study highlights the importance of positive work-home spillover, conscientiousness, agreeableness and emotional stability as key factors that can drive employee engagement within the South African industries.

- The study proves to be significant for its focus on employee engagement among adult working people in several industries in South Africa. The combination of different variables in the form of a model tested on a South Africa sample makes the results beneficial for the management of organisations which are considering accelerating employee engagement. The relationship between personality traits, work-life balance and employee engagement is examined.

7.3   LIMITATIONS OF THE STUDY

The limitations of the study regarding the literature review and empirical study are discussed below.

7.3.1   Limitations of the literature review

- The major limitation noted in the work-family facilitation literature relates to a lack of understanding of how work positively affects family life and vice versa and the lack of a well-established, psychometrically sound scale measuring work-life balance (Frone, 2003; Wayne et al., 2003). The literature identified relatively few established research instruments measuring both the positive and negative side of the work and home domains.

- Another limitation relates to the lack of precise meaning of employee engagement. It appears from the literature that there are large inconsistencies regarding what employee engagement entails both from the practitioners and academic researchers (Bakker & Schaufeli, 2008). Nienaber and Martins (2014) also affirm that different studies have treated the construct engagement differently, resulting in different outcomes which are not always coherent. Others refer to the confusion associated with the conceptualisation of engagement as "new wine in old bottle" (Macey & Schneider, 2008) or "conceptual bleed" (Gibbons, 2006) because of its linkage to other well-known constructs such as employee satisfaction and commitment, motivation, job involvement and organisational citizenship behaviour.

- Another limitation relates to the limited research undertaken to assess the relationship between personality traits, work-life balance and employee engagement in a single model in general and in South Africa in particular. However, there is ample research on work-life balance and employee engagement (De Klerk & Mostert, 2010; Marais et al., 2009; Rothmann & Baumann, 2014) and personality traits and employee engagement (Akhtar et al.,

2015; Inceoglu & Warr, 2012; Kim et al., 2009; Ongore, 2014). There is ample research on the environmental correlates of engagement, but little research on the relationship between personality characteristics and work-life balance as well as the dimensions of engagement. This limitation made it difficult to refer to previous studies during the interpretation of the research findings.

7.3.2 Limitations in terms of the empirical study

The following limitations were inherent in the empirical study:

- The main limitation of the empirical study was that the majority of the participants was at management levels and responsible for driving the employee engagement to the bottom-line. The study could have added more valuable insights if the sample included younger employees, whom one assumes to be the least positive and most disengaged in the workplace. However, the level of engagement varies in terms of seniority, occupations and tenure, suggesting that people tend to feel attachment and loyalty to the organisation based on the many years they have been with the organisation.

- Another limitation of the study was the reliance of sample obtained on convenience (company database). Although the sample size was large enough to increase the likelihood to generalise the results, however, the study was limited to those individual employees that are listed in the company database and thus excluded other potential respondents who were never recruited to participate in completing survey questionnaire.

- The other limitation concerned the dimensions tested in the research. It was not possible in the current empirical study to test all the possible measures that influence employee engagement as presented by research by the Rutgers Centre for Human Resource Strategy, Castellano (2015). However, in an attempt to enhance the employee engagement model, this is a possibility for further research.

- A further limitation relates to the use of a cross-sectional study which limits the possibility of confirming the causal relationship between the constructs. Future research on work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction), the big five personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and employee engagement (vigour, dedication and absorption) should consider obtaining larger samples from a single organisation as well as in terms of gender, generational cohort, functional job level, economic sector, educational qualifications, tenure, parental status and marital status, in an attempt to achieve representative and generalised research findings.

- Yet another limitation relates to the nature of the participants. The majority of the participants were at the management level and, to a certain degree, older people (those born between 1946 and 1964) that have different work values from the general employees. In addition, responses from the majority of participants may differ from the general employees who are presupposed not to be actively engaged.

- A notable limitation was the novel approach of incorporating self-reporting and observer-reporting in a single study. Self-reporting was used as a data collection tool for the two measuring instruments, namely, work-life balance (SWING) and employee engagement (UWES), whereas observer-reporting was used to assess the personality attributes in terms of the subordinate's judgement of their managers' behaviour which can be viewed as a limitation. It is generally assumed that with self-reporting, measures are susceptible to common method variance where participants tend to perceive themselves as social desirability.

7.4   ETHICAL CONSIDERATIONS

All ethical rules, regulations and procedures for conducting research involving human subjects were adhered to. Specifically, permission to conduct the research was also obtained from the Department of Industrial and Organisational Psychology and the

Ethics Committee, both at the University of South Africa (UNISA). The research participants were briefed on the objective and nature of the research and promised confidentiality and anonimity for their participation in this study. The research participants were also informed that they could opt out within a given time of the research without any explanation thereof.

The next section considers recommendations for the field of industrial and organisational psychology and future research.

7.5   RECOMMENDATIONS

Based on the findings, conclusions and the limitations of this study, the following recommendations for industrial and organisational psychology as well as for future research are given.

7.5.1   Recommendations for the field of industrial and organisational psychology

The results of this study seem to emphasise the importance of work-life balance (positive work-home interaction and positive home-work interaction) and personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) as well as employee engagement (work enthusiasm and work occupied) as key indicators of organisational effectiveness. The results also suggest several other interesting future studies on employee engagement constructs.

- Engagement levels have been linked to individual attitudes and traits such as agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability which are likely to be used as a reference for being engaged. Although, ample research does exist that links engagement with environmental factors (autonomy, feedback and support), it is unknown to what extent characteristics of personality and work-life balance would respond to the different environmental impact of engagement.

- Prior research has indicated that striving for a balance between work and home roles poses a great challenge to organisations as well as the individual employees. Thus, it is imperative for organisations to realise that younger generations entering the labour market have different expectations as compared to the older generation, who are nearing retirement. As such, organisations need to tailor their HR strategies to such an extent that aspects relating to flexibility and autonomy are implemented. Younger generations will most likely join organisations that support work-life practices. Several studies have indicated that work-life balance contributes towards employee engagement at work with regard to job satisfaction, organisation commitment and self-esteem, which in turn could contribute to high productivity and lower organisational turnover (Downes & Koekemoer, 2011; Harter et al., 2002).

- Industries and organisations considering increasing performance could focus on developing an employee engagement strategic leverage point. This study provides support for using each of the variables to develop specific and objective work-oriented interventions around employee engagement. Human resource practitioners can play an important role in designing and implementing interventions in ways that increase employee engagement and impact organisational outcome variables. In addition, human resource practitioners could, for example, carefully assist managers and supervisors in how to help employees be involved in meaningful work that fits their abilities and interests and provide the available resources in terms of support to complete their work.

- The reliance on international research instruments (UWES and SWING) has been found to be unsuitable in multicultural and multilinguistic settings like South Africa. As such, future research should undertake to use South African-based research instruments which take the language proficiency of the diverse cultural groups into account. Among others, Nienaber and Martins (2015) have developed an instrument that measures the level of employee engagement at the individual and organisational levels specifically for the South African diverse multicultural context. The instrument takes into account the different language

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and ethnic groups in order to achieve an unbiased assessment (Laher & Croxford, 2013).

7.5.2   Recommendations for future research

The findings of this study showed a need for further research in exploring the relationship between work-life balance (negative work-home interaction, positive work-home interaction, negative home-work interaction and positive home-work interaction), personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and employee engagement (work enthusiasm and work occupied). It is recommended that further research should address the following limitations inherent to this study:

- This study was cross-sectional in nature, and it was therefore not possible to ascertain the causal relationships of the variables under investigation. Longitudinal studies would thus be appropriate to determine the influence of each variable tested in this study. In addition, observers' rating in terms of work-life balance and employee engagement is recommended in order to validate the self-reporting responses from the participants.

- It is recommended that further studies make use of different methodologies, such as qualitative and quantitative, which could provide more in-depth insights into the relationship between personality traits, work-life balance and employee engagement behaviour.

- Future research should extend the constructs (work-life balance, personality traits and employee engagement) to include other constructs such as job characteristics, which include task variety, identity and significance, autonomy and feedback as well as organisational characteristics including supportive organisational culture and perception of fairness (procedural justice, distributive and interactional) which could aid in understanding and benchmarking intervention strategies. In addition, further research should also include other

job-related outcomes that might yield interesting results, such as performance of the organisation, profitability and turnover. It should be noted that employee engagement is associated with a number of factors which could be investigated as they could be valuable to the organisations.

7.6   EVALUATION OF THE RESEARCH

This study contributed at three levels to the field of industrial and organisational psychology, namely theoretical, empirical and practical levels.

7.6.1   Contribution at a theoretical level

The findings of this study have provided a new understanding of how personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance (negative work-home interaction, positive work-home interaction negative home-work interaction and positive home-work interaction) are associated with employee engagement (work enthusiasm and work occupied). The literature review highlighted the importance of considering these constructs in the design of employee engagement strategies. The approach followed by this study was original, as it integrated all these constructs in order to develop and test a model of personality traits and work-life balance as determinants of employee engagement within various industries.

Human resource management can be in a better position to align the outcomes of the relationship between personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance (negative work-home interaction, positive work-home interaction negative home-work interaction and positive home-work interaction) and employee engagement, with specific workplace policies that address work-life initiatives and psychometric assessment for new labour entrants in order to determine the person-job fit. It is recommended that these findings, especially personality traits and work-life balance and its key behavioural aspects, be used for employee engagement practices within industries.

7.6.2 Contribution at an empirical level

The findings of this study contributed to the development of an empirically tested personality traits and work-life balance behaviour model that may be used to inform employee engagement strategies among employees in different industries in South Africa. The proposed model is a new contribution to the field of industrial and organisational psychology and adds valuable knowledge and understanding to contemporary research on the personality traits and work-life balance and employee engagement that affect individuals' performance within the fragmented world of work.

The empirically tested model outlined the importance of agreeableness, conscientiousness and emotional stability (personality traits) and positive work-home interaction and positive home-work interaction (work-life balance) that should be incorporated into employee engagement strategies in order to retain and attract skilfull job incumbents, as well as increase their productivity. In addition, the study revealed that gender (male), generational cohorts (participants born between 1946 and 1964), functional job level (top and executive management), and industries (transport, storage and communication and financial, intermediation, insurance, real estate and business services sectors) acted as moderators of the relationship between personality traits (conscientiousness and emotional stability) and work-life balance (positive work-home interaction and positive home-work interaction) as well as employee engagement (work enthusiasm and work occupied). These findings add to existing knowledge that can be used to inform employee engagement strategies by identifying the biographical characteristics which should be taken into account to drive employee engagement.

7.6.3 Contribution at a practical level

This study is important and useful because of the relationships that were found between the personality traits (agreeableness, extraversion, conscientiousness, resourcefulness and emotional stability) and work-life balance (negative work-home interaction, positive work-home interaction negative home-work interaction and positive home-

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work interaction) as determinants of employee engagement. The outcomes can be useful in informing employee engagement strategies, particularly in the recruitment, selection and retaining of highly skilful talents. Specifically, the study provided practical recommendations for employee engagement practices, based on the literature review and empirical results. This study highlighted the way in which the personality traits and work-life balance variables impact on employee engagement behavior. The findings contribute significantly to the body of knowledge relating to the human resources systems that influence employee engagement.

7.7   CHAPTER SUMMARY

This chapter presented the conclusions and limitations of this study and made recommendations for employee engagement strategy and further research. The limitations were discussed with specific reference to the literature review and the empirical study. Subsequently, the recommendations for the field of industrial and organisational psychology and future studies were presented, highlighting the extent to which the results of the study provide support for work-life balance and personality traits and employee engagement in various economic sectors in a South African context.

This chapter serves to provide support for the research aim 7, namely, to formulate conclusions based on the research findings and to make recommendations for industrial and organisational psychology employee engagement, as well as for the future.

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APPENDIX A

Table 6.1

Rotated factor matrix for all items (N= 74 listwise)[a]

	Component											
	1	2	3	4	5	6	7	8	9	10	11	12
q59 A Hostile vs Peaceful	**.881**	.082	-.087	.134	.002	.011	.080	-.002	-.006	.011	.073	-.071
q60 A Mean vs Gentle	**.863**	.085	-.087	.149	.006	.017	.059	-.014	.019	.013	.099	-.093
q67 A Angry vs Happy	**.858**	.115	-.113	.099	.157	.059	-.007	.032	-.032	.019	-.027	.049
q66 A Agitated vs Calm	**.857**	.074	-.079	.151	.019	.042	-.025	.038	-.053	.018	-.029	.157
q61 A Opposing vs Cooperative	**.840**	.094	-.084	.196	.081	.064	.072	.015	.009	-.019	.028	-.064
q65 A Touchy vs Ever-tempered	**.837**	.064	-.082	.153	.055	.063	-.043	.089	-.024	-.014	-.036	.137
q58 A Insensitive vs Sympathetic	**.814**	.092	-.102	.172	.066	.075	.073	.009	.008	.010	.065	-.197
q63 ES Moody vs Stable	**.808**	.137	-.095	.206	.053	.085	-.042	.040	-.039	.010	-.071	.126
q56 A Rude vs Tactful	**.799**	.092	-.052	.191	-.038	.029	.011	.021	-.059	.064	.031	-.061
q55 A Unfriendly vs .Friendly	**.765**	.072	-.089	.097	.282	.094	.021	-.019	-.003	-.005	.008	-.110
q62 ES Nervous vs Relaxed	**.703**	.070	-.012	.059	.180	.071	.007	.058	-.033	.059	-.085	.343
q57 C Deceitful vs Trustworthy	**.673**	.109	-.055	.426	.071	.166	-.007	.001	-.014	-.015	-.019	-.028
q54 A Cold-hearted vs Warm-hearted	**.668**	.064	-.068	.262	.254	.066	.077	.039	.058	-.050	.069	-.294
q64 ES Insecure vs Confident	**.622**	.088	.016	.308	.221	.267	-.051	.034	-.042	.030	-.188	.301
q68 R Dull vs Intelligent	<u>**.530**</u>	.077	-.013	.377	.170	.360	-.047	-.008	-.048	.072	-.127	.222
q5 DE I am (enthusiastic) passionate about my job	.079	**.797**	-.030	.033	.035	.038	.096	.038	-.041	.103	-.058	-.151
q7 DE My job motivates (inspires) me	.089	**.791**	-.062	.129	.044	.050	.022	.111	-.036	.116	-.023	-.179
q4 VI At my job, I feel strong and energetic	.155	**.761**	-.089	.017	.040	.041	.014	.138	-.094	-.055	-.238	-.039
q1 VI At my work, I feel full with energy	.130	**.735**	-.129	.058	.035	.038	.006	.155	-.086	.020	-.289	-.067
q2 DE I find the work that I do full of meaning and purpose	.102	**.734**	-.103	.117	.046	-.019	.101	.017	-.044	.088	-.159	-.188
q8 VI When I get up in the morning, I feel like going to work	.096	**.731**	-.117	.082	.007	.048	.087	.146	-.066	.013	-.161	-.140
q11 AB I am engrossed in my work	.068	**.721**	.063	.003	.025	.050	.026	.076	-.058	.006	.169	.208
q13 DE To me, my job is challenging	.073	**.701**	.079	.080	.048	.096	.074	.030	.001	.073	.082	-.011
q10 DE I am proud on the work that I do	.083	**.683**	-.121	.064	.053	.003	.059	-.045	-.045	.128	.041	.046
q3 AB Time flies when I am working	.076	**.661**	.067	-.009	-.005	.041	.023	.094	-.071	-.015	.057	-.054
q9 AB I feel happy when I am working intensely	.096	**.650**	-.090	.059	.072	.021	.033	.075	.008	.087	.113	.165
q12 VI I can continue working for very long periods at a time	.031	**.634**	.100	.056	.064	.025	.057	.067	-.044	-.053	.302	.239
q15 VI At my job, I am very mentally flexible	.037	**.621**	-.069	.013	.064	.024	.167	.006	-.026	-.079	.117	.202

520

q14 AB I get carried away when I am working	.082	**.587**	.149	-.008	.060	-.003	-.033	.121	-.053	.070	.470	.072
q17 VI At my work I always persevere, even when things do not go well	.048	**.500**	.076	.038	.049	.042	.200	-.079	-.087	-.190	.177	.323
q24 NWHI Your work schedule makes it difficult for you to fulfil your domestic obligations	-.113	-.030	**.802**	-.003	-.010	-.026	-.034	-.065	.074	-.044	-.076	-.040
q29 NWHI Your work takes up time that you would have liked to spend with your spouse/family/friends	-.088	.001	**.795**	.005	.007	.006	-.062	-.049	.053	-.040	-.058	-.010
q26 NWHI You have to work so hard that you do not have time for any of your hobbies	-.094	.003	**.783**	-.012	-.026	.004	.023	-.059	.061	-.001	.006	.033
q19 NWHI You find it difficult to fulfil your domestic obligations because you are constantly thinking about your work	-.070	-.044	**.771**	-.061	-.006	-.007	-.020	-.037	.086	.071	.084	-.003
q25 NWHI You do not have the energy to engage in leisure activities with your spouse/family/friends because of your job	-.076	-.081	**.732**	-.031	.023	-.023	.036	.001	.095	-.044	.027	-.033
q21 NWHI You have to cancel appointments with your spouse/family/friends due to work-related commitments	-.084	.045	**.729**	-.029	-.002	.032	-.050	.030	-.036	-.044	-.126	-.054
q28 NWHI Your work obligations make it difficult for you to feel relaxed at home	-.060	-.056	**.720**	-.043	.034	.006	.043	-.086	.161	-.025	.124	.100
q18 NWHI You are irritated at home because your work is demanding	-.098	-.106	**.622**	-.095	-.049	.000	-.006	-.008	.198	.055	.219	.047
q16 AB It is difficult to (detach) separate myself from my job	-.009	.413	**.441**	.017	.079	.026	.011	.070	-.024	-.056	.355	.073
q40 C Irresponsible vs Responsible	.354	.100	-.028	**.751**	.106	.173	-.024	.050	-.027	-.001	.000	-.002
q44 C Lazy vs Hardworking	.277	.074	-.063	**.740**	.169	.148	.046	-.007	-.013	.031	-.016	-.008
q42 C Disorganised vs Organised	.335	.069	-.017	**.730**	.051	.075	-.053	.063	-.023	.030	-.043	.055
q46 C Careless v s Careful	.372	.078	-.082	**.722**	.085	.030	.030	-.033	-.008	-.009	.066	.025
q43 C Sloppy vs Neat	.310	.104	-.017	**.704**	.112	.074	.037	.013	-.061	.059	.047	.038
q45 C Dishonest vs Honest	.446	.093	-.089	**.650**	.135	.095	-.007	-.007	.007	-.045	.001	-.099
q41 C Undependable vs Dependable	.393	.068	-.053	**.648**	.149	.215	-.044	.084	.062	-.046	-.035	-.085
q50 E Reserved vs Outgoing	.204	.088	.007	.083	**.835**	.143	.006	.012	-.019	-.033	.034	-.021
q48 E Withdrawn vs Sociable	.270	.053	-.040	.083	**.802**	.041	.067	-.033	-.051	-.042	.061	-.107
q47 E Quiet Vs Talkative	.040	.056	.009	-.043	**.783**	.059	-.017	-.065	.006	.005	.066	-.066
q52 E Shy vs Bold	.098	.075	.038	.180	**.757**	.205	.057	.100	.017	.043	-.058	.141
q53 E Passive vs .Active	.237	.069	-.003	.303	**.658**	.193	-.023	.138	.026	.056	-.060	.089
q49 E Unassertive vs Assertive	.058	.100	.040	.393	**.593**	.216	-.040	.065	-.021	.042	-.058	.229
q51 E Gloomy vs Cheerful	.565	.098	-.049	.165	**.571**	.066	-.006	.047	-.026	.026	.005	-.088
q73 R Simple vs Complex	-.069	.000	.058	.129	.010	**.716**	-.109	-.002	.056	.030	-.003	.122
q71 R Indifferent vs Curious	.372	.092	-.103	.143	.227	**.705**	.064	-.013	-.011	-.020	.049	-.077

q70 R Conventional vs Innovative	.378	.088	-.016	.134	.243	**.694**	.072	.026	-.042	-.045	.022	-.092
q72 R Believing vs Questioning	.055	.098	.004	.237	.090	**.682**	.007	-.012	.031	.105	-.039	.082
q74 R Prefers routine vs Prefers variety	.275	.079	.023	-.012	.295	**.676**	.006	.068	-.007	-.086	.022	-.178
q69 R Unimaginative .vs Creative	.486	.108	-.010	.183	.269	<u>**.491**</u>	.069	-.004	-.008	.005	-.038	.049
q37 PHWI You manage your time at work more efficiently because at home you have to do that as well	.022	.173	-.048	.025	.039	-.019	**.800**	.253	.014	.061	-.020	.024
q35 PHWI You are better able to keep appointments at work because you are required to do the same at home	.037	.144	-.051	-.027	.047	.016	**.783**	.294	.026	.091	.005	-.017
q33 PHWI You take your responsibilities at work more seriously because you are required to do the same at home	.031	.118	.117	-.031	-.014	-.003	**.758**	.172	.014	.069	.028	-.034
q38 PHWI You have greater self-confidence at work because you have your home life like well organised	.041	.187	-.130	.016	-.025	-.014	<u>**.531**</u>	.168	-.043	.323	-.082	.066
q27 PWHI You fulfil your domestic obligations better because of the things you have learned on your job	.057	.166	-.069	.013	.057	.019	.270	**.726**	.009	.147	-.036	.003
q20 PWHI You manage your time at home more efficiently as a result of the way you do your job	.020	.147	-.098	.037	.034	-.010	.132	**.690**	.038	-.065	.086	.022
q22 PWHI You are better able to interact with your spouse/family/friends as a result of the things you have learned at work	.067	.217	-.005	.023	-.011	.026	.173	**.686**	.035	.151	-.037	-.057
q23 PWHI You are better able to keep appointments at home because your job requires this as well	.033	.144	-.074	.043	.042	.011	.298	<u>**.631**</u>	.008	.076	.079	.030
q36 NHWI Problems with your spouse/family/friends affect your job performance	-.025	-.079	.124	-.011	.004	-.028	-.009	.034	**.803**	.072	-.039	.011
q39 NHWI You do not feel like working because of problems with your spouse/family/friends	-.047	-.148	.168	.043	.003	.041	.063	-.066	**.745**	.040	.069	.000
q34 NHWI The situation at home makes you so irritable that you take your frustrations out on your colleagues	-.014	-.040	.122	-.068	-.033	.014	-.032	.069	**.696**	-.061	.035	.028
q32 NHWI You have difficulty to concentrate on your work because you are preoccupied with domestic matters	-.025	-.192	.161	-.011	-.005	.017	.006	.034	<u>**.629**</u>	.010	-.132	-.072
q30 PWHI After a pleasant working day/week, you feel more in the mood to engage in activities with your spouse/family/friends	.043	.086	-.078	.026	.023	.050	.141	.168	.050	**.750**	.140	-.008
q31 PHWI After spending a pleasant weekend with your spouse/family/friends, you have more fun in your job	.036	.249	.011	.018	.014	-.003	.306	.082	.014	<u>**.658**</u>	-.100	-.015
q6 AB When I am working, I forget everything else around me	.009	.462	.143	.004	.027	-.030	-.088	.150	-.120	.105	**.497**	-.107

1 (combined agreeableness and emotional stability), 2 (combined vigour, dedication and absorption), 3 (negative work-home interaction), 4 (conscientiousness), 5 (extraversion), 6 (resourcefulness), 7 (positive home-work interaction), 8 (positive work-home interaction), 9 (negative home-work interaction), 10 (combined positive work-home interaction and home-work interaction), 11 (absoprtion) and 12 (combined emotional stability and vigour)
. Extraction Method: Principal Axis Factor Analysis. Rotation Method: Varimax with Kaiser Normalization.[a]
. a. Rotation converged in 8 iterations
Kaiser-Meyer-Olkin Measure of Sampling Adequacy: .948
Bartlett Test of Sphericity: 51877.362
Significance: 000
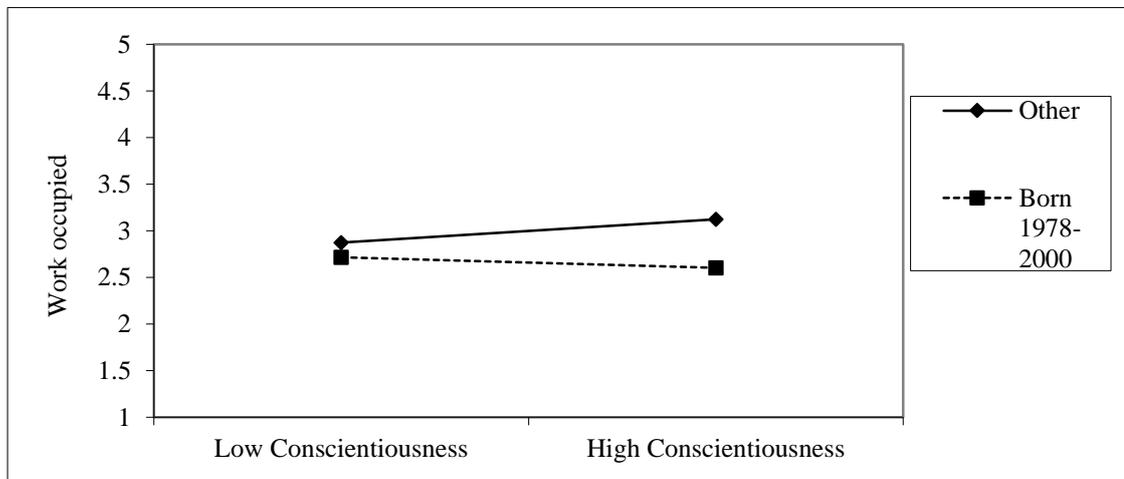
Figure 6.9.   Interaction effects between conscientiousness and participants born between 1978 and 2000 on work occupied
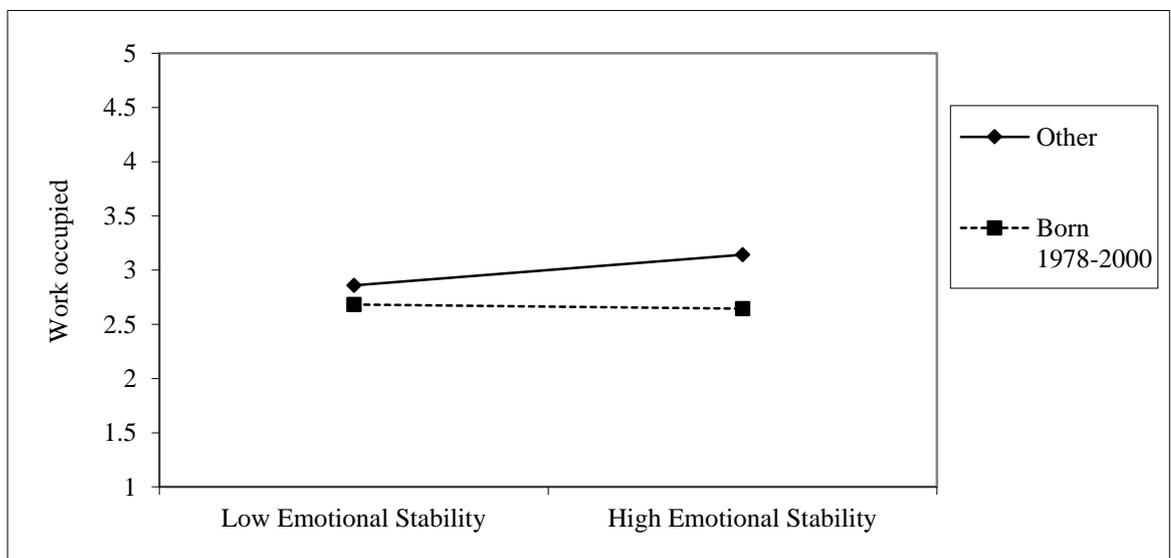
Figure 6.10   Interaction effects between emotional stability and participants born between 1978 and 2000 on work occupied
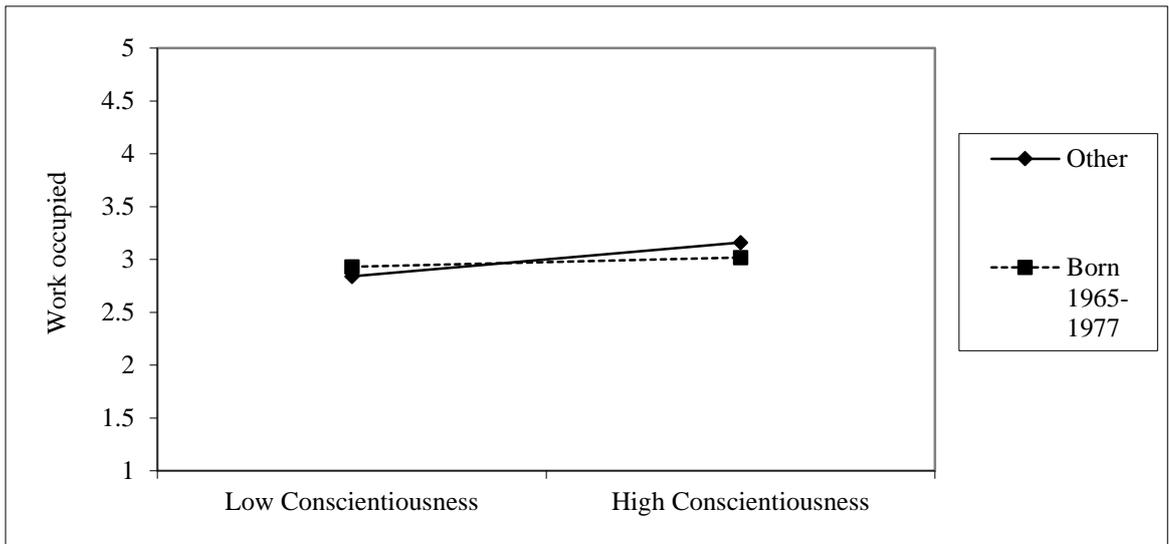
Figure 6.11   Interaction effects between participants born between and 1965 and 1977, conscientiousness and work occupied
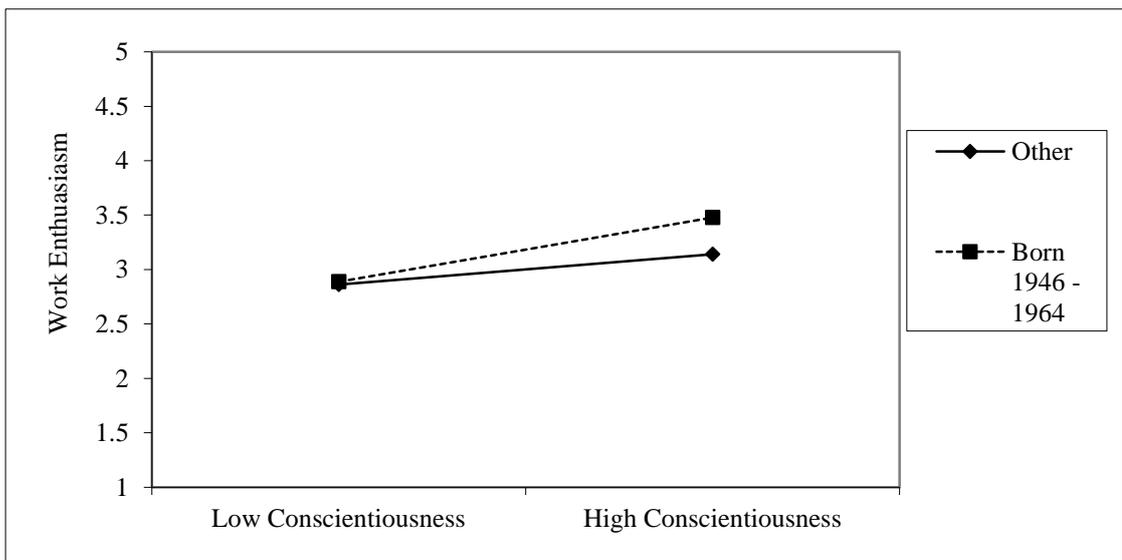
Figure 6.12   Interaction effects between generational cohort (born between 1946 and 1964), conscientiousness and work enthusiasm
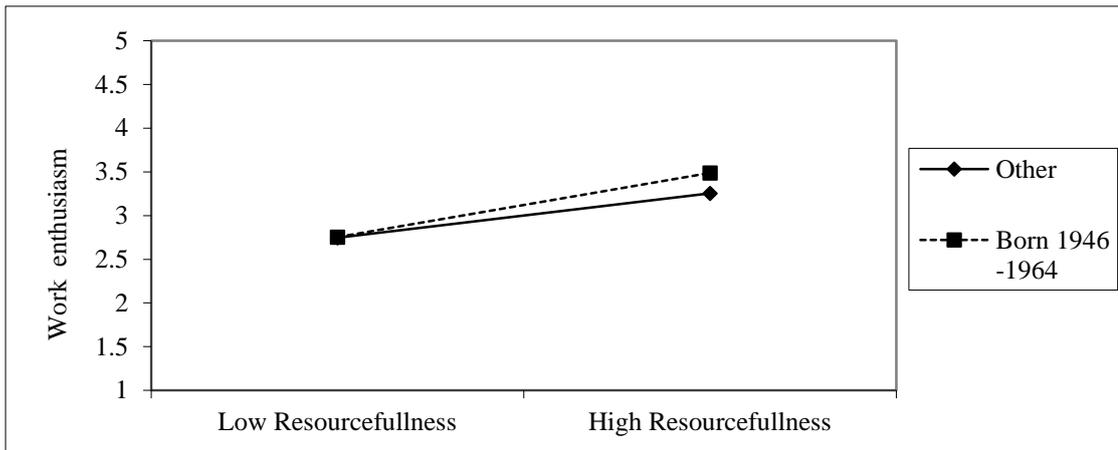
Figure 6.13 Interaction effects between generational cohort (born between 1946 and 1964), resourcefulness and work enthusiasm
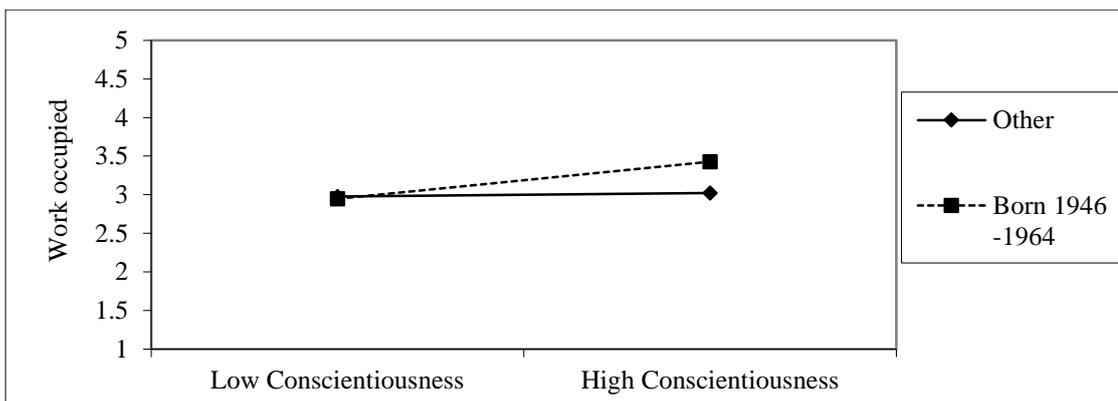
Figure 6.14 Interaction effects between generational cohort (born between 1946 and 1964) conscientiousness and work occupied
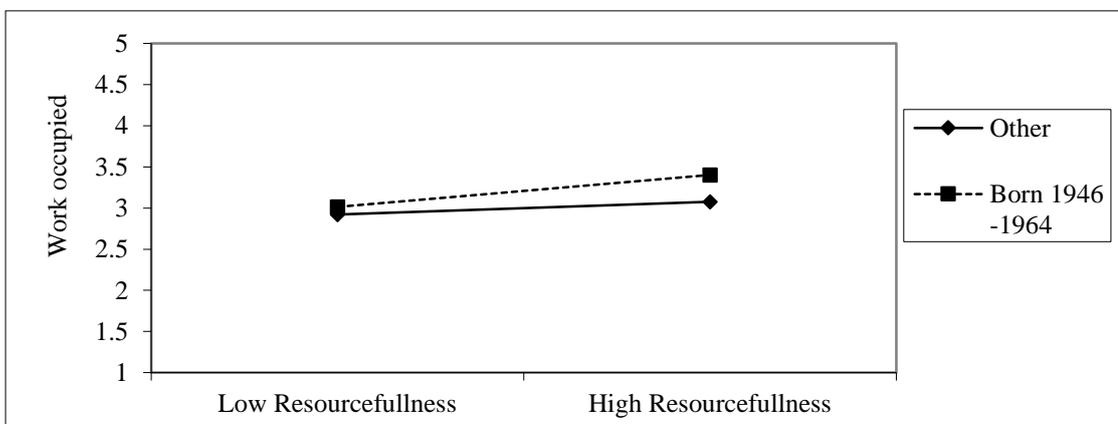
Figure 6.15 Interaction effects between generational cohort (born between 1946 and 1964), resourcefulness and work occupied
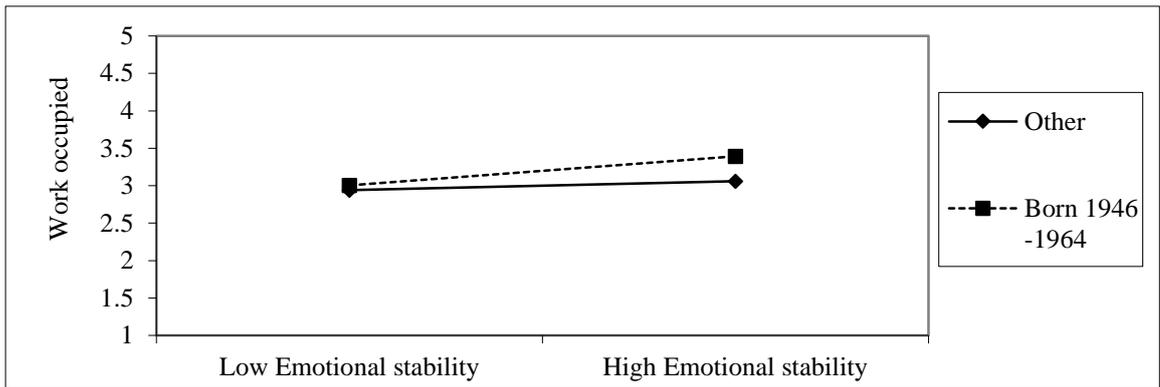
Figure 6.16   Interaction effects between generational cohort (born between 1946 and 1964), emotional stability and work occupied
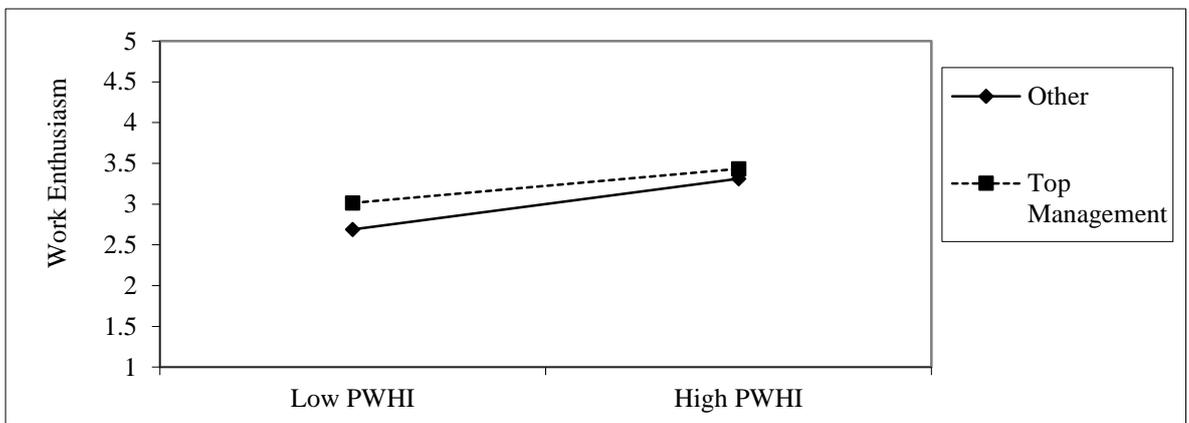

Figure 6.17   Interaction effects between top management, positive work-home interaction and work enthusiasm
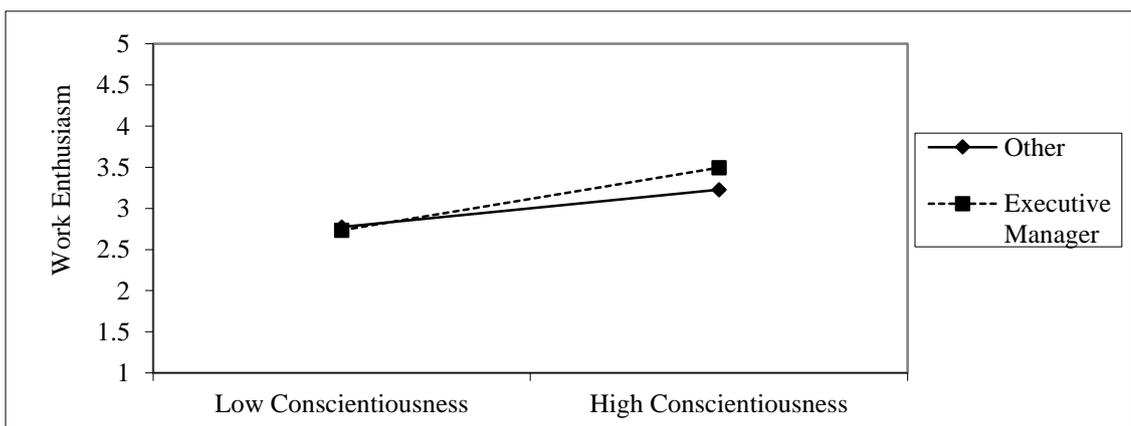
Figure 6.18   Interaction effects between executive management, conscientiousness and work enthusiasm
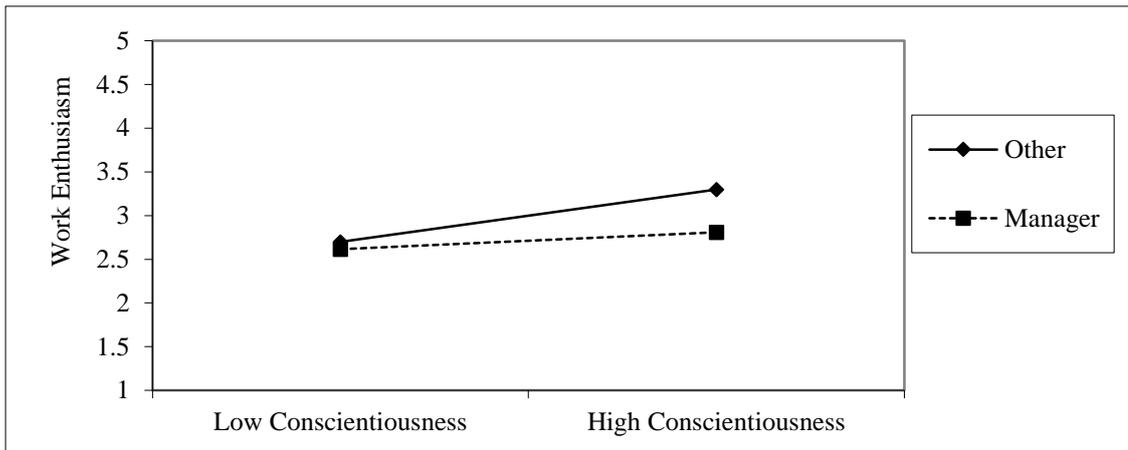
Figure 6.19   Interaction effects between managers, conscientiousness and work enthusiasm
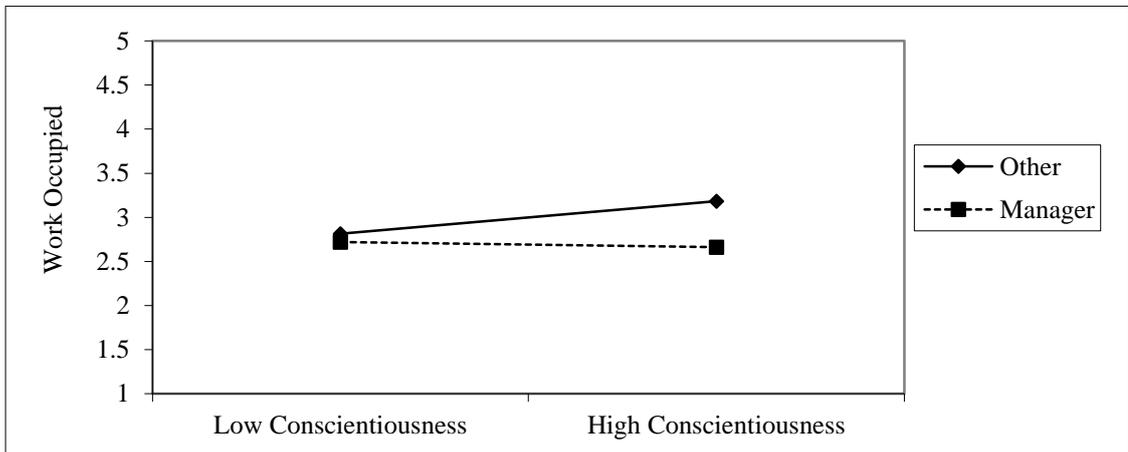
Figure 6.20   Interaction effects between managers, conscientiousness and work occupied
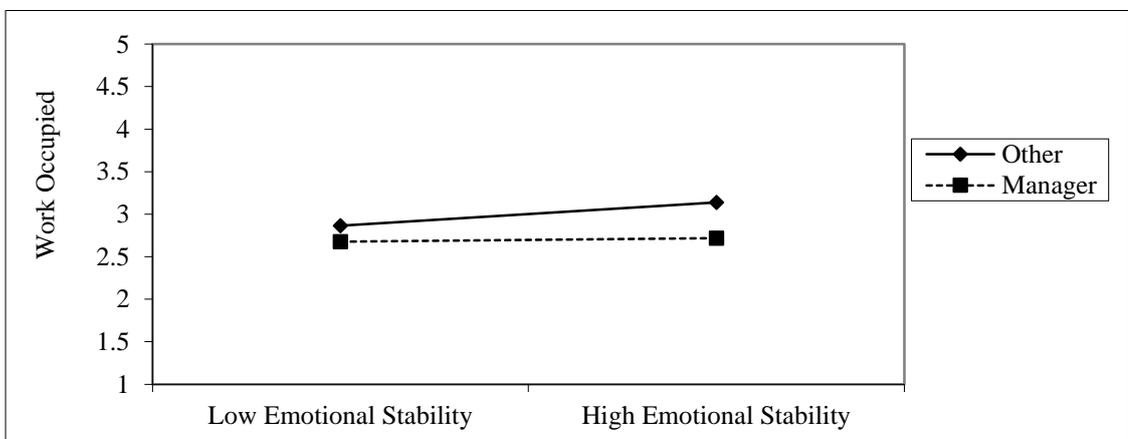
Figure 6.21   Interaction effects between managers, emotional stability and work occupied
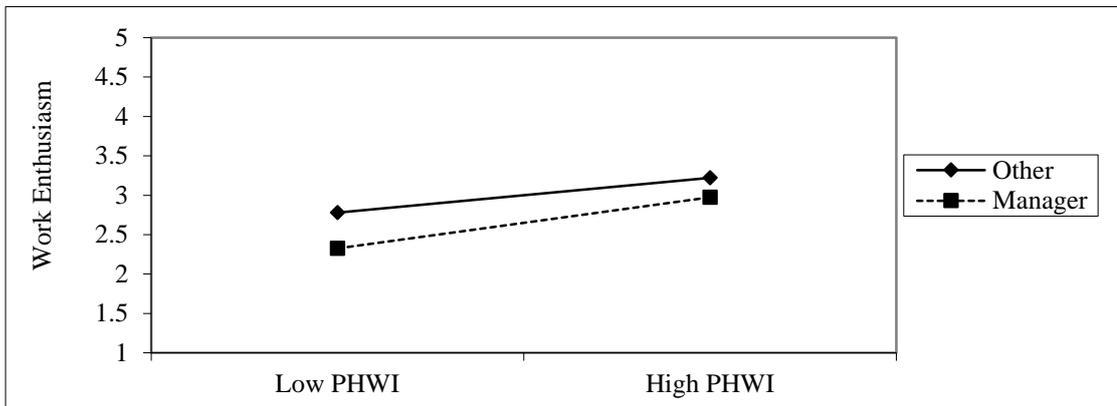
*Figure 6.22*   Interaction effects between manager, positive home-work interaction and work enthusiasm
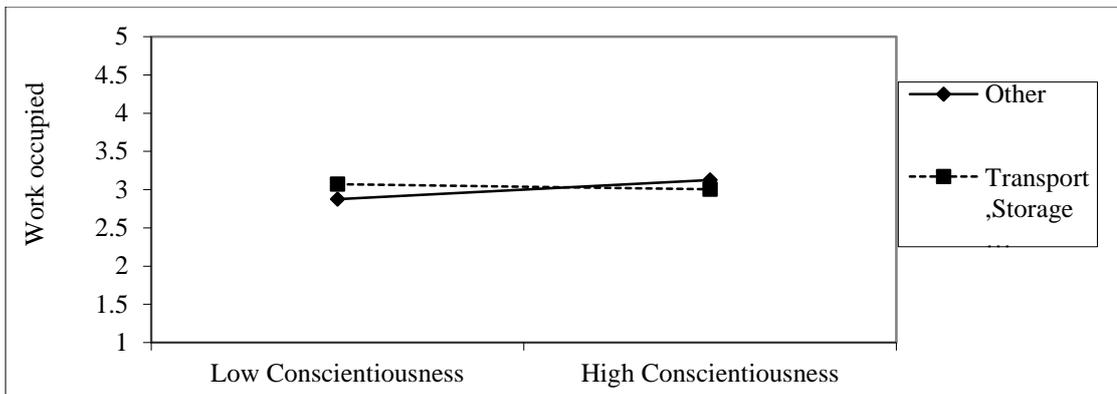
Figure 6.23   Interaction effects between transport, storage and communication sector, conscientiousness and work occupied
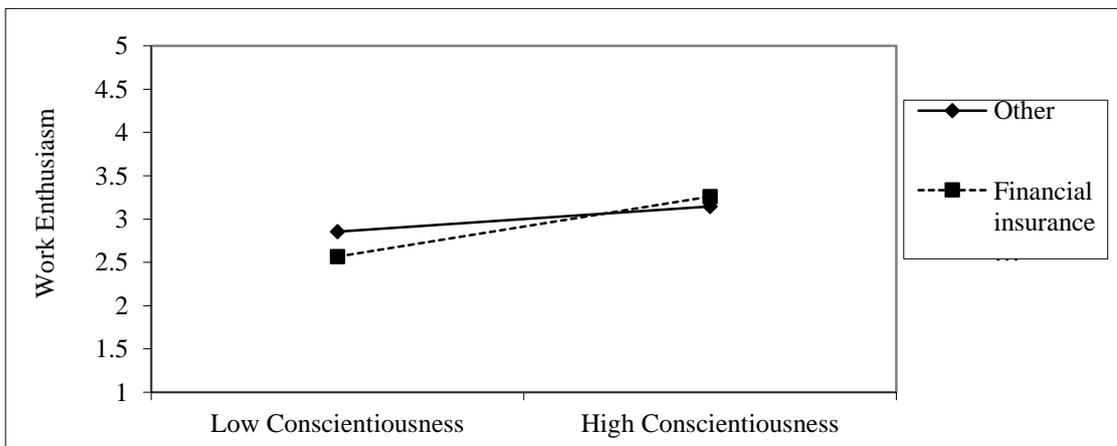

Figure 6.24   Interaction effects between financial, intermediation, insurance, real estate and business services sector, conscientiousness and work enthusiasm
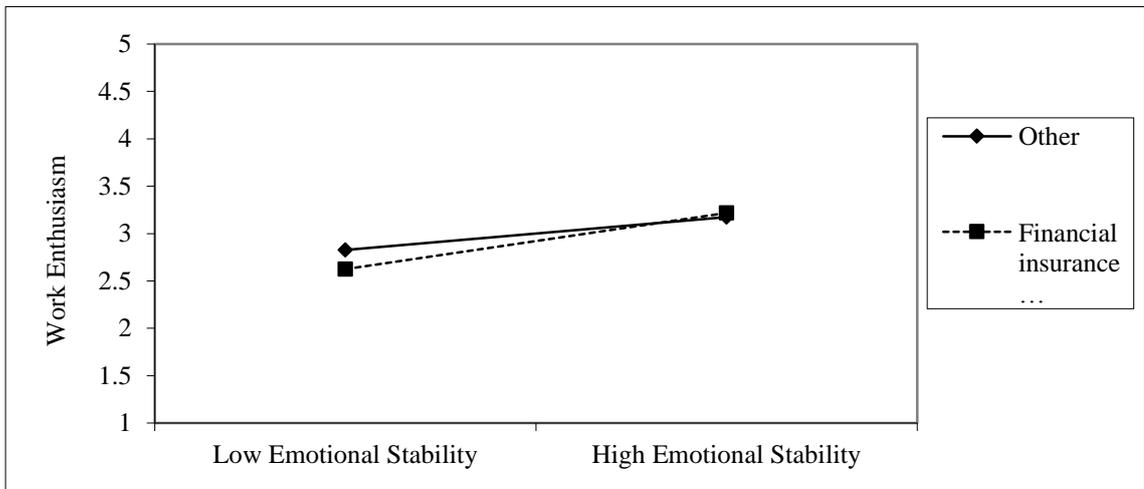
Figure 6.25   Interaction effects between financial, intermediation, insurance, real estate and business services sector, conscientiousness and work occupied
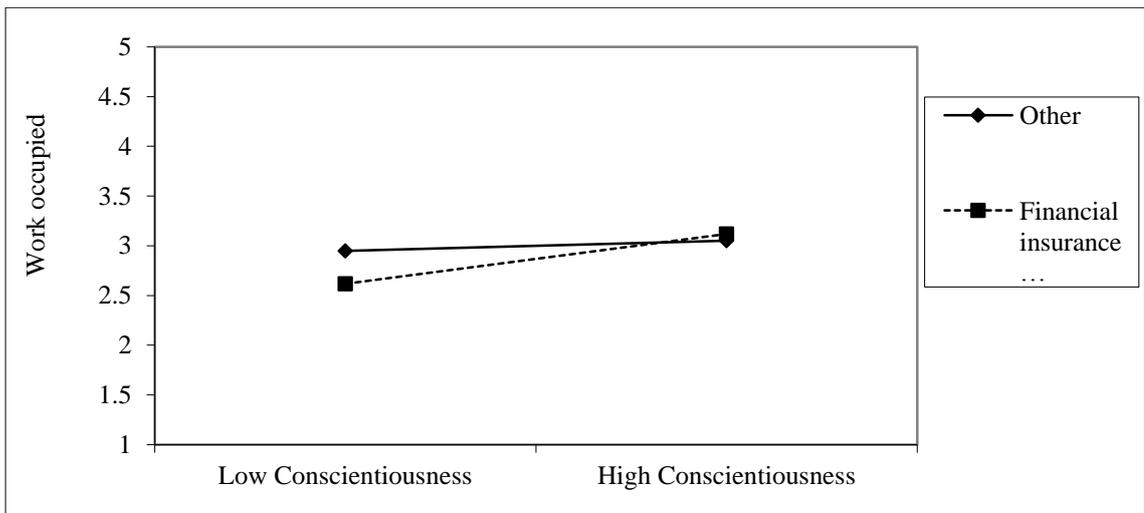

Figure 6.26   Interaction effects between financial, intermediation, insurance, real estate and business services sector, conscientiousness and work occupied