THE DEVELOPMENT AND EVALUATION OF A PARTIAL TALENT MANAGEMENT COMPETENCY MODEL.

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DECLARATION

I, the undersigned, hereby declare that the work contained in this thesis is my own original work and that I have not previously in its entirety or in part submitted it at any university for a degree.

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ABSTRACT

This study was driven by a need that was identified within a large telecommunications organisation to establish the Talent Management competencies required of line managers, and to provide HR managers with a measure to constructively, rationally and purposefully manage the Talent Management performance of line managers. In an attempt to address the above research needs, the study set about to 1) identify the Talent Management competencies required by line managers in order to successfully implement the organisation's Talent Management strategy; 2) formulate these competencies within a model, and 3) determine what the desired Talent Management outcomes are and how these relate to line managers' Talent Management competencies.

The initial part of this study describes the development of a Talent Management competency 360° evaluation questionnaire. This objective was achieved by means of a literature search, followed by the Critical Incidents Technique (CIT) of interviewing. The questionnaire consists of 8 dimensions and 43 items. The sample consisted of 123 leadership development candidates within this organisation. A total of 357 questionnaires were obtained.

A comprehensive Talent Management competency model was developed that defines and describes the line manager behaviours required in order to successfully carry out the Talent Management strategies within an organisation. These competencies were evaluated against the outcomes of Job Satisfaction, Affective Commitment and Intention to Quit that the Talent Management competencies are meant to affect.

Item analysis and dimensionality analysis were performed on each of the subscales, using SPSS. Thereafter, confirmatory factor analysis was performed on the relevant measurement model data sets, using LISREL. The results indicated in all cases satisfactory measurement model fit. Subsequently, the comprehensive Talent Management competency structural model was tested using LISREL. Reasonable to good model fit was indicated for the structural model. Ten of the 24 stated hypotheses in this study were corroborated.

A notable unique result of this research presented itself in the significant positive relationships uncovered between the exogenous latent variable, *Talent Management Mindset***,** and the endogenous latent variables of *Attracts and Recruits Talent*, *Builds and Maintains*

Relationships, Provides Meaningful and Challenging Work, Remunerates and Rewards Fairly and *Manages Work-life Balance***.** These significant positive relationships provide empirical evidence for the first time of the importance of instilling a Talent Management mindset within the line managers. Additional significant links established between *Affective Commitment* and *Intention to Quit*, between *Attracts and Recruits Talent* and *Organisational Job Satisfaction*, and between *Organisational Job Satisfaction* and *Intention to Quit* corroborates previous research findings.

OPSOMMING

Hierdie studie is gemotiveer deur die behoefte wat in ‘n groot telekommunikasieonderneming geïdentifiseer is om die Talentbestuursbevoegdhede wat van lynbestuurders vereis word vas te stel en om ‘n meting daar te stel waarmee Menslike Hulpbronne konstruktief, rasioneel en doelgerig die Talentbestuurprestasie van lynbestuurders sou kon bestuur. In ‘n poging om die voorafgaande navorsingsbehoefte aan te spreek het die studie hom ten doel gestel om 1) die Talentbestuursbevoegdhede te identifiseer wat van lynbestuurders vereis word ten einde die onderneming se Talentbestuurstrategie suksesvol te implementeer; 2) hierdie bevoegdhede binne ‘n model te formuleer, en 3) vas te stel wat die verlangde Talentbestuuruitkomste is en hoe hierdie met die Talentbestuursbevoegdhede verband hou.

Die eerste deel van die studie beskryf die ontwikkeling van die 360° Talentbestuurbevoegdheidsvraelys. Hierdie oogmerk is bereik deur middel van ‘n literatuursoeke, gevolg deur die Kritieke Insidentonderhoudsvoering. Die vraelys bestaan uit 8 dimensies en 43 items. Die steekproef het bestaan uit 123 leierskapontwikkelingskandidate binne die betrokke onderneming. ‘n Totaal van 357 voltooide vraelyste is ontvang.

‘n Omvattende Talentbestuurbevoegdheidsmodel is ontwikkel wat die lynbestuurgedrag omskryf wat vereis word om die Talentbestuurstrategie binne organisasies suksesvol tot uitvoer te bring. Hierdie bevoegdhede is beoordeel teen die uitkomste Werkstevredenheid, Affektiewe Toewyding en Voorneme om te Bedank wat die Talentbestuursbevoegdhede veronderstel is om op te impakteer.

Itemontleding en dimensionaliteitontleding is op elk van die subskale uitgevoer met behulp van SPSS. Bevestigende faktorontleding is vervolgens met behulp van LISREL op die ter sake metingsmodeldatastelle uitgevoer. Resultate het in alle gevalle bevredigende metingsmodelpassing aangetoon. Die omvattende Talentbestuurbevoegdheidstrukturele-model is vervolgens met behulp van LISREL getoets. Redelik tot goeie modelpassing is gevind vir die strukturele model. Tien van die 24 gestelde hipoteses in hierdie studie is bevestig.

‘n Noemenswaardige unieke resultaat van hierdie studie is geleë in die beduidende positiewe verwantskap wat aangetoon is tussen die eksogene latente veranderlike

Talentbestuuringesteldheid, en die endogene latente veranderlikes *Lok en Werf Talent*, *Ontwikkel en Hou Verhoudinge in Stand*, *Verskaf Betekenisvolle en Uitdagende Werk*, *Vergoed en Beloon Billik*, en *Bestuur Werk-lewe Balans*. Hierdie beduidende verwantskappe verskaf vir die eerste keer empiriese getuienis van die belang van die installasie van ‘n Talentbestuuringesteldheid by lynbestuurders. Addisioneel beduidende verwantskappe is gevind tussen *Affektiewe Betrokkenheid* en die *Voorneme om te Bedank*, tussen *Organisatoriese Werkstevredenheid* en *Voorneme om te Bedank* en tussen *Lok en Werf Talent* en *Organisatoriese Werkstevredenheid.*

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CHAPTER 1
RESEARCH PROBLEM AND RESEARCH OBJECTIVES

1.1 INTRODUCTION

Superior talent is increasingly recognized as the prime source of sustainable competitive advantage in high performance organisations. The ability to attract and retain talent is rapidly becoming one of the key issues for human resources managers and their organisations across the globe (Hiltrop, 1999). As a result of a highly competitive market, companies are discovering that, not only is it becoming increasingly difficult to recruit top talent, but that they are running the constant risk of losing the ones they have to competitors. (Sutherland, Torricelli & Karg, 2002).

Research (Antonucci, 2005; Fegley, 2006) shows that organisations are increasingly focusing on Talent Management. According to the Society for Human Resource Management's (SHRM) 2006 Talent Management Survey Report (SHRM, 2006), 53% of organisations have specific Talent Management initiatives in place and this increases to 86% for large organisations with 50 to 99 HR employees. Of these companies, 76% consider Talent Management to be a top priority (Fegley, 2006). As the competition for a limited pool of talented employees grows, organisations are investing further in Talent Management strategies. Many business and HR professionals want to measure the progress of these strategies in terms of key Talent Management outcomes such as retention, hiring of top talent, benchstrength and diversity (Antonucci, 2005).

There are several factors that have influenced the need for organisations to introduce Talent Management strategies, each of which is discussed in the following paragraphs.

First of all, the impact of globalization has created a market where workers are no longer limited to promoting their skills solely within one market or region. In addition, jobs are also being relocated to the places that best match the needs of the organisation in terms of labour, skills, costs and capacity. Many companies are off-shoring their call-centres, IT departments, manufacturing, finance and accounting departments to countries where operational and labour costs are greatly reduced (Tucker, Kao & Verma, 2005).

The demographics of the workforce population is undergoing considerable change. In industrialized nations the size of the working-age population is being greatly reduced. As the Baby-boomers continue to leave the job market, the size of the working-age population decreases. In the United States alone it is estimated that there will be 10 million more jobs than workers by the year 2010 and member nations of the Organisation for Economic Cooperation and Development (OECD) will have experienced a combined reduction in their working-age populations of 65 million people (Gandossy & Kao, 2004; Tucker, Kao & Verma, 2005).

The demand for skilled workers in particular is a matter for concern. Global competition for skilled workers is keen; worldwide, many employers are experiencing a talent shortage. A survey of nearly 33 000 employers in 23 countries revealed that 40% are struggling to locate qualified candidates (Manpower, 2006a). This is corroborated in the results of the 2005 study undertaken by Executive Development Associates, which lists 'a lack of needed skills' as the number one cause of leadership shortages (Antonucci, 2005, p. 6).

Job mobility is increasing and organisations are finding it harder to retain employees. Knowledge workers display high levels of mobility as the psychological contract has moved on from a previous emphasis on job security and loyalty to the company to the current emphasis on employability and loyalty to one's own career and experience (Sutherland, 2005).

South Africa is experiencing a unique situation in the quest to find and retain talented employees. The introduction of the Employment Equity Act (Republic of South Africa, 1998) and the Broad-Based Black Economic Empowerment Act (Republic of South Africa, 2004) requires organisations to take affirmative action to bring about a representative spread of race groups in all occupations and organisational levels within a defined time period, as well as other measures to address inequalities arising from the apartheid era. Due to the preferential education of White South Africans prior to democracy, there is a shortage of skilled Black workers at many levels. This shortage of Black talent, together with the demand for organisations to fulfill their requirements according to the current legislation, necessitates companies to ensure that special attention is paid to recruiting and retaining talented Black employees. Despite the high importance of this matter, it appears that companies in South Africa are not paying attention to this issue. In the recent Human Capital Institute (HCI)

South African national Talent Management survey (HCI, 2006) 82% of responding organisations felt that they did not have effective strategies in place to attract and retain top Black and female talent.

Of concern is the generally low level of education acquired by the South African workforce, showing that the majority of Black workers (61%) possess less than a Matric certificate (34% for Whites, Coloureds and Indians), while only 10% of the Black working population have a post-Matric qualification (26% for Whites, Coloureds and Indians) (State of skills in South Africa, 2005).

In addition to the impact on skills shortages created by the previous apartheid system, South Africa's AIDS crisis has severe consequences for industry and the economy. According to UNAIDS (2006) statistics, approximately 18.8% of South Africa's adult population was living with HIV in 2005 and this figure continues to rise. With an annual AIDS related death rate of 40 000 people, this has a major impact on the available workforce in South Africa. (UNAIDS, 2006).

One industry in particular that is experiencing a shortage of skilled and talented employees in South Africa is the Information and Communication Technology (ICT) sector, which is defined by the Organisation for Economic Co-operation and Development (OECD, 2002, p. 81) as "the industries that produce the products (goods and services) that support the electronic display, processing, storage, and transmission of information". This definition includes the telecommunications industry (both manufacturers of telecommunications equipment, plus the network operators Telkom, MTN and Vodacom). (SAITIS, 2000a).

One of the largest concerns in the ICT sector in South Africa is the inability of the labour market to supply sufficient skilled ICT workers to meet the rising demand. (James, Esselaar & Miller, 2001; SAITIS, 2000a, 2000b; State of skills in South Africa, 2005). The factors impacting on this shortage of skilled ICT workers include an education system which does not meet the demand for such workers (James, Esselaar & Miller, 2001; SAITIS, 2000b;), the loss ("brain drain") of skilled workers due to emmigration to other countries (SAITIS, 2000a, 2000b) and the tendency of knowledge workers to be highly mobile on a global basis and to "job-hop" (Birt, Wallis & Winternitz, 2004; SAITIS 2000a; Sutherland, 2005; Sutherland & Jordaan, 2004).

Compounding the skills shortage problem is the large and rapid growth of the South African ICT sector (James, Esselaar & Miller, 2001; SAITIS, 2000a, 2000b; State of skills in South Africa, 2005) and the telecommunications and cellular industry in particular (James, Esselaar & Miller, 2001; SAITIS, 2000a, 2000b), resulting in a market where organisations are competing for the same limited skills base (SAITIS, 2000a; State of skills in South Africa, 2005). This problem is likely to be compounded with the introduction of South Africa's second fixed-line telecommunications network operator, Neotel, at the end of 2006.

Due to the limited availability of skilled ICT workers in South Africa, it is important for ICT organisations to make a considerable effort to attract and retain talented employees. Organisations that wish to secure and retain knowledge workers in a limited market require a strategy in place to attract, engage, recruit, develop and retain talented employees. A critical question, however, is who should shoulder the primary responsibility for the development and implementation of such a Talent Management strategy. In answering this question it is important to consider the interaction between HR managers and line managers in the Talent Management process. Accountability for the success of Talent Management strategies usually falls squarely on the shoulders of the HR department. HR managers, however, oversee the redesign and execution of the processes of employee recruiting, development, administration and retention through the competencies of the line managers in the organisation. (Dychtwald, Erickson & Morison, 2006). It is, therefore, actually the line managers within the organisation who are responsible for carrying out the duties required within the Talent Management strategy. It is the supervisors and middle-level managers who play a critical role in employee performance and retention of high performing employees (Martel, 2002).

The important role played by line managers in the Talent Management process is emphasized in the literature (Chambers, Foulon, Handfield-Jones & Hankin, 1998; Fegley, 2006; Handfield-Jones & Axelrood, 2001; Hiltrop, 1999; Kaye, 2002). Despite this emphasis, only limited literature and research is available to explain the *process* of distilling Talent Management strategies down to line management level and the competencies required by line managers in order to ensure that Talent Management processes lead to the desired outcomes for the organisation. Schweyer (2004) points out that talent is the most critical component of success in today's economy, yet no proven formula exists to manage it or even measure its precise impact. The problem of distilling responsibility for Talent Management down to line

manager level is highlighted in the recent HCI (2006) South African Talent Mindset Index survey which revealed that 86% of responding organisations felt that top executives have a deep conviction and abiding belief that better talent results in superior organisational performance. Despite this belief, 82% of organisations feel that rich talent pools are not in place in their organisation, 70% of organisations feel that employees do not understand who is responsible for talent in the organisation, and 54% of organisations state that their organisations do not have a defined strategy for developing talent, including a clear set of formal and informal development programmes. This survey highlights a clear gap between the Talent Management *intentions* of organisations and the actual Talent Management *processes and outcomes* that would be beneficial to the organisation.

In considering methods to manage or measure Talent Management outcomes, it is important to take into account that these Talent Management processes are introduced into organisations in order to achieve certain specific outcomes (such as retention of talented employees and increased performance). In order to achieve these outcomes, line managers are required to perform certain duties successfully. Specific critical Talent Management competencies are thus assumed to exist that serve the desired Talent Management outcome variables. The ability of line managers to achieve these desired outcomes through Talent Management competencies in turn depends on specific Talent Management competency potential variables which need to be identified. A 3-domain Talent Management competency model, based on the SHL Performance@Work competency framework (SHL, 2000b, 2001; Bailey, Bartram & Kurz, 2001) is thus implied, that explicates the manner in which managerial characteristics impact on managerial Talent Management competencies and how these in turn affect the desired Talent Management outcome variables. The outcome variables relate to states characterizing followers (e.g., commitment, satisfaction, intention to quit) that in turn are assumed to be systematically related to follower behaviour (e.g., performance on task specific and more generic performance dimensions) and outcome latent variables (e.g., quantity and quality of output, client satisfaction, extended tenure). The outcome latent variables in the 3-domain Talent Management competency model by implication are competency potential latent variables (SHL, 2000b, 2001; Bailey, Bartram & Kurz, 2001) in a similar follower competency model explicating the manner in which follower characteristics impact on follower competencies and how these in turn affect the outcome variables for which the follower job exists. The underlying assumption, moreover, is that causal linkages also exist amongst the latent variables within the competency potential, competency and outcome

domains. More specifically a fully-fledged 3-domain Talent Management structural model is therefore implied.

In order for HR managers to constructively, rationally and purposefully manage the Talent Management performance of line managers, it is necessary for them to be knowledgeable of the identity of the latent variables included in the Talent Management competency potential, competency and outcome domains comprising the aforementioned structural model and the manner in which they causally affect each other. Line managers' Talent Management performance (conceptualized in terms of Talent Management competencies as well as Talent Management outcomes) is not a random event. It is the result of the systematic working of a myriad of influences that express themselves in the actual performance levels achieved. HR managers need to understand the nature of these forces and how they affect the intended results of Talent Management strategies if they aspire to significantly contribute towards the success achieved through Talent Management interventions. It is only possible to rationally and purposefully affect the behaviour of talented followers through the behaviour of their managers if you have empirically supported knowledge of what causes this behaviour, and can thus monitor and influence (if necessary) the dominant determinants of the behaviour.

It is with this in mind that this study suggests that, so as to put Talent Management on a rational footing, it would be necessary to develop a Talent Management structural model which will show how various personal characteristics affect certain line management Talent Management competencies which, in turn, lead to certain desired Talent Management outcomes (such as reduced staff turnover and higher performance levels). A model of this nature would serve the purpose of empowering HR managers to rationally and purposefully monitor and manage the Talent Management competency levels of line managers and through that, the desired Talent Management outcomes. This model would offer the opportunity to HR managers and senior executives to purposefully and rationally affect the Talent Management process by enhancing their understanding of the manner in which certain line managers' Talent Management competency potential latent variables map onto line managers' Talent Management competencies and those, in turn, map onto specific desired Talent Management outcome latent variables.

To propose and empirically evaluate such a comprehensive Talent Management competency model in a single study would, although not impossible, nonetheless be somewhat ambitious.

The proposed comprehensive Talent Management competency model therefore would have to be developed in phases. Since the primary focus of any competency model is on the outcome latent variables, it probably would make sense to start phase 1 by identifying the primary Talent Management outcome latent variables of interest, to identify the Talent Management competencies that serve these outcome variables and to hypothesize the paths through which the competencies affect the outcome latent variables. In phase 2 the person qualities that determine the level of competence (SHL, 2000b, 2001) achieved on the Talent Management competencies could then be hypothesized, as well as the manner in which they causally map onto the competencies.

The objective of this study, consequently, is to develop a partial Talent Management competency model that will map the core Talent Management competencies onto the primary outcome latent variables targeted by the Talent Management process as phase 1 of the development of a more extensive Talent Management structural model.

1.2 PURPOSE OF THIS STUDY

The organisation in which this study has been performed is a large telecommunications company within the ICT sector. In order to remain the market leader in this field, their employees need to be competent to cope with continual specialized technological updates and a rapidly increasing customer base. Due to the organisation's heightened awareness of the limited availability of talented employees with ICT experience (especially engineers, IT personnel and senior management) an integrated Talent Management process has been introduced. The intention within this organisation is for the line managers to understand the impact of such a strategy and to take accountability for their involvement in the process.

In order to guide, regulate and monitor the success of line managers in implementing the Talent Management process, the HR department would like to identify specifically why line managers differ in the extent to which they impact on their subordinates' turnover intentions as the primary Talent Management outcome variable. The objective of this study, consequently, is to assist the organisation in identifying the Talent Management competencies line managers have to be competent in, in order to reduce turnover and to explicate the network of mediator latent outcome variables through which the Talent Management

competencies have to percolate in order to affect follower's intention to remain with the organisation.

1.3 RESEARCH INITIATING QUESTION

Against the above background, the research initiating question driving this investigation is:

> What constitutes line managers' Talent Management competencies, what are the outcomes that these competencies are meant to achieve and how is the former related to the latter?

1.4 RESEARCH OBJECTIVES

In an attempt to address the above research needs, the proposed study will focus on the following research objectives:

1. To identify the Talent Management competencies required by line managers in order to successfully implement the organisation's Talent Management strategy.
2. To conceptualize these competencies within a partial competency model.
3. To determine how subordinate's intention to remain with the organisation is affected by line managers' Talent Management competencies via its affect on a network of relevant mediator latent outcome variables.

1.5 DELIMITATIONS

Although it is recognized that certain behavioural drivers will have an impact on the line managers' Talent Management competencies, it is not within the scope of this study to investigate these drivers. The identity of the person-centered characteristics and the manner in which they combine to affect the level of competence achieved on the Talent Management competencies will be the focus of a second phase of research. The intention of this study is to develop a *partial* Talent Management model which will provide a valid account of how certain line managers' Talent Management competencies affect certain Talent Management outcomes, for which managers should be held accountable. It is also recognized that the possibility exists that such a model could (and eventually should) be extended to include the subordinates' competencies for which the managers should also be held accountable.

Although the significance of this possibility will be addressed, this will not be investigated further within the parameters of this study.

1.6 STUDY OUTLINE

Chapter 2 outlines the Talent Management process. This chapter begins by defining Talent Management and explaining the factors that have influenced the need for organisations to rely on Talent Management strategies. The many facets that make up the Talent Management process are discussed and linked to the contributions that they make to the organisation. The chapter concludes with some detail regarding the future trends of Talent Management and the recognition of the negative impact that Talent Management may have on the organisation.

Chapter 3 focuses on the intended outcomes of the Talent Management process: the concepts of affective commitment, job satisfaction and intention to quit. The importance of these constructs to Talent Management is discussed, pointing out how their antecedents and consequences fit in within the proposed partial Talent Management competency model.

Chapter 4 provides the research design and methodology, including the development of a 360° evaluation questionnaire used to assess the line managers' Talent Management competencies. The results of this statistical analysis will be presented in Chapter 5 and discussed in Chapter 6, along with recommendations for future research.

1.7 SUMMARY

Organisations operating in highly competitive markets are discovering that, not only is it becoming increasingly difficult to recruit top talent, but that they are running the constant risk of losing the ones they have to competitors. In response to this, many large organisations have implemented Talent Management strategies in order to attract, recruit, develop and retain talented employees within their organisations. A considerable amount of literature is available providing details of how to implement such Talent Management strategies within an organisation, but very little research appears to be available investigating this concept.

HR managers are usually held accountable for the successful implementation of Talent Management programmes, while it is the line managers who actually implement this process on a day to day basis. In order for HR managers to constructively, rationally and purposefully manage the Talent Management performance of line managers, it is necessary for them to be knowledgeable of the behaviours required to achieve this. With this in mind, it is necessary to identify the competencies required by line managers in order to successfully implement the organisation's Talent Management strategy. The objective of this study therefore entails the identification of line managers' Talent Management competencies which can be structured within a model. This model also needs to reflect the desired Talent Management outcomes, showing how these relate to the Talent Management competencies.

It is only with this measurable information at hand, that HR managers can regulate and measure the success of their Talent Management strategies, as delivered by the line managers within the organisation.

CHAPTER 2
LITERATURE REVIEW: TALENT MANAGEMENT

2.1 INTRODUCTION

This chapter aims to provide a comprehensive synopsis of Talent Management and the role this strategy plays within the organisation. The first objective of this study is to identify the Talent Management competencies required by line managers in order to successfully implement the organisation's Talent Management strategy. In order to meet this objective, this chapter will initially review the full process of Talent Management and will also highlight and justify the dimensions which could be included in the Talent Management model. In particular, the relationships between various constructs in the present study and how they relate to Talent Management will be explicated.

2.2 DEFINITION OF TALENT MANAGEMENT

In 1997, McKinsey and company coined the term *the war for talent* (as cited in Michaels, Handfield-Jones, & Axelrood, 2001) in response to the shortage of skilled employees in the marketplace and the need for organisations to compete for this limited talent pool.

The practice of Talent Management was initially developed to improve the process for recruiting and developing people with the required skills and aptitudes to meet current organisational needs. Over the years Talent Management has evolved, along with the expanding responsibilities and sophistication of the HR profession, to be incorporated into the goals and strategy of an organisation. Talent Management has moved away from being an administrative process and has developed into a continual organisational practice with a strategic focal point that drives organisational outcomes (Fegley, 2006).

It is difficult to give an exact definition of Talent Management, as there are several variations of the definition and terms used by the authors of Talent Management. The definitions tend to group into three distinct meanings of Talent Management (Lewis & Heckman, 2006).

The first group of Talent Management definitions focuses on the concept of talent pools. These authors view Talent Management as a set of processes designed for the purpose of

ensuring that there is a sufficient flow of skilled and capable employees to support the needs of the organisation. (Cohn, Khurana & Reeves, 2005; Griffen, 2003; Hiltrop, 1999; Kesler, 2002). The Talent Management processes in this instance are carried out with the explicit purpose of recruiting, developing and retaining talent in order to build up a large enough pool of talent to fill current and future vacancies. This is often similar to the processes of succession planning or workforce management; ensuring the progression of people through positions due to organisational demand, production needs, staff turnover, organisational growth or cutbacks.

The second group of definitions centres on talent in general. This approach requires the differentiation of employees into categories according to their value (level of talent) to the organisation. It is recommended that talented employees should be managed according to their performance levels. Highly competent performers are sought, hired and differentially rewarded in order to retain their abilities (Buckingham & Vosburgh, 2001; Chambers, Handfield-Jones, Hankin & Michaels, 1998; Gandossy & Kao, 2004; Huselid, Beatty & Becker, 2005; Tucker, Kao & Verma, 2005). One such approach classifies employees by performance level as “A”, “B” and “C Players” (to indicate top, competent and bottom performers, respectively) and encourages the development of A players, the retention of B players and the development or termination of C players (Chambers, Handfield-Jones, et al., 1998; Chambers, Foulon, Handfield-Jones, Hankin & Michaels, 1998; Michaels, Handfield-Jones, et al., 2001).

The third group of definitions classifies Talent Management as a set of HR department practices or functions, such as recruitment, selection, development and performance appraisal (Byham, 2001; Chowanec & Newstrom, 1991; Fegley, 2006; Hartley, 2004; Hilton, 2000; Mercer, 2005; SHRM, 2006). These authors promote the concept of Talent Management as a set of integrated HR processes that need to be aligned with organisational strategy in order to ensure that human capital is able to meet organisational needs. The definition of Hartley (2004, p. 20): “Talent Management is the process of recruiting, on-boarding, and developing, as well as the strategies associated with those activities in organisations”, includes this aspect of aligning Talent Management with organisational strategies. This definition fails to place emphasis on the fact that Talent Management has evolved from an administrative process to become a continuous organisational practice with a strategic focal point that drives organisational outcomes (Fegley, 2006).

In order to include the organisational outcomes aspect, SHRM (2006, p. 1) defines Talent Management as "the implementation of integrated strategies or systems designed to increase workplace productivity by developing improved processes for attracting, developing, retaining and utilizing people with the required skills and aptitude to meet current and future business needs".

This definition encompasses several important aspects of Talent Management:

- It is an ongoing systematic process of organisational practice
- It must be aligned with organisational strategies
- The process is focused on skilled people with high potential
- It is outcomes-based, as it aims to enable meet organisational strategic objectives.

Due to the inclusion of all of these aspects, the definition of SHRM (2006) will be used for the purpose of this study.

All three of the groups of Talent Management definitions advocate the use of various HR *processes* and *line management responsibilities* which are aligned with organisational strategies, to be used with the intent of improving organisational success. These processes and line management responsibilities will be detailed further on in this study.

2.3 DEFINITION: TALENT MANAGEMENT COMPETENCIES

It is very important to ensure that an exact definition of Talent Management competencies is explicated in this study before a model of such competencies can be developed. No such definition could be found in the literature, making it necessary to explore suitable definitions of both 'competencies' and 'Talent Management" in order to combine these two in a manner that will explain how Talent Management competencies will be selected for this model.

2.3.1 Definition: Competencies

There appears to be a large diversity in the understanding of the term 'competency', and as a result, consensus on the definition of the term does not exist. (Bailey, Bartram, & Kurz, 2001; Cheng, Dainty & Moore, 2003; Hoffman, 1999; Rees & Garnsey, 2003; SHL, 2000a;

Whiddett & Hollyforde, 2000). The meaning of competency shifts according to the context of its use and the requirements of the user (Hoffman, 1999).

Essentially two main themes can be identified in the various definitions of competencies. In terms of the first interpretation competencies are seen as underlying characteristics of a person in an occupational role, which will distinguish superior performers from average performers (Boyatzis, 1982; Fletcher, 1997; Mitrani, Dalziel & Fitt, 1993; Spencer & Spencer, 1993; Weightman, 1995; Whiddett & Hollyforde, 2000). Many of the definitions that fall in this category are a variation of Boyatzis's (1982, p. 21) definition, which states; "A job competency is an underlying characteristic of a person in that it may be a motive, a trait, a skill, an aspect of one's self-image or social role, or a body of knowledge which he or she uses". In terms of the second interpretation, competencies are seen as relatively stable sets of behaviours that are instrumental in the delivery of superior performance defined in terms of outcomes for which the individual is held accountable. Standards in national training schemes such as the National Qualifications Forum (NQF) (Vorster & Roodt, 2003) are defined in terms of these outcomes and standards set on outcomes are translated back to the behaviours on which these outcomes are dependent to establish behavioural standards.

The conceptual confusion can be resolved via the SHL Performance@Work competency framework. According to SHL (2001b, p. 6) the Performance@Work model refers to:

> … a model of performance at work that defines the relationship between competency potential, competency requirements and competencies themselves. "Competencies" are defined as desired behaviours that support the attainment of organisational objectives. "Competency potential" is seen to derive from individual dispositions and attainments, and "competency requirements" involve both facilitators of and barriers to effective performance in the workplace. The framework points to ways in which people and work settings interact, and has implications for how performance in the workplace can be managed.

In terms of the SHL competency model, the individual can be characterized in terms of a constellation of critical attributes (competency potential) that determine the behaviour (competencies) that is instrumental in achieving specific outcomes for which the individual is held accountable Some of these critical attributes are relatively malleable attainments (e.g., knowledge and experience) whereas others are relatively rigid dispositions (e.g. motives, values, personality) In terms of the SHL competency framework, competency potential refers to person constructs. Competencies in turn are regarded as performance constructs.

Competencies thus are seen as the abstract theme in a bundle of related behaviour that constitutes success, in that it is instrumental in the realization of at least some of the outcomes for which the individual is held accountable (SHL, 2002).

In the final analysis, the terms used to refer to the three domains comprising the SHL competency framework, as outlined above, are probably not important. The introductory argument, moreover, already established that the primary focus of this study is on the Talent Management outcome latent variables. The Talent Management outcome latent variables of interest characterize the follower and are presumed to affect the follower's intention to quit. The assumption is that these outcome variables are at least to some degree sensitive to the manner in which the manager behaves towards the follower.

As the objective of this study is to show that certain Talent Management behaviours affect specific Talent Management outcome variables, it is essential to focus on these specific Talent Management *behaviours* displayed by line managers, which are assumed to be related to superior performance. Underlying personal characteristics such as personality, motivation, values or other factors very likely play a role in determining Talent Management outcome variables such as commitment, satisfaction and intention to quit, but probably do so via their effect on the manner in which the manager behaviourally responds towards his/her followers. The question, then really is, which term would be appropriate to refer to the abstract behavioural themes that characterize the behaviours required of line managers to elicit the states in followers that would increase the likelihood of them remaining in the organisation. The SHL Performance@Work competency framework would suggest that the term *competency*, as defined within this framework, would be appropriate.

Competencies can therefore be defined as sets of desirable behaviours, where 'desirable' is defined in terms of the outcomes such behaviours lead to (Bailey, et al., 2001). It is with the emphasis on competencies as *dimensions of behavior*, that Woodruffe's (1993) definition is most suitable for the purpose of this research: "A competency is the set of behaviour patterns that the incumbent needs to bring to a position in order to perform its tasks and functions with competence" (p. 29).

2.3.2 Definition: Talent Management competencies

For the purpose of this study, SHRM's (2006, p. 1) Talent Management definition applies: "….the implementation of integrated strategies or systems designed to increase workplace productivity by developing improved processes for attracting, developing, retaining and utilizing people with the required skills and aptitude to meet current and future business needs".

Within this study, the focus is on the ability of line-managers to deliver Talent Management strategies effectively within the organisation. The distinction must therefore be made between Talent Management *processes that take place in the organisation* and Talent Management *competencies which are the specific responsibility of the line-manager*.

The definition of competencies derived from the foregoing discussion will therefore, for the purpose of this study, be used to define Talent Management competencies as: *sets of behaviour patterns that line managers need to bring to a position in order to attract, select, engage, develop and retain talented employees in order to reach specific desirable business objectives for the organisation.*

In the following section, the process of Talent Management will be discussed in order to provide a comprehensive synopsis of Talent Management. It is important to note that many of the aspects of Talent Management, such as certain HR functions, are not *behaviourally observable* as required in the definition of Talent Management competencies and therefore cannot be included in the Talent Management competency model. This section aims to review the full process of Talent Management in order highlight and justify the dimensions which should be included in the Talent Management competency model.

2.4 TALENT MANAGEMENT PROCESS

The process of Talent Management is one of frequent development, adjustment and change in order to ensure that the process remains aligned with organisational strategies and goals. The emphasis here is on the notion of Talent Management as a *continuous process*, rather than as an intervention of limited duration.

This process is depicted in Figure 2.1 which shows a conceptual framework of the Talent Management process at various phases. The format of this diagram shows this process to be continuous, requiring constant evaluation and redevelopment. This framework will be used to discuss each of the phases of the Talent Management process and the factors that should be considered at each phase. The following detail of this process lists a number of methods that have been suggested (and in some instances researched) in the management literature as strategies to attract, recruit, develop and retain talented employees.

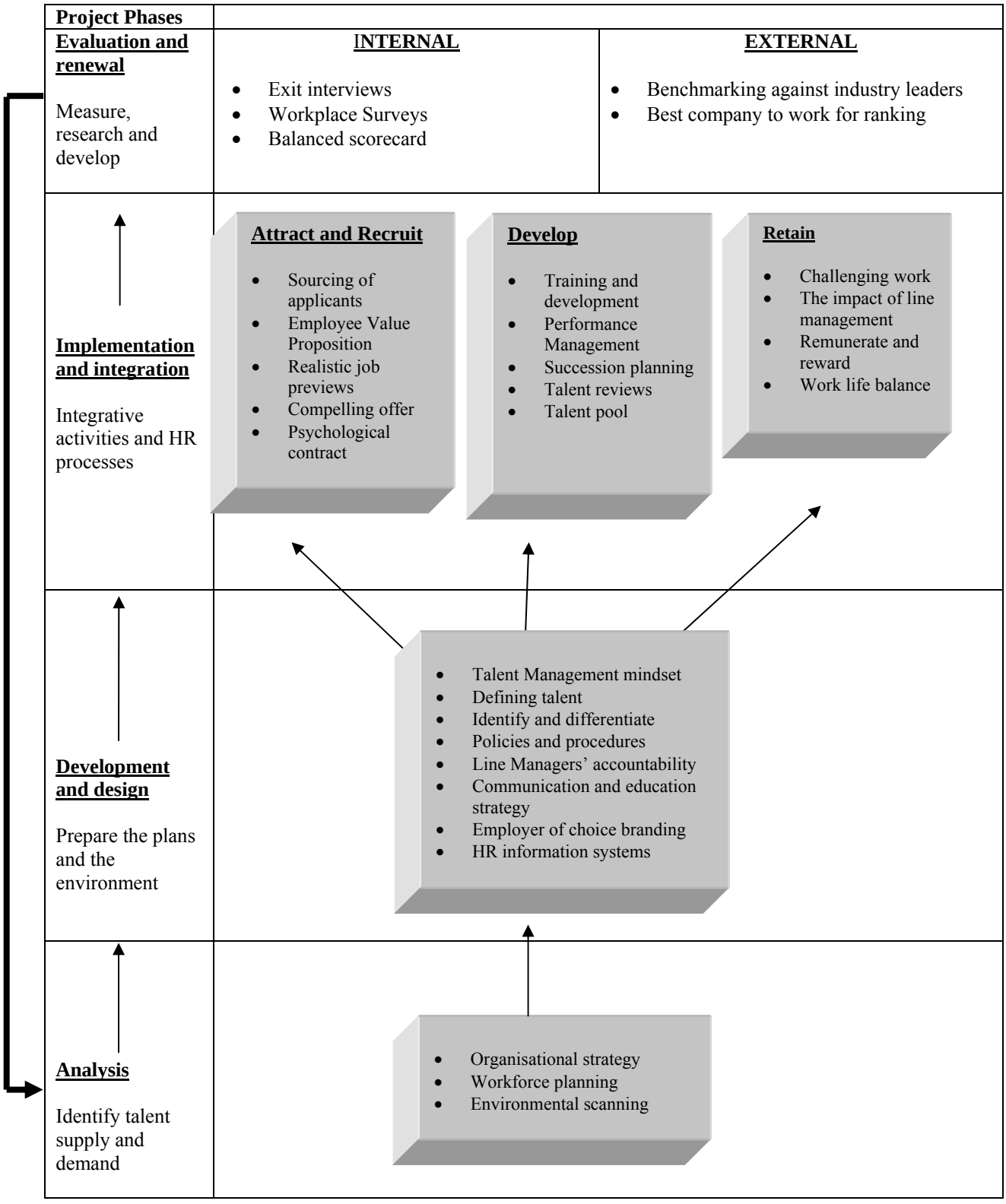

Figure 2.1: **Conceptual framework of Talent Management process: adapted from Potchefstroom University study notes (2004) (Author unknown).**

2.4.1 Analysis

An organisational Talent Management process is based on organisational needs. In order to determine the need for the introduction of a Talent Management programme, as well as to lay the groundwork for the development stage, careful analysis is needed in the following areas:

Organisational strategy analysis: Organisations that understand the business case for Talent Management successfully link Talent Management and organisational strategy, reaping benefits in increased workplace performance (Lockwood, 2006). It is necessary to analyse the organisational strategy in order to ensure that the Talent Management plan is aligned with the needs of the organisation, with particular emphasis on current and future demand for talent.

Workforce needs analysis: Organisations make use of workforce planning - a fully integrated organisational process that involves proactively planning ahead to avoid talent surpluses or shortages. This process is based on the premise that a company can be staffed effectively if it forecasts its talent needs, while considering the actual supply of talent that is or will be available. Workforce planning might be more accurately called talent planning, as it integrates the forecasting elements of each of the HR functions that relate to talent: recruiting, retention, redeployment, as well as leadership- and employee-development. The end result of workforce planning is an action plan which outlines the specific actions all management will have to take in terms of implementing Talent Management within the organisation (Sullivan, 2002).

Environmental scanning: This is done in order to determine the availability of talent in the labour market, the general conditions of the economy, customer demand, as well as the hiring and retention strategies of competitors, all of which will influence the eventual Talent Management process (Potchefstroom University, 2004).

2.4.2 Development and design

Once an organisation has made a strategic decision to introduce a Talent Management strategy within the organisation, it is necessary to prepare the plans to implement this strategy. This section discusses the important considerations for the preparation and planning of the implementation of a Talent Management strategy.

***Talent Management mindset*:** A Talent Management mindset is a deep-seated belief that having better talent at all levels allows an organisation to outperform its competitors. This

belief gives leaders the determination to strengthen their talent pool and the courage to take bold actions to do so. This means that the CEO should accept direct responsibility for the Talent Management standards to be implemented in the organisation and expect the same of his/her management team. The 'War for Talent Survey, 2000', undertaken by McKinsey and Company (as cited in Michaels, Handfield-Jones, et al., 2001), found that 49% of *high performing* companies stated that improving talent was one of the top three priorities of the organisation; while the same claim was made by only 30% of the *average performing* companies. This appears to indicate that there might be a link between the Talent Management mindset within the organisation and the possible successful outcomes such as performance or retention of talented employees. The importance of instilling a Talent Management mindset at both executive and line management level has been discussed extensively in the literature (Antonucci, 2005; Boudreau & Ramstad 2005; Byham 2001; Chambers, Foulon, et al., 1998; Chambers, Handfield-Jones, et al., 1998; Cohn, Khurana & Reeves 2005; Conger & Fulmer 2003; Fegley 2006; Handfield-Jones, Michaels & Axelrod 2001; Hiltrop 1999; Jacobs 2005; Lockwood 2006). A study by Antonucci (2005) found a direct negative link between the level of executive commitment to Talent Management and the incidence of significant leadership shortages within organisations. The majority of the literature suggests that Talent Management strategies will not prove to be successful unless they are driven by the Talent Management mindset of both executives and line managers. This emphasis leads to the possible belief that a Talent Management mindset might be the driver behind all other Talent Management competencies.

A positive causal linkage is thus hypothesized between a *Talent Management Mindset* and the remainder of the Talent Management competencies to be proposed in the model.

Defining talent: A standard needs to be set for what the organisation defines as 'talent'. A common understanding is necessary of what comprises superior performance in order to create a benchmark for making hiring, developmental and promotional decisions across the organisation. Handfield-Jones, Michaels, et al., (2001, p. 27) term this the "gold standard for talent". The requirements for talented employees will not be the same for all organisations and each company must understand the specific talent profile that best produces desirable results for the organisation. Managerial talent is difficult to define, but can generally be considered to be a "combination of a sharp strategic mind, leadership ability, emotional maturity, communications skills, the ability to attract and inspire other talented people,

entrepreneurial instincts, functional skills, and the ability to deliver results" (Michaels, Handfield-Jones, et al., 2001, p. xiii). For organisations to succeed at managing talent they should be able to identify and measure the talent levels of their employees. This would then imply the need for the development and empirical testing of a comprehensive competency model, as defined above, for the various positions in the organisation. This would by implication then also necessitate the development of psychometrically sound performance measures, both on a behavioural level and on an outcome level. The argument presented in Chapter 1 would moreover imply that, with regards to managerial positions, such a competency model will have to include Talent Management as one of the (second-order) management competencies. The development of a Talent Management competency model, as proposed in this study, in essence constitutes an elaboration of this one facet of the larger managerial competency model and thereby allows for the explication of Talent Management competency potential, required Talent Management competencies, as well as the desired Talent Management outcomes.

Identify and differentiate talented employees: Differentiation entails assessing the performance and potential of the employees within an organisation and utilizing this knowledge in order to allocate the commensurate promotion, compensation, and development opportunities. Michaels, Handfield-Jones, et al. (2001) propose the differentiation of employees into A, B and C players: "A players define the standard for exceptional performance by constantly delivering results and inspiring and motivating others; B players are solid performers who meet expectations, but who may have limited upward mobility; and C players deliver barely acceptable results" (p. 127). In order to maximize employee retention, it is necessary to prioritize the development of A players and compensate them on a higher level; affirm and develop the B players, so that they can contribute their best; and act decisively on the C players, as this will help them to improve their performance, except where it is necessary to remove them from critical positions (DeLong & Vijayaraghaven, 2003; Michaels, Handfield-Jones, et al., 2001). Corporate officers in the McKinsey and Company War for Talent 2000 Survey believe that top performers should be paid on average 42% more than average performers (as cited in Michaels, Handfield-Jones, et al., 2001).

There are several advantages to differentiating employees in this way: Affirmation of talented employees reduces employee turnover. In the McKinsey and Company War for Talent 2000 Survey, 65% of all responding employees indicated that *not feeling valued by their companies*

was a major reason for seeking alternative employment. This survey also found that a significantly greater number of *high-performing companies,* when compared to *average-performing companies,* focus on differentially identifying high performers, discussing their status with them and paying them higher salaries to prevent losing them. There is no doubt that A players boost company performance. Managers who are A players create much more value for the company than C players do; – 80 to 130 % more value in terms of company performance in the cases studied by McKinsey and Company. Another advantage of differentiating based on future potential of employees is to apportion scarce development resources to the employees who show the most potential and thus generate the most income (Kesler, 2002).

The McKinsey and Company War for Talent 2000 Survey revealed that differentiating employees had implications for management selection and development. C players were not rated highly as managers and 80% of those who had worked under C players felt that this had prevented them from learning, had hampered their career and had caused them to want to leave the company. Bosses who are C players do not develop their subordinates, do not serve as a good role models or coaches and do not boost the productivity and morale of the people around them (Michaels, Handfield-Jones, et al., 2001). It is necessary for line managers to deal with poor performers timeously in order to prevent them from dragging down the performance of the team that they work in (Chambers, Foulon, et al., 1998). This same approach applies to line managers with regards to Talent Management. Line managers who approach Talent Management in a C player-type manner will be unlikely to achieve the desired outcomes of the organisation. Hence there is a need for a Talent Management competency assessment instrument, allowing for the ability to monitor and develop these competencies if necessary.

It appears that managers who identify and differentiate their employees will use this knowledge in order to allocate the commensurate promotion, compensation, challenging assignments and development opportunities accordingly. The development of a competency model provides organisations with a tool to identify A players and to link the line management competency of *Identifying and Differentiating Talented Employees* with outcomes that are beneficial to the organisation.

It is therefore hypothesized that the line management competency of *Identifying and Differentiating Talented Employees* is positively causally linked to *Developing Others, Providing Meaningful and Challenging Work* and *Remunerating and Rewarding Fairly* (competencies that are discussed further on in this chapter).

Policies and procedures: Careful planning, development and documentation of the procedures and policies necessary to implement a Talent Management strategy is important. This includes, amongst others, procedures for career planning, performance management and reward and recognition policies. These policies and procedures will act as a sound basis for the implementation of the Talent Management strategy.

Line management accountability: The success of a Talent Management strategy is dependent on those who deliver it within the organisation. Organisations that put Talent Management strategies in to place and fail to make line managers accountable for the outcomes have nothing except a set of policies and procedures. The impact made by line managers on subordinates is one of the strongest variables influencing the retention of employees. Members of a South African organisation's talent pool rated *manager integrity and quality* as the third most important factor influencing their intention to quit (Birt, Wallis & Winternitz, 2004). Employees want a leader who knows them, understands them, treats them fairly and is someone who they can trust (Taylor, 2002).

In all areas of an employee's development, their line manager must work proactively to set development goals, assist in providing information on the resources available to meet these goals and monitor the development process. When managers are held responsible for these activities, through linking specific and measurable goals to management performance appraisals, it ensures that organisations communicate the message to high performers that the company wants them to stay and is committed to their success (Garger, 1999). It appears, however, that management accountability is not the norm. Results from the McKinsey and Company "War for Talent Survey, 2000" show that 93% of corporate officers believe that managers should be held accountable for the strength of their talent pools, while only 3% think that their companies actually do this (Handfield-Jones, Michaels, et al., 2001). The recent South African HCI (2006) Talent Mindset Index shows that 65% of organisations believe that their managers are held directly responsible for improving the development and growth of their employees. The survey also reveals that organisations are not equipping line

managers with the skills to do this: only 30% of organisations appear to be training their managers in best practices and the latest techniques to develop, mentor and nurture talent.

The literature (Antonucci, 2005; Fegley, 2006) reports that organisations have a strategic intent to hold line managers accountable for the results of Talent Management plans; however, systems for measuring and managing this accountability do not seem to be in place. In order for HR managers or senior executives to purposefully, rationally and successfully affect the Talent Management process through their line managers depends on the structures in place to measure and develop the line managers' Talent Management competencies. This study proposes that the development of a Talent Management competency model will provide such a tool. Line managers need to accept their accountability and responsibility in the Talent Management process. A commitment to the Talent Management competencies proposed in this study will create a form of 'buy-in' for line managers. This is especially important with regard to the competency of *Talent Management Mindset.*

Communication and education strategy: The importance of the Talent Management strategy needs to be communicated clearly at all levels. The roles of the various stakeholders need to be clarified and the employees need to understand how this Talent Management strategy will be beneficial to both them and the organisation. Knowledge of the competencies required for successful Talent Management at line manager level will provide a clear understanding of the expectations of the organisation in this regard. The need for improvement in communication clarity is emphasized by the fact that only 54% of organisations responding to the HCI (2006) Talent Mindset Index recorded the presence of a defined strategy for developing talent, including a clear set of formal and informal development programmes.

Employer of choice branding: Employer of choice branding refers to the process of identifying and creating a company brand message by means of applying marketing principles to the company's recruitment and retention programme. Employer branding involves differentiating the company's brand message in a manner that will appeal to the current and future workforce and set it apart from organisations competing for the same talent pool. Knowledge workers are often in a position to choose to which organisation they will sell their services and are likely to take note of the factors included in the communication of the brand image. Certain factors appear to be rated higher by knowledge workers when evaluating an organisation as a possible employer of choice. These include, amongst others; a corporate

culture of career growth and challenging work; personal training and development opportunities; pay, including it being linked to performance and profit sharing; as well as knowing that the organisation is global, innovative, and is based on good products (Sutherland & Torricelli, 2002,)

Sutherland and Torricelli's (2002) research study showed that it is important to brand yourself internally, as 54% of the perceived channels of influencing the message of an organisation's reputation as employer of choice was provided for by current employees. It is therefore necessary for organisations to brand themselves internally in order to ensure that the message is communicated to the external labour market. Internal employer of choice branding can be achieved through line managers who operationally take up the Talent management responsibility.

Human Resources information systems: The use of HR information systems or specific Talent Management software can help to manage workforce skills and capabilities, demographics, career planning, development and performance management (Lockwood, 2006). These tools can be used to centralize Talent Management information, thus improving effective decision-making.

2.4.3 Implementation and integration

A Talent Management strategy well grounded in needs analysis, development and design will prove to be far more successful in the stages of implementation and integration into the organisation. This section discusses the three important Talent Management processes of attracting and recruiting; developing; and retaining talented employees.

2.4.3.1 Attracting and recruiting employees

In order to compete for the limited supply of skilled and talented workers, organisations need to ensure that they have systems in place to attract and recruit employees of high calibre. In addition to these systems, it is imperative that line managers have the competencies to carry this process through, or risk losing potential candidates to competitors. Several of these functions are often the service responsibility of the HR department, but are not successful without the support and responsibility of the line managers. The Critical Incidents Interviewing Technique (CIT) used later in this study revealed that line managers need to have the ability to prioritize time to interview potential candidates; to devote time and energy

to the filling of vacancies; to posses a good overall knowledge of HR recruitment processes and polices; and to consistently appoint high calibre employees. Managers who display such recruitment behaviours will assist in ensuring that the following recruitment requirements are met.

***Sourcing applicants*:** In an environment where talented and skilled employees are in short supply it is necessary for organisations to be innovative in their methods to source suitable applicants ahead of their competititors. Vacancies that remain unfilled for extended periods of time are costly to an organisation and place considerable stress on the other members of the team.

Web recruiting has shortened the time to advertise vacancies, as well as the time for applicants to respond. The use of an online career website will broaden the reach and accelerate the speed of linking vacancies and applicants. Monster.com, the largest career website, had 16.7 million unique visitors and 30.7 million active resumes on site in the first three quarters of 2003 (Frank & Taylor, 2004). In addition, on-line screening and analysis tools, resume analysis programmemes and pre-employment assessments programmemes are available and will assist in decreasing the recruitment time and workload (Hartley, 2004).

Employee value proposition: An employee value proposition is a marketing-orientated strategy detailing the qualities of the organisation which allow it to be considered an employer of choice. It is necessary for the organisation to research its distinguishing qualities in order to discover those that hold employee value. Candidates place higher value on challenging jobs, flexibility, training opportunities, work environment, and the reputation of an organisation and its management (Chambers, Handfield-Jones, et al., 1998; Wellins, 2001).

Realistic job previews: The highest turnover rate occurs within the first six months of employment and this is usually due to the unrealistic expectations that the employee has about the organisation (Hiltrop, 1999). To prevent this dissatisfaction and turnover, applicants and new recruits need to be given a realistic job preview that emphasizes both the appealing and mundane aspects of the job. This approach assumes that giving candidates and newcomers accurate and complete information will result in better matching, increased job satisfaction and occupational commitment, and lower turnover (Mobley, 1982, p. 55).

There are many techniques available for the successful selection of candidates. It is essential that the organisation investigates the success of the various techniques and equips line managers with the skills to use these techniques. One such technique, behavioural-based selection interviewing, is useful to determine whether applicants demonstrate the attitudes, personality traits, behaviours and values that ensure organisational fit. (Garger, 1999; Greengard, 2003; Hartley, 2004). Line managers need to understand the importance of person-organisation fit, defined as "the congruence between the norms and values of organisations and the values of persons" (Chatman, 1989, p. 339). Person-organisation fit perceptions are strongly related to organisational commitment (Tain, 1999; Saks & Ashforth, 2002) and higher work satisfaction (Kristof-Brown, Jansen & Colbert, 2002; Tain, 1999) and are therefore likely to reduce turnover.

Selection (the procedures through which an organisation chooses its members) is seen as an antecedent to personal-organisational fit (Chatman, 1989). This is an example of one of the areas where line managers' Talent Management competencies are significant in producing desirable organisational outcomes such as reduced turnover.

A compelling offer: Although the value of financial incentives to retain employees has reduced in significance (Garger, 1999), a highly competitive compensation, particularly the potential of long-term wealth accumulation, is rated quite highly in the ability to attract talent (Chambers, Handfield-Jones, et al., 1998). Talented workers want the reassurance that the better they perform, the more money they can earn (Sutherland, Torricelli & Karg, 2002). In the McKinsey and Company's War for Talent 2000 Survey, 36% of managers rated "substantial wealth creation opportunity" as an item that was critical in their decision of which company to join, while 39% rated "being recognized and rewarded for my individual contribution" as critical. While it is not only money that attracts employees, organisations do need to remain competitive with the market price in order to acquire the best managerial talent (Michaels, Handfield-Jones, et al., 2001). Line managers have an important role to play in ensuring that potential candidates are offered market related and competitive salary packages. This is elaborated further on in this study under the section *rewards and recognizes.*

Psychological contract: Psychological contracts are the subjective beliefs regarding an exchange agreement between and individual and the organisation. These is not a written or even orally agreed contract, but is based on perceptions of what is owed between the

employee and the organisation. It is the norm for an individual to believe that the agreement is mutual and that a common understanding exists that binds them and the organisation (Rousseau, 2001).

The psychological contract has changed over recent years. Previously, organisations were viewed as a source of secure employment, along with guaranteed holiday and retirement benefits (Hiltrop, 1999) and in exchange, employees would give all their loyalty and effort to the company on a long term basis (Lee, 2001). Due to the economic downturn of the 1980's and 1990's, changing demographics and information technology, companies have found it necessary to downsize and retrench large numbers of employees and could no longer offer job security (Lee, 2001). As a result of this, organisations have had to reassess the forms of "security" that they offer to their employees in order to avoid excessive turnover and retain global talent (Hiltrop, 1995). In order to attract talented employees, organisations need to understand and meet employees' needs in terms of a new form of psychological contract.

The expectations of this new psychological contract are summed up by Hiltrop (1995):

> There is no job security. The employee will be employed as long as he or she adds value to the organisation, and is personally responsible for finding new ways to add value. In return, the employee has the right to demand interesting and important work, has the freedom and resources to perform it well, receives pay that reflects his or her contribution, and gets the experience and training needed to be employable here or elsewhere. (p.289)

Not all of the recruitment and selection considerations discussed in this section are under the control of the line manager. It is however evident that, through their recruitment and selection competencies, line managers have the ability to impact on the quality and tenure of new recruits. This in turn impacts on desirable organisational outcomes such as job satisfaction.

The competency of *Attracting and Recruiting Talent* is thus hypothesized to positively affect *Organisational Job Satisfaction* directly and to indirectly negatively affect *Intention to Quit* through *Organisational Job Satisfaction.*

2.4.3.2 Development of employees

Although Talent Management is relative to all components of the workforce, including the potential workforce that exists outside the organisation, it is however principally an internally

focused discipline. Organisations focusing on the development and redeployment of employee skills will ensure that their talented employees will change jobs and careers from within the organisation, rather than to the outside. This supports the proposal of the Talent Management competency model that states that: line managers' Talent Management competencies will have a direct impact on certain beneficial organisational outcomes.

Training and development: Research shows that opportunities for training and development have significant (perceived) ability to retain talented people (Hiltrop, 1999) and in line with the new psychological contract, high performers often perceive development as a benefit to which they are entitled. When evaluating organisations as "employers of choice", a group of South African knowledge workers rated training and development as being the second most desirable attribute (Sutherland, Torricelli & Karg, 2002). When employees see a constructive and individual return from the training they receive, their organisation usually gains in the form of increased commitment, employee satisfaction and retention (Garger, 1999).

Certain training and development interventions have been highly rated as beneficial to both employees and organisations. Leadership development initiatives use methods such as mentoring to pass on important knowledge and to provide helpful evaluations and feedback, as well as job rotation to expose future leaders to the full range of the company's operations (Cohn, Khurana & Reeves, 2005; Hiltrop, 1999). Mentoring and role-modelling have been found to be highly correlated as an antecedent to affective commitment (Stallworth, 2003). Other successful methods include executive coaching (Garger, 1999; Jacobs, 2005); the allocation of challenging tasks with greater responsibility (Gandossy and Kao, 2004; Handfield-Jones, Michaels, et al., 2001); and the use of 360° evaluation and regular feedback sessions (Kesler, 2002).

This Talent Management competency study consequently hypothesizes, consonant with the cited research evidence, that a positive causal linkage exists between the competency of *Developing Others* and *Affective Commitment* as well as the indirect negative causal linkage between *Developing Others* and *Intention to Quit* through *Affective Commitment.*

Performance management systems: Performance management systems can be used to identify employees of high potential, formulate personal development plans, and connect

ratings with the succession planning system or talent pool (Byham, 2001). In this manner, the development needs of high potential employees can be accurately assessed in order to maximize the effectiveness of development actions (Buckingham and Vosburgh, 2001).

Although the use of performance management systems is considered to be effective in motivating and retaining high performance employees (Cohn, Khurana and Reeves, 2005), some research shows that performance appraisal appears to have deleterious effects on employees' organisational commitment, particularly among high performing employees (Taylor & Pierce, 1999). The performance appraisal process can impact on the job attitudes of organisational commitment and job satisfaction, however, it appears that the appraisal *process* has the greatest impact on these job attitudes, as individuals who believe that they understand the performance appraisal system used within their organisation are more satisfied with their jobs and are more committed to their organisation (Levy & Williams, 1998).

Within this present study, the behavioural indicator of *rates the performance level of employees candidly during the performance appraisal process* was used to evaluate the competency of *Identifies and Differentiates Talented Employees.*

Succession Planning: Succession planning ensures that "lynch-pin positions that are essential to the long term health of the organisation" are able to be filled with internal candidates where possible (Conger & Fulmer, 2003, p. 79). Potential candidates are developed for promotion and identified gaps are filled through external executive recruitment. Succession planning should be linked to leadership development strategies in order to maximize the impact on the organisation. The strength of the organisation's succession planning and leadership development initiatives, as well as support from the CEO, will convey the message to employees that the company is serious about retaining them for promotional purposes (Cohn, Khurana & Reeves, 2005).

Talent reviews: A talent review, also termed "workforce planning" is a way for the leaders of an organisation to discuss the performance and potential of their people on a regular basis, in order to decide on action plans for strengthening the talent pool, thus proactively planning ahead to avoid talent surpluses or shortages This is very different to succession planning which only focuses on the executive level (Handfield-Jones, Michaels, et al., 2001).

Talent reviews play an important role in the Talent Management process through integrating the forecasting elements of each of the HR functions that relate to talent – recruiting, retention, redeployment and leadership and employee development. Through the forecasting of predicted upcoming changes in the demand and supply of talent, talent action plans (which set out the specific actions all management will have to take in terms of Talent Management) can be prepared and implemented in the organisational strategy (Sullivan, 2002).

Talent pools: Talent pools, also termed acceleration pools or leadership bench strength, are defined as the availability of strong and deep pools of talent, able to assume a number of varied leadership roles at various levels (Kesler 2002). High potential employees are identified and developed as a group, in order to supply a steady stream of internal leadership talent to fill a variety of management positions, rather than being groomed for a specific position (Byham, 2001). In the SHRM 2006 Talent Management Survey Report, one of the top areas identified for improvement by organisations that implemented Talent Management processes was to build a broader base of successors at all levels (Fegley, 2006). Only 20% of respondents felt that their organisation had adequately prepared for this through their talent pool. Relying on internal recruitment and promotion to fill new or vacant positions tends to improve employee morale, commitment and job security (Hiltrop, 1999).

2.4.3.3 Retention of employees

The literature reveals a wide range of suggested methods for retaining talent, and these recommendations are not always in agreement. The majority of the retention literature appears to be anecdotal, without the support of many empirical studies (Sutherland & Jordan, 2004). The items discussed in this section include recommended interventions which are usually introduced with the main aim of retaining talented workers, however, they may serve to attract and develop employees as well.

Challenging work: The provision of exciting and challenging work is a leading factor for engaging and retaining talent (Chambers, Foulon, et al., 1998; Garger, 1999; Levin & Rosse, 2001; Martel, 2002), regardless of the industry, economic conditions or business challenges (Kaye & Jordan-Evans, 2002). Challenging assignments are perceived to be attractive to talented employees if they require the achievement of results through influencing others, have increased responsibility, involve problem solving or taking on assignments that will stretch their abilities. Lack of challenging work was found to be the most important variable of

factors affecting the retention cognitions of employees (Birt, Wallis & Winternitz, 2004; Sutherland & Jordan, 2004). Skill variety or complexities of work are antecedents that have shown to have the greatest impact on job satisfaction (Abdel-Halim, 1981; Katz, 1978; Goldstein & Rockart, 1984; Kinicki et al., 2002; Curry, Wakefield, Price & Mueller, 1988).

A positive causal linkage is thus proposed between *Providing Meaningful and Challenging Work* and *Supervisory Job Satisfaction,* as well as between *Providing Meaningful and Challenging Work* and *Affective Commitment.*

The impact of line management: Employee's dissatisfaction with the quality of their relationship with their boss is the strongest single predictor of decisions to quit (Griffeth, et al., 2000). The line manager is the most important as the enabler of employee's commitment to their jobs, organisation and their team (CLC, 2004). Therefore, developing an effective working relationship with employees is one of the most effective ways that line managers can retain employees (Levin & Rosse, 2001).

Management attributes that are valued by employees include an open and honest two-way communication channel (Gaylard, Sutherland & Viedge, 2005), helping employees accomplish performance objectives (Levin & Rosse, 2001), manager integrity and quality (Birt, Wallis, & Winternitz, 2004), participative management (Griffeth, et al., 2000), supportive management (Kaye & Jordan-Evans, 2002) and providing feedback (Martel, 2002).

Due to the extensive impact that management relationships have on the retention of employees, a positive causal linkage is thus hypothesized between B*uilding and Maintaining Positive Relationships* and the endogenous latent variables of *Supervisory Job Satisfaction, Affective Commitment* and *Intention to Quit.*

Remunerate and reward: "Making sure that top performers' compensation is considerably higher than that of their average colleagues is a relatively straight forward way to keep the exit price high and raise barriers to poaching" (Chambers, Foulon, et al., 1998, p. 52). An employee's satisfaction with their total compensation will increase their intent to stay (CLC, 2004; Gaylard, et al., 2005; Marquez, 2006; Sutherland and Jordan, 2004). As labour market forces tend to keep pay levels relatively stable within occupations, compensation levels are

important, but are seldom listed as *the most important* of employees' concerns (Levin & Rosse, 2001).

Organisations are increasingly basing employees' bonuses, as well as merit increases, on individual performance. This method of 'pay for performance' or 'variable pay' allows high performers to receive proportionately larger bonuses and salary increases than average or poor performers and assists in retaining top performers (Griffeth, et al., 2000; Kaye & Jordan-Evans, 2002; Marquez, 2006; Martel, 2002; Sutherland, Torricelli & Karg, 2002; Sutherland & Jordan, 2004). It appears that employees are seeking a compensation package with a monetary value that they regard as a *fair and equitable* in exchange for their work effort and skills (Martel, 2002). The element of fairness is based on their income relative to other colleagues, personal experience and qualifications, performance and contribution and market trends (Gaylard, et al., 2005; Levin & Rosse, 2001).

In contrast, standard employment contract benefits such as pension, provident fund, medical aid, share options and leave, were not found to be such an important factor in influencing retention (Gaylard, et al., 2005). Perhaps this is because these are perceived to be 'standard' and are therefore expected, rather than being considered as benefits.

Non-monetary recognition in the form of acknowledgment from coworkers and managers is very important. Immediate, informal, personal rewards are considered to be earnest and this works to strengthen the relationship between the managers and the employee. This recognition could be in the form of informal verbal or written appreciation as well as company service awards or performance awards (Martel, 2002).

Based on the aforementioned research, it is hypothesized that *Remunerating and Rewarding Fairly* is positively causally linked with the endogenous latent variables of *Organisational Job Satisfaction, Supervisory Job Satisfaction* and *Intention to Quit.*

Work life balance: It is important to remember that commitment is an emotional bond that is based largely on intangibles, such as feelings of being valued and appreciated. For this reason, the inclusion of non-financial rewards, such as giving employees more control over their work and their schedule can add quality to their work life and strengthen their feelings of affiliation (Garger, 1999). Reducing stress by means of having a good balance between work and home

life contributes towards retaining employees (Gaylard, et al., 2005). This is very important for employees who are classified as 'B players' who are probably not prepared to strive for achievement at all costs and highly value the time they spend with family and friends (Chambers, Foulon, et al., 1998). Methods that can be used to increase work-life balance are flexibility of work hours, compressed work weeks, telecommuting, employee assistance programmes, childcare facilities, fitness centres, sports facilities and cafeterias (Martel, 2002). Control over the factors that can improve work-life-balance is considered to be within the domain of line managers.

A higher level of competence on the competency of *Managing and Improving Work-life-Balance* for one's subordinates is likely to increase their level of *Supervisory Job Satisfaction* as well as the emotional bond that they have with the organisation through *Affective Commitment.* A positive causal linkage between these latent variables is thus hypothesized.

2.4.4 Evaluation and renewal

In order to remain competitive, it is necessary for organisations to assess their Talent Management process regularly, reviewing the internal and external factors that impact on the attraction and retention of talented employees. It is essential to benchmark against competitors' compensation and benefits, recruiting practices and training and development programmes. Information from salary surveys, the 'Best Company to Work for' list and customer feedback are also valuable. Internal reviews include obtaining information from exit interviews, employee surveys and evaluation of HR procedures (Potchefstroom University, 2004).

Talent Management metrics have advanced considerably with the introduction of HR information systems (Tucker, Koa & Verma, 2005) with advanced data analysis capabilities for workforce planning, demographics, career planning, performance management and learning management. Scorecards can be developed to link organisational goals to Talent Management objectives and performance appraisals. Measurements can include factors such as employee survey results and turnover statistics (Lockwood, 2006).

The proposed Talent Management competency model provides a means of measuring and developing certain line management Talent Management competencies which will lead to

desirable organisational outcomes as discussed in the following literature review chapter (Chapter 3).

2.4 TALENT MANAGEMENT FUTURE TRENDS

The following discussion does not form part of the Talent Management process or the Talent Management competency model. It is however included in this chapter as it provides meaningful insight into the future progression of Talent Management strategies.

In order to link the Talent Management strategic planning to that of the organisation, Boudreau and Ramstad (2005) have proposed a new approach to Talent Management which involves the development of a "decision science" used to enhance decisions about talent resources and planning at an organisational level. Their decision frame model aims to "increase the success of the organisation by improving decisions that impact or depend on talent resources" (p. 20). This framework moves away from the traditional Talent Management approach of 'processes' to a more strategic process. This method outlines decisions at three independent levels of analysis (impact, effectiveness and efficiency) and the organisational tools, practices and resources that effect those decisions. Business leaders can use this model to understand that talent investments can open up strategic opportunities (Lewis & Heckman, 2006).

Other advances in Talent Management include the development of software which assists in decreasing job vacancy periods. Companies are posting their vacancies on to online career websites as well as the organisation's own websites, allowing applicants to submit the resumes electronically (Frank & Taylor, 2004). Technology-enabled tools and applications which make talent recruitment easier include Yahoo, Resumix, Unicru and Monster.com. These tools help to create job postings and disperse them to a larger number of people. These products allow hiring managers to create filters for screening and tracking metrics such as time-to-interview, time-to-hire and time-to-start. Some applications bundle additional pre-hire screening, background checks and behavioural assessments. These tools can also be used to track the effectiveness of the hiring and recruiting organisation (Hartley, 2004).

Due to the established reliance on Talent Management strategies in most large organisations, a demand has arisen for Talent Management metrics to be analyzed through strategic software

with advanced data analysis capabilities. Many companies are seeking ways to measure Talent Management strategies and to determine the bottom line (Lockwood, 2006).

2.5 THE POTENTIAL NEGATIVE IMPACT OF TALENT MANAGEMENT

Pfeffer (2001) points out that the focus on Talent Management may have negative consequences for the organisation and their employees. In many instances there is an overemphasis on the individual (especially talented A players), whereby these individuals are rewarded, receive higher remuneration and are included in accelerated learning programmes. The mindset develops that it is the *individual* who makes the difference and as a result there is an under-emphasis of the *team* contribution.

The search for talented employees through extensive recruitment and marketing may create the impression that talented workers are primarily available outside of the organisation. The tendency to downplay the skills and attributes of the current employees can lead to a loss of motivation and to their possible resignation.

The differentiation of talent within the organisation may also have a negative impact. Employees who are labeled as B or C players will find that less is expected of them, will attend fewer training programmes and might not receive coaching or mentoring. Average employees could become discouraged, rather than motivated, resulting in lower productivity or increased turnover.

Pfeffer (2001) also points out the fact that the prioritizing of Talent Management strategies could lead to a de-emphasis of addressing the systemic, cultural and business processes issues that play an important role in improving individual and organisational performance. It is important that organisations ensure a holistic approach to Talent Management in order to prevent these possible consequences.

2.6 SUMMARY

This chapter has reviewed the many integrated facets of Talent Management strategies that organisations need to consider within their organisations. Where relevant, these facets have been incorporated within the proposed Talent Management competency model. The following chapter will investigate the possible Talent Management organisational outcomes which Talent Management strategies aim to achieve.

CHAPTER 3
LITERATURE REVIEW: ORGANISATIONAL COMMITMENT, JOB SATISFACTION AND INTENTION TO QUIT

3.1 INTRODUCTION

As one of the major intended outcomes of Talent Management strategies is to retain talented employees, it is important to consider the antecedents to turnover. This chapter explores the possible measurable outcomes of Talent Management and finds Job Satisfaction, Organisational Commitment and Intention to Quit to be the best determinants of actual turnover. Each of these constructs is described in detail, including particulars of research regarding their antecedents and consequences.

3.2 DETERMINANTS OF TURNOVER

Turnover refers to the actual movement of employees across the membership boundaries of an organisation (Currivan, 1999). The specific form of turnover most relevant to Talent Management studies is voluntary turnover. Since data on employees who quit voluntary is difficult to collect, researchers often focus on the determinants of turnover instead. Multiple studies have confirmed that turnover intentions (intention to quit) remain the best determinant of actual turnover (Arnold & Feldman, 1982; Cotton & Tuttle, 1986; Currivan ; Griffeth, et al., 2000; Igbaria & Greenhaus, 1992; Tett & Meyer, 1993). *Intention to quit* is seen as a conscious and deliberate willfulness to leave the organisation, and has been describes as the last in a sequence of withdrawal intentions (Tett &Meyer). With a view of identifying the factors that may influence retention, the literature has repeatedly raised job satisfaction, organisational commitment and intention to quit as important antecedents to job turnover (Arnold & Feldman; Chen, 2006; Cotton & Tuttle; Currivan; Curry et al., 1988; Elangovan, 2001; Gaylard, et al.; Griffeth, et al.; Igbaria & Greenhaus; Tett & Meyer). Organisational commitment and job satisfaction are usually proposed as intervening variables between other determinants and outcomes such as intention to quit and employee turnover.

3.3 ORGANISATIONAL COMMITMENT

3.3.1 The significance of organisational commitment to Talent Management

Research on the consequences of organisational commitment, the psychological bond between employees and their employing organisation (Bagraim, 2003), shows there to be several organisational benefits to increased organisational commitment. These benefits are shown through the establishment of significant causal links between organisational commitment and *reduced turnover intentions* (Arnold & Feldman, 1982; Bagraim; C.L.C., 2004; Griffeth, et al., 2000; Meyer & Allen, 1997; Stallworth, 2003; Wasti, 2002; Winterton, 2004), *higher performance levels* (Meyer & Allen, 1997; Winterton, 2004), *increased employee discretionary effort* (C.L.C., 1999) and *improved employee wellness* (Meyer & Allen, 1997). Therefore, organisations can benefit by focusing on the variables which aim to increase commitment amongst talented employees.

3.3.2 Background to the concept of organisational commitment

Organisational commitment has been a topic of interest to researchers for over 30 years (Bagraim, 2003). Initially organisational commitment was termed *attitudinal commitment* by Porter, Steers, Mowday and Boulian (as cited in Steers, 1977). Attitudinal commitment was seen as a psychological state that reflected an employee's relationship to the organisation and was defined as the relative strength of an individual's identification with, and involvement in, a particular organisation. It was characterized by three factors;- 1) a strong belief in and acceptance of the organisation's goals and values; 2) a willingness to exert considerable effort on behalf of the organisation; and 3) a strong desire to maintain membership in the organisation.

A second approach, cost-induced organisational commitment, developed out of Becker's (1960) "side-bet" theory, which explained commitment as a tendency to engage in consistent lines of activity, for reasons completely extraneous to the activity itself. This was based on the individual's recognition that there would be some costs or penalties involved in leaving the organisation, rather than on their affective, or emotional attachment to the organisation.

A third approach tended to view commitment as a belief about one's obligation to the organisation. Some individuals remain within an organisation because they believe that it is the right and moral thing to do. In this approach, organisational commitment is viewed as

"value-based, normative evaluations of alternative organisation-related behaviors" (Wiener & Vardi, 1980, p. 4), where an individual's behaviour in this instance is based on their "values and expectations of loyalty and duty" (p. 14). In this description of commitment, an individual retains membership within the organisation due to his belief that this is the correct and expected way to behave, and not because he is acting for his personal benefit.

These three approaches to commitment were initially viewed as separate types of organisational commitment, but where later shown by Meyer and Allen (1997) to be three distinguishable components of organisational commitment, each of which can be experienced to varying degrees by an individual. These three facets were combined in Meyer and Allen's Three Component Model of organisational commitment which is detailed further on in this literature review.

3.3.3 The definition of organisational commitment

Meyer and Allen (1997) note that the definitions of organisational commitment in academic literature vary considerably, mostly because they are based on the three different types of commitment detailed in the previous section. It is pointed out by Meyer and Allen (1991) that common to these three approaches is the view that "commitment is a psychological state that (a) characterizes the employee's relationship with the organisation, and (b) has implications for the decision to continue or discontinue membership in the organisation" (p. 7). Organisational Commitment is seen as a multidimensional construct that is a "psychological link between the employee and his/her organisation that makes it less likely that the employee will voluntarily leave the organisation" (Allen & Meyer, 1990, p. 3). This multidimensional model of organisational commitment, termed the Three Component Model (Allen & Meyer, 1990), enjoys the greatest degree of acceptance and application in organisational research (Bagraim, 2003).

3.3.4 The 'Three Component Model'

Within the Three Component Model, *affective*, *continuance* and *normative* commitment are seen as distinguishable components of organisational commitment and each of these psychological states can be experienced by employees to varying degrees (Allen & Meyer, 1990). Affective commitment refers to the employee's emotional attachment to, identification with, and involvement in the organisation; continuance commitment refers to an awareness of the costs associated with leaving an organisation; and normative commitment reflects a

feeling of obligation to continue employment (Meyer & Allen, 1991). "Employees with strong affective commitment remain because they *want* to, those with strong continuance commitment because they *need* to, and those with strong normative commitment because they *ought* to do so" (Allen & Meyer, 1990, p. 3). Continuance commitment has subsequently been shown to consist of two underlying dimensions: *personal sacrifice* and *perceived lack of employment alternatives*. Both of these could increase the employee's perceived costs associated with leaving the organisation (Meyer & Allen, 2004). Each of these separate components of organisational commitment develops independently of the others as a function of different antecedents.

3.3.5. The antecedents of Organisational Commitment.

The antecedents of organisational commitment are important for the purpose of this study in as far as they present the key to the explication of the network of mediator latent outcome variables through which the Talent Management competencies have to percolate to affect follower's organisational commitment and thereby their intention to remain with the organisation. Investigation into the antecedents of organisational commitment has been the subject of a large amount of empirical research. Comparing the results of this research poses some problems as a variety of measures of commitment are used in these studies. Some studies base results on certain dimensions of organisational commitment, while other studies research the antecedents of organisational commitment in general. This discussion will first address antecedent studies related to general organisational commitment, followed by the individual facets of normative, continuance and affective commitment.

Determinants of organisational commitment have been researched extensively. Research conducted by Igbaria and Greenhaus (1992) has shown the variables of *age*, *organisational tenure, role ambiguity, role conflict, salary* and *availability of career opportunities* to have a direct effect on organisational commitment. Characteristics of the organisation have been found to be the strongest predictors of organisational commitment (Glisson & Durick, 1998); these include *organisation age*, *leadership* (characteristics of those in authority), *size of the workgroup* and *type of service provided by the workgroup.* A further study examining the antecedents of organisational commitment (Currivan, 1999) support these findings, showing *peer support, supervisor support* and *role conflict* to have a positive influence; and *work routinization* and *workload* to have a negative influence on commitment. The most significant determinant of organisational commitment found in a study conducted by Rayton

(2006) proved to be *level of job involvement* (perceived level of autonomy); additional variables impacting significantly on organisational commitment in this study were *level of pay*, level *of job routinization, peer support* and *clear job expectations*. These research results serve as examples of the many empirical studies available on this topic, as the present study does not allow for more extensive discussion. What is of importance is the considerable number of determinants which can be influenced by the competencies of line managers. This places theoretical justification for the inclusion of organisational commitment in the proposed Talent Management model as an influential endogenous latent variable. The specific dimension of affective commitment within the Three Components Model of organisational commitment will be explicated further in this study as the primary dimension of organisational commitment that mediates the affect of the level of competence achieved on the proposed Talent Management competencies on the intention to quit.

Each of the components of the Three Components Model will have a different set of antecedents that will lead to the development of commitment, due to the conceptual differences of the three components of organisational commitment (Allen & Meyer, 1990). In a meta-analysis (Meyer & Allen, 1991) of the theory and research regarding these antecedents, it is pointed out that further research is required in order to reach a more certain conclusion. This meta-analysis summarizes the general patterns that have emerged in the literature regarding the potential antecedents to each of the components of organisational commitment and a discussion of these findings follows.

The antecedents to ***continuance commitment*** develop out of the employee's assessment of costs associated with leaving the organisation and can vary considerably for each individual (Meyer & Allen, 1991). These include the evaluation of 'side-bets' (Becker, 1960) which assess the losses that the individual could incur through job-change, as well as the perceived lack of alternative employment opportunities.

It appears that the majority of the literature on the development of ***normative commitment*** is theoretical rather than empirical (Meyer & Allen, 1991). The feeling of obligation to remain with the organisation could result from cultural, familial or organisational socialization (Wiener & Vardi, 1980) or on receipt of organisational investments in the employee such as pre-employment costs for training, bursaries or relocation (Meyer & Allen, 1991).

The antecedents to ***affective commitment*** tend to fall in to three categories: personal characteristics, work experience and organisational-structure (Meyer & Allen, 1991). Within the personal characteristics category, *demographic characteristics* (age, tenure, gender and education) and *personal depositions* (need for achievement, affiliation and autonomy, as well as needs fulfillment) have been linked to commitment. Work experience antecedents to affective commitment include those experiences that satisfy the employee's needs to feel comfortable in the organisation (both physically and psychologically) as well as the experiences that increase the employee's feelings of competence in the work role. Organisational-structure antecedents that have been researched include *decentralization of decision making*, *formalization of policy and procedure* and *employee/supervisor relations*. *Mentoring* and *role-modelling* by line managers have been positively linked with affective commitment (Stallworth, 2003).

3.3.6 The consequences of organisational commitment

Meyer and Allen (1991) point out that research into the link between organisational commitment and on-the-job-behaviour (attendance and performance) has been limited and has provided mixed results. In contrast to this, research showing that organisational commitment has been found to have a significant negative effect on turnover or turnover intentions, has been widely conducted and confirmed in many instances (Arnold & Feldman, 1982; Elangovan, 2001; Griffeth, et al., 2000; Steers, 1977; Wiener & Vardi, 1980). This link is important to those studying Talent Management with the intention of retaining talented employees.

It is with this substantial body of research evidence in mind that organisational commitment is used as an explanatory latent variable in this research study in attempt to show that the *Talent Management competencies* of line managers lead to increased *Organisational Commitment* and reduced *Intention to Quit*.

3.3.7 The importance of affective commitment as a determinant of turnover intentions

Of the three components of organisational commitment, affective commitment has been the most widely studied (Wasti, 2003; Winterton, 2004) as it has consistent relationships with organisational outcomes such as performance, attendance and retention (Meyer & Allen 1997). Studies support the view that affective commitment appears to be the strongest predictor of intention to leave the organisation (Stallworth, 2003; Boshoff, van Wyk, Hoole &

Owen, 2002; Bagraim, 2003; Mathieu & Zajac, 1990; Spies, 2006). A study by Stallworth (2003) shows that, in contrast, both continuance commitment and normative commitment have a less significant predictive ability of intention to leave or actual turnover. As this study focuses on the impact of line managers' Talent Management competencies and organisational commitment on turnover intentions, for the purpose of this study, affective commitment appears to be the most appropriate component of organisational commitment for predictive purposes. In this study the affective commitment component of organisational commitment will be used as the primary dimension of the employee's commitment towards their organisation.

It is hypothesized that *Affective Commitment* will have a negative direct influence on *Intention to Quit.*

3.4 JOB SATISFACTION

3.4.1 Benefits of job satisfaction to business

Job satisfaction research is considered to be important due to its implications for job-related behaviours such as productivity, absenteeism, and turnover (Oshagbemi, 1999). Job satisfaction is repeatedly raised in the literature as one of the key areas fundamental to employee retention (Gaylard, et al., 2005). For this reason, organisations focusing on Talent Management find it important to investigate the outcomes of job satisfaction and to consider the ways in which the job satisfaction of employees can be improved

3.4.2 Definition of job satisfaction

Job satisfaction represents an affective response to specific aspects of the job and is generally defined as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experience" (Locke, 1976, p. 1300). The employee's attitude formed about his job is not based on a unitary attitude object, but rather as a degree of satisfaction with a number of different dimensions of the job (McCormick & Ilgen, 1989). Job satisfaction is generally accepted as a multifaceted construct (Fields, 2002) and has been found to be made up of several dimensions. The Job Descriptive Index (JDI) developed by Smith, Kendall and Hulin (Balzer et al., 2000) provides five subscales that measure different facets or dimensions of job satisfaction. These dimensions include satisfaction with pay, satisfaction with the job,

satisfaction with promotion opportunities, satisfaction with the supervision and satisfaction with co-workers (Ironside, Smith, Brannick, Gibson & Paul, 1989).

3.4.3 Antecedents of job satisfaction

Job satisfaction is the result of a wide range of factors that affect the quality of working life (Winterton, 2004). Previous research indicates that there are roughly three groups of variables that affect job satisfaction: job/task-related characteristics, individual characteristics and organisational characteristics (Zeffane, 1994).

Aspects of the work/job situation that have been shown to be determinants of job satisfaction have received the most attention (Glisson & Durrick, 1988). In this meta-analysis, job or task related antecedents shown to have the greatest impact on job satisfaction include *role ambiguity* (Abdel-Halim, 1981; Bedeian & Armenakis, 1981; Glisson & Durick; Goldstein & Rockart, 1984; Kinicki, McKee-Ryan, Schriesheim & Carson, 2002; Rayton, 2006; Spector, 1985), and *skill variety or complexity of work* (Abdel-Halim; Curry, Wakefield, Price & Mueller, 1988; Goldstein & Rockart; Katz, 1978; Kinicki et al., 2002). Additional work-characteristic antecedents of job satisfaction include *feedback from the job* (Spector, 1985), *person-job fit* (Saks & Ashforth, 2002), *working hours* (Gazioglu & Tansel, 2006), *workload or overload* (Curry et al., 1988; Scott, Gravelle, Simoens, Bojke & Sibbals, 2006), *job training* (Gazioglu & Tansel), *job involvement* (Rayton), *fairness of rewards* (Curry et al., 1988), and *remuneration* (Rayton; Scott et al., 2006; Spector). Job/task related characteristics are also more frequently significantly associated with job satisfaction than individual- or organisational-characteristics (Scott et al.). Several of these work-characteristic antecedents are those which can be controlled or manipulated by line managers, thus allowing them to have an impact on the job satisfaction of their employees. Foremost of these factors are *skill variety, role ambiguity, work complexity, flexibility of working hours, workload, job training* and *remuneration.* It is of significance that the majority of these factors are included in the Talent Management 360° evaluation questionnaire developed for this study, as well as the dimensions of the Job Descriptive Index (JDI) job satisfaction measure used.

Within this present study it is hypothesized that line managers' *Talent Management competencies* will have a significant positive impact on their employees' *Job Satisfaction* and

that *Job Satisfaction* will mediate the negative impact of the *Talent Management competencies* on their followers' *Intention to Quit*.

Organisational characteristics affecting job satisfaction include *leadership characteristics* (Goldstein & Rockart, 1984; Kinicki et al., 2002; Rayton, 2006), *supervision* (Spector, 1985), *peer characteristics* (Goldstein & Rockart), *person-organisational fit* (Kristof-Brown, Jansen & Colbert, 2002), *communication quality* (Kinicki et al., 2002), *career opportunities* (Rayton, 2006), and *perceived knowledge of performance-appraisal process* (Levy & Williams, 1998). Aspects of leadership and supervision effectiveness are also included in the Talent Management 360° questionnaire developed for this study and are also to be found in the dimensions of the Job Descriptive Index (JDI) job satisfaction measure.

Characteristics of the individual that predict job satisfaction have received less attention in the research literature (Glisson & Durick, 1988). These include *personality disposition* (Dorman & Zapf, 2001; Rasch & Harrell, 1990), *age* (Spector, 1985; Scott et al., 2006), *level of education* and *health problems* (Gazioglu & Tansel, 2006).

3.4.4 Consequences of job satisfaction

Empirical studies have shown that job dissatisfaction can result in alternative forms of employee withdrawal such as absenteeism, lengthy rest periods or passive job behaviour (Winterton 2004; Spector, 1985). The link between job satisfaction and work performance is a very controversial research issue (Petty, McGee & Cavender, 1984); however, several studies have shown that there is a positive, but small, correlation between individual job satisfaction and individual work performance (Petty et al., 1984). The correlation most likely is underpinned by a complex causal process in which job satisfaction is determined by both performance levels achieved and the perceived equity of the rewards received; but in which performance is simultaneously affected by job satisfaction via its impact on the value of performance and therefore, indirectly, motivation. Of greater consequence to Talent Management interventions is the link between job satisfaction and turnover behaviour, as interventions to improve job satisfaction may assist in reducing turnover. Job satisfaction has been found to have a negative effect on *intention to search for an alternative position* (Arnold & Feldman, 1982), *intention to quit* (Chen, 2006; Elangovan, 2001; Rasch & Harrel, 1990; Scott et al., 2006; Spector, 1985), and *actual quitting* (Arnold & Feldman, 1982; Freeman,

1978). There is also considerable, unresolved debate as to whether job satisfaction has a direct affect on turnover intentions, or is only effective through organisational commitment (Elangovan, 2001; Steers, 1977). This discussion regarding the causal ordering of job satisfaction, organisational commitment and intention to quit is detailed under a separate heading.

3.5 INTENTION TO QUIT

3.5.1 Definition

Intention to quit/leave an organisation refers to an employee's behaviour *intentions* and is defined as a "conscious and deliberate willfulness to leave the organisation" (Tett & Meyer, 1993, p. 2), often measured with reference to a particular time frame. In contrast, turnover refers to *actual separation* from the membership of an organisation. There are three main reasons why employees leave work; retirement, dismissal or voluntary resignation (Winterton, 2004). Studies which link job satisfaction and organisational commitment to actual turnover generally take voluntary turnover statistics into consideration.

3.5.2 The intention to quit link to actual turnover

Prior research has established that, in most instances, the best single predictor of an individual's turnover behaviour is the individual's turnover intentions. Intention to quit is considered to be the most important and immediate antecedent of turnover decisions (Arnold & Feldman, 1982; C.L.C., 1999; Cotton & Tuttle, 1986; Currivan, 1999; Griffeth, et al., 2000; Mobley, 1982; Sutherland & Jordaan, 2004; Tett & Meyer, 1993). The timeframe of this study does not allow for a link between job satisfaction, organisational commitment and actual turnover to be researched. For this reason, intention to quit will be used as a proxy measure of actual turnover.

3.6 THE CAUSAL ORDERING OF ORGANISATIONAL COMMITMENT, JOB SATISFACTION AND INTENTION TO QUIT.

Research has consistently reported both job satisfaction and organisational commitment to be negatively related to turnover and intention to quit (Arnold & Feldman, 1982; Chen, 2006; Elangovan, 2001; Freeman, 1978; Griffeth, et al., 2000; Igbaria & Greenhaus, 1992; Scott et al., 2006; Spector, 1985; Steers, 1977; Wiener & Vardi, 1980). Despite this well-established

link, disagreement continues regarding the most appropriate causal ordering of the turnover process (Chen, 2006; Currivan, 1999; Elangovan, 2001; Glisson & Durick, 1998; Rayton, 2006; Tett & Meyer, 1993; Vandenberg & Lance, 1992; Zeffane, 1994). "The diversity of the results in the literature indicates that the links between organisational commitment and job satisfaction are complex and that these attitudes are still misunderstood" (Rayton, 2006, p. 141). Tett and Meyer (1993) propose three main theoretical perspectives to this process; 1) the satisfaction-to–commitment-mediation model, 2) the commitment-to-satisfaction model, and 3) the independent-effects model. A fourth model, 4) the reciprocal relationship model is detailed by both Currivan (1999) and Rayton (2006).

For some time the dominant view in the literature stated that organisational commitment develops from job satisfaction in a manner that organisational commitment mediates the effects of job satisfaction on withdrawal variables (Elangovan, 2001; Igbaria & Greenhaus, 1992; Lincoln & Kallenberg, 1988; Mathieu & Zajac, 1990; Wallace, 1995). This notion is based on the concept that job satisfaction is an immediate affective reaction to the job and is one of the many determinants of organisational commitment, which is thought to develop over time due to exposure to the many facets of the organisation.

The second, commitment-to-satisfaction model indicates that high levels of organisational commitment lead to increased job satisfaction (Bateman & Strasser, 1984: Vandenberg & Lance, 1992). In this less supported view, organisational commitment is believed to be formed prior to and during the joining of an organisation. Once formed, organisational commitment becomes the basis for developing other attitudes, such as job satisfaction.

Both of the above models are theoretically defensible and have some empirical support (Vandenberg & Lance, 1992). This has led to the expectation that a reciprocal relationship exists between the two constructs (Farkus & Tetrick, 1989; Mathieu, 1991). The analysis undertaken by Farkus and Tetrick produced a reciprocal relationship between organisational commitment and job satisfaction, with results that did not favour one causal direction over the other.

Finally, the independent-effects model appears to have the most support in several recent studies, including meta-analyses (Arnold & Feldman, 1982; Chen, 2006; Currivan, 1999; Curry et al., 1986; Glisson & Durick, 1988; Igbaria & Greenhaus, 1992; Tett & Meyer, 1993;

Rayton, 2006). In these studies, no significant causal relationship was found between job satisfaction and organisational commitment to conclusively link the two. It is debated that job satisfaction and organisational commitment are correlated due to the effects of common causal variables, such as pay satisfaction, job involvement and job routinization (Rayton). The model proposed in this research is based on the independent-effects model, where job satisfaction and organisational commitment are seen as separate and distinct constructs, independently affecting an employee's intention to quit.

3.7 DEVELOPMENT OF A PARTIAL TALENT MANAGEMENT MODEL

Following a literature search covering Talent Management and the possible Talent Management outcomes of Job Satisfaction, Affective Commitment and Intention to Quit, a partial Talent Management competency model was derived. This model links various dimensions of line managers' Talent Management competencies to the Talent Management outcomes of Job Satisfaction, Affective Commitment and Intention to Quit. Based on the literature reviewed in chapters 2 and 3, the following fundamental model (Figure 3.1) was suggested.

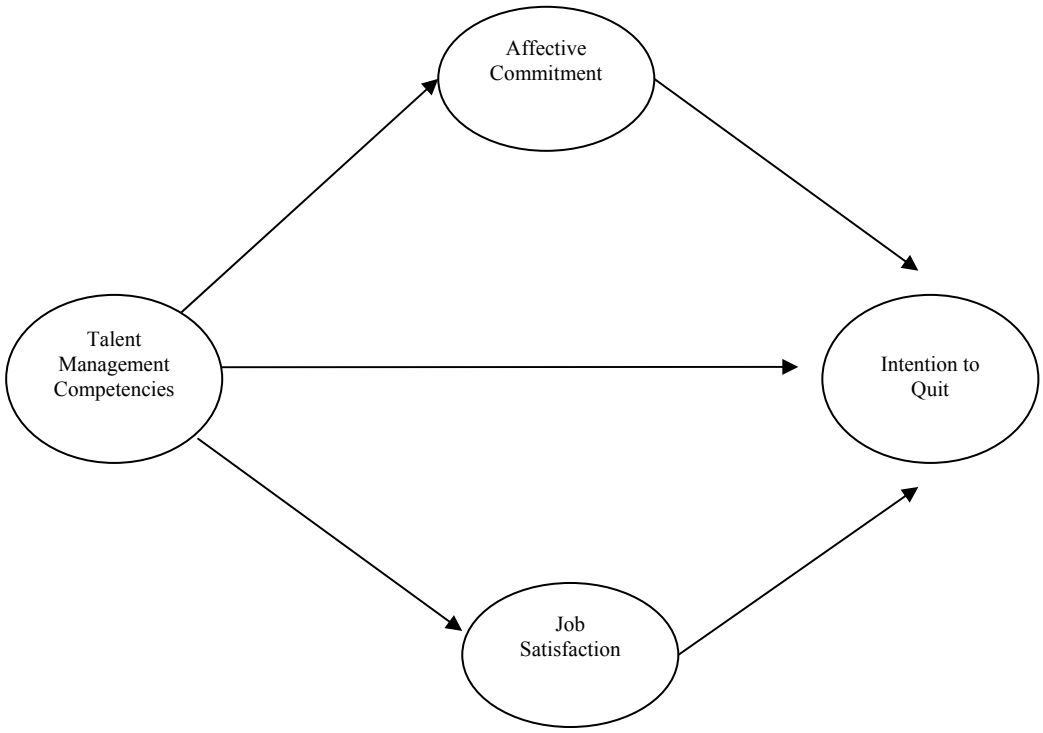

***Figure 3.1*: Fundamental partial Talent Management competency model**

According to the proposed model, the Talent Management Competencies are depicted as the exogenous latent variable, with Affective Commitment, Job Satisfaction and Intention to Quit depicted as the endogenous latent variables. It is proposed that certain Talent Management competency dimensions will contribute to the development of Affective Commitment and increased Job Satisfaction and this will result in reduced Intention to Quit.

This model was developed further through mapping out each of the dimensions of the Talent Management Competencies within the model. According to the relationships proposed within the literature study, these competencies were depicted as influencing the various outcomes. The arguments detailed in the literature review culminated in a structural model (illustrated in Figure 3.2) that depicts the specific paths or hypothesized causal linkages between the constructs.

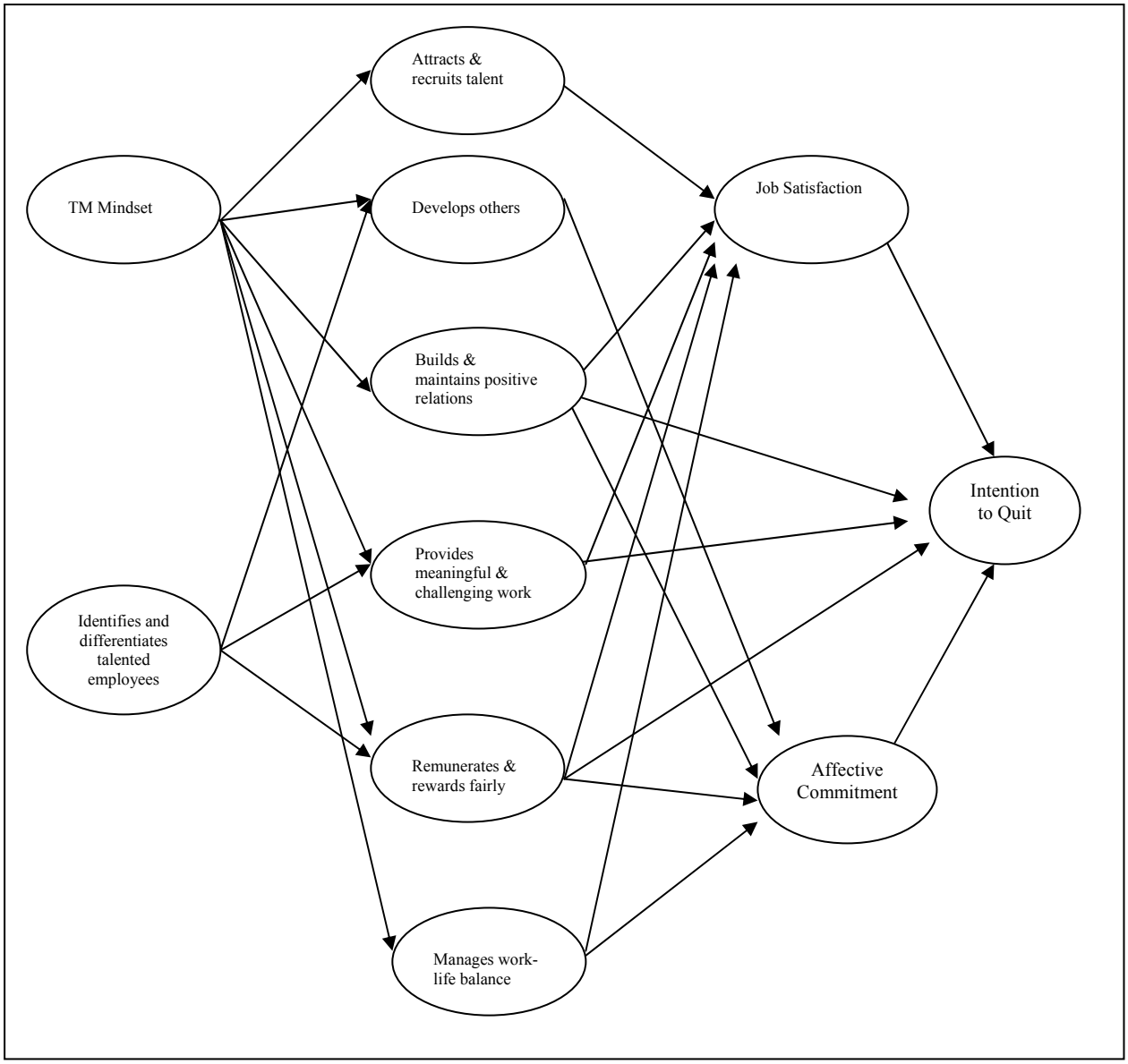

Figure 3.2: **Expanded partial Talent Management competency model.**

3.8 SUMMARY

This chapter has investigated the various Talent Management competency outcomes variables that conceivably could be influential effects in the network of latent mediator variables through which the Talent Management competencies have to percolate to affect follower's intention to remain with the organisation. Affective Commitment, Job Satisfaction and Intention to Quit were found to be the most pertinent explanatory latent variables that had to be included in the proposed Talent Management competency model. The chapter was concluded with a depiction of this proposed model in the form of a structural path diagram. Chapter four will develop this model further as the research methodology and design for this study will be explicated.

CHAPTER 4
RESEARCH DESIGN AND METHODOLOGY.

4.1 INTRODUCTION

This chapter presents the research design and methodology that will be used in this study to empirically evaluate the proposed partial Talent Management competency model depicted in Figure 3.2. In order to appreciate the proposed research methodology it is important to re-examine the objectives of this study.

The stated objectives of this study were to identify the Talent Management competencies required by line managers in order to successfully implement the organisation's Talent Management strategy, to conceptualize these competencies within a partial competency model and to determine how subordinate's intention to remain with the organisation is affected by line managers' Talent Management competencies via its affect on a network of relevant mediator latent outcome variables. The theoretical argument lead in the literature study presented in Chapters 2 and 3 culminated in a theoretical model (depicted in Figure 3.2) which hypothesizes specific structural relationships between the latent variables.

4.2 RESEARCH DESIGN

A research design is the plan and structure of investigation created in order to obtain answers to research questions. The plan is the overall scheme or programme of the research, while the structure is the framework, organisation or configuration of elements of the structure related in specific ways (Christensen, 1993; Kerlinger, 1992). A research design is a strategy for gathering evidence about the knowledge desired (De Vos, 2005).

In order to develop and evaluate the theorized partial Talent Management competency model, facilitation of the research process necessitates a research design which will set up the framework required to regulate the manner in which the validity of the hypothesized relations among the variables will be examined. The plan and structure of the research design for this study is best achieved within the realms of the quantitative research paradigm.

A quantitative design is defined as an inquiry into a social or human problem, based on testing a theory composed of variables, measured with numbers and analyzed with statistical procedures in order to determine whether the predictive generalizations of the theory hold true (De Vos, 2005, p. 74.). Within this paradigm the data are collected empirically and presented in the form of numbers (Goodwin, 2003).

A research design strategy that seeks to describe and evaluate the degree of relationship that exists between two measured variables is termed a correlational strategy. The correlational strategy involves measuring two or more variables as they exist naturally: its goal is to establish that a relationship exists between variables and to describe the nature of the relationship. One important use of correlation research is to establish relationships between variables that can be used for prediction. In correlational study, the researcher is interested in the relationship between two or more variables in order to use knowledge about the predictor variables to help predict or explain the criterion variable. This strategy is ideally suited to social sciences research as variables are measured as they exist normally, with no attempt to manipulate them, thus making it *ex-post-facto* in nature. As a result, researchers are able to investigate variables that would be impossible or unethical to study through manipulation. Correlational studies tend to have a high external validity as they do not manipulate, control or interfere with the variables being examined (Gravetter & Forzano, 2003). The concomitant disadvantages of this non-experimental method include 1) a low internal validity; 2) excluding the ability to apportion causality; 3) the third variable problem (the fact that two variables may be correlated not because they are causally related, but because some third variable caused both of them); and 4) the lack of ability to establish directionality. Interpretation of the research data obtained via a correlational design should take these factors into consideration (Christensen, 1994).

4.3 REVISED THEORETICAL MODEL

The Talent Management competency model depicted in the previous chapter (Figure 3.2) was found to require some modification after initial statistical analysis on the model. Chapter 5 presents the statistical analysis results based *initially* on the model depicted in Figure 3.2. During the fitting of the measurement model for the job satisfaction scale (the Job Descriptive Index) a poor fit was returned (see chapter 5 for details). It was discovered through exploratory factor analysis that two factors underlie the observed correlation matrix calculated

for the Job Descriptive Index scores. These two factors were termed (1) Organisational job satisfaction and (2) Supervisory job satisfaction. The structural model was altered accordingly in order to include these two job satisfaction factors and this resulted in the final version of the partial Talent Management competency model as depicted in Figure 4.1. This final model was confronted with data in a structural equation modelling analysis and the results are reported in Chapter 5.

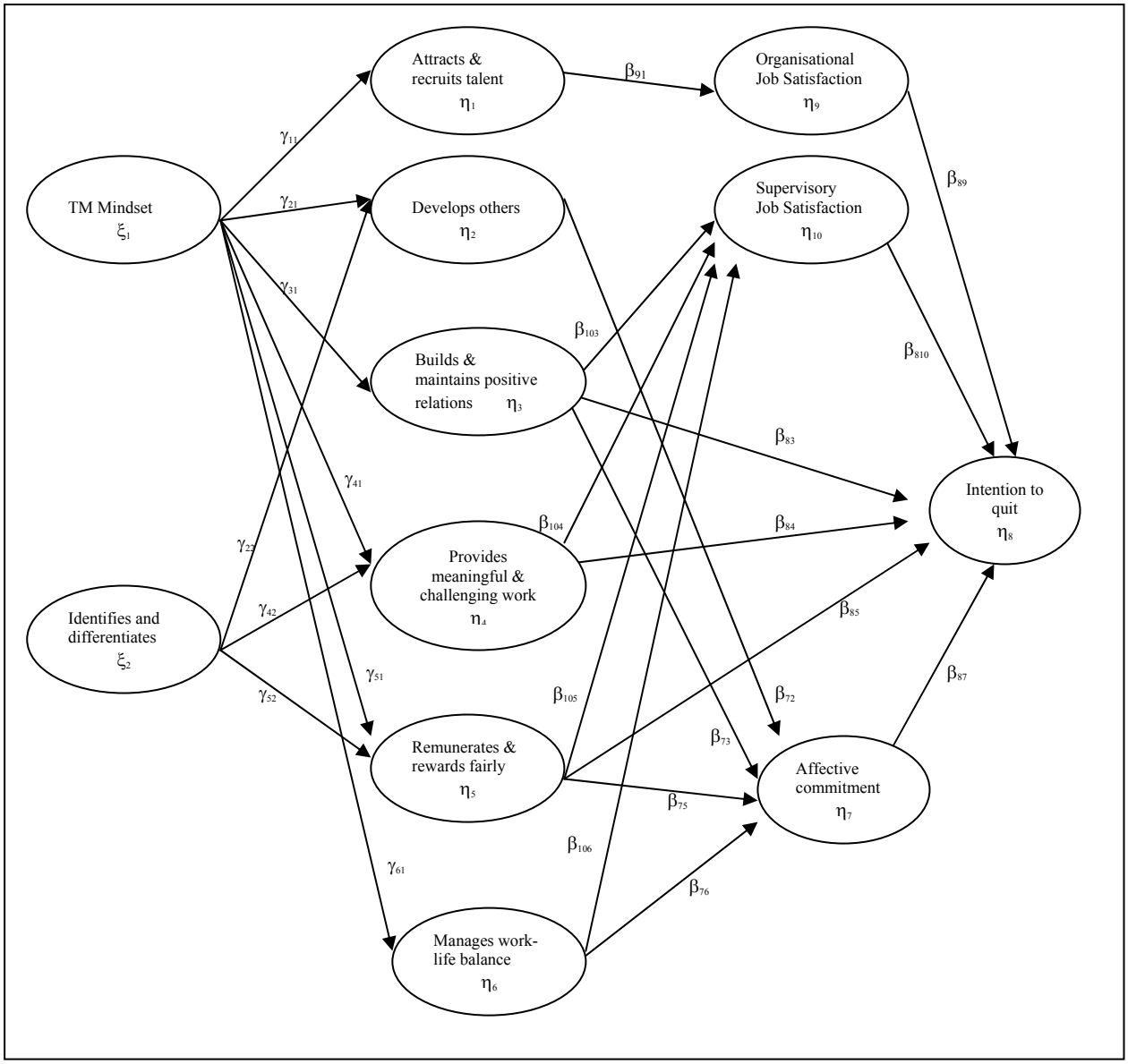

Figure 4.1: **Final revised partial Talent Management competency model**

4.4 STATISTICAL HYPOTHESIS

The overarching substantive research hypothesis tested in this study is that the structural model depicted in Figure 4.1 provides a valid account of the manner in which Talent Management competencies affect Intention to Quit in subordinates. The overarching substantive hypothesis can be dissected into twenty-four separate substantive research hypotheses as represented by the paths hypothesized in Figure 4.1.

If the overarching substantive research hypothesis would be interpreted to mean that the structural model depicted in Figure 4.1 provides a perfect account of the manner in which Talent Management competencies affect Intention to Quit in subordinates, the substantive research hypothesis translates into the following exact fit null hypothesis:

H_{01}: RMSEA = 0
H_{a1}: RMSEA > 0

If the overarching substantive research hypothesis would be interpreted to mean that the structural model depicted in Figure 4.1 provides an approximate account of the manner in which Talent Management competencies affect Intention to Quit in subordinates, the substantive research hypothesis translates into the following close fit null hypothesis:

H_{02}: RMSEA ≤ 0,05
H_{a2}: RMSEA > 0,05

If H_{01} and/or H_{02} would not be rejected (or if at least reasonable model fit would be obtained) the twenty-four separate substantive research hypotheses as represented by the paths hypothesized in Figure 4.1 will be tested by testing the specific null hypotheses depicted in Table 4.1.

Table 4.1: Statistical hypotheses

Hypothesis 1	Hypothesis 6	Hypothesis 11	Hypothesis 16	Hypothesis 21
H_{03}: $\gamma_{11} = 0$	H_{08}: $\gamma_{61} = 0$	H_{013}: $\beta_{72} = 0$	H_{018}: $\beta_{84} = 0$	H_{023}: $\beta_{76} = 0$
H_{a3}: $\gamma_{11} > 0$	H_{a8}: $\gamma_{61} > 0$	H_{a13}: $\beta_{72} > 0$	H_{a18}: $\beta_{84} < 0$	H_{a23}: $\beta_{76} > 0$
Hypothesis 2	Hypothesis 7	Hypothesis 12	Hypothesis 17	Hypothesis 22
H_{04}: $\gamma_{21} = 0$	H_{09}: $\gamma_{22} = 0$	H_{014}: $\beta_{103} = 0$	H_{019}: $\beta_{75} = 0$	H_{024}: $\beta_{89} = 0$
H_{a4}: $\gamma_{21} > 0$	H_{a9}: $\gamma_{22} > 0$	H_{a14}: $\beta_{103} > 0$	H_{a19}: $\beta_{75} > 0$	H_{a24}: $\beta_{89} < 0$
Hypothesis 3	Hypothesis 8	Hypothesis 13	Hypothesis 18	Hypothesis 23
H_{05}: $\gamma_{31} = 0$	H_{010}: $\gamma_{42} = 0$	H_{015}: $\beta_{83} = 0$	H_{020}: $\beta_{105} = 0$	H_{025}: $\beta_{810} = 0$
H_{a5}: $\gamma_{31} > 0$	H_{a10}: $\gamma_{42} > 0$	H_{a15}: $\beta_{83} < 0$	H_{a20}: $\beta_{105} > 0$	H_{a25}: $\beta_{810} < 0$
Hypothesis 4	Hypothesis 9	Hypothesis 14	Hypothesis 19	Hypothesis 24
H_{06}: $\gamma_{41} = 0$	H_{011}: $\gamma_{52} = 0$	H_{016}: $\beta_{73} = 0$	H_{021}: $\beta_{85} = 0$	H_{026}: $\beta_{87} = 0$
H_{a6}: $\gamma_{41} > 0$	H_{a11}: $\gamma_{52} > 0$	H_{a16}: $\beta_{73} > 0$	H_{a21}: $\beta_{85} < 0$	H_{a26}: $\beta_{87} > 0$
Hypothesis 5	Hypothesis 10	Hypothesis 15	Hypothesis 20	
H_{07}: $\gamma_{51} = 0$	H_{012}: $\beta_{91} = 0$	H_{017}: $\beta_{104} = 0$	H_{022}: $\beta_{106} = 0$	
H_{a7}: $\gamma_{51} > 0$	H_{a12}: $\beta_{91} > 0$	H_{a17}: $\beta_{104} > 0$	H_{a22}: $\beta_{106} > 0$	

4.5. SAMPLE

A variety of sample groups was used at specific stages of the research study.

Sample 1: Prior to designing the Talent Management 360° evaluation questionnaire (detailed under 4.6.1.1.), a total of four line managers (subject matter experts) were interviewed using the Critical Incident Technique (CIT). This was done in order to ascertain the Talent Management behavioural indicators to be used for the development of the questionnaire. One of these participants was at director level, two at executive management level and one at middle-management level.

Sample 2: The completed questionnaire was submitted to a pilot study sample, consisting of three HR managers, three line managers, as well as an HR manager external to the organisation. Feedback was given to suggest improvements to the questionnaire.

Sample 3: A convenience sample consisting of 123 employees who have been identified as talented employees with management potential and who are currently enrolled in the organisation's three-year leadership development programme was used for the completion of the Talent Management 360° evaluation questionnaire. These employees mostly fall in to the categories of non-management and entry-level management and a few have reached middle

management level. The majority of these 123 employees have subordinates who report to them directly. The Talent Management of these direct reports thus forms part of their management responsibility. The eventual purpose with the Talent Management 360° evaluation questionnaire would be to assist in the monitoring and development of the Talent Management competencies in these aspirant leaders. To justify the future use of the instrument, however, requires evidence that competence in these competencies indeed relates to job satisfaction, commitment and intention to quit in their direct reports and does so in the manner hypothesized by the structural model depicted in Figure 4.1.

A total of 78 out of the 123 candidates were rated by their peers, superior and (where applicable) subordinates. A total of 357 questionnaires were returned by the employees. In order to maintain the anonymity of the employees, no demographic details where requested. It was felt that a more accurate and frank response would be received as a result of assured confidentiality.

4.6 MEASURING INSTRUMENTS

Three versions of the Talent Management competency 360° evaluation questionnaire were distributed. The first version was specifically for the candidates of the leadership development programme (see Appendix A), and the second version was for their superiors and their peers (see Appendix B). These two formats of the 360° evaluation questionnaire contain only the Talent Management competency scale. Direct reports of these candidates were requested to complete the third version of the questionnaire which also included the Job Descriptive Index, the Affective Commitment scale and the Intention to Quit scale (see Appendix C).

4.6.1 Talent Management Competencies

Talent Management competencies were measured by means of the 360° evaluation questionnaire developed for this study. Responses to the items were on a five point Likert frequency scale ranging from ‘never’ to ‘always’.

4.6.1.1 Development of 360° evaluation questionnaire

A literature research was unable to identify details of measuring instruments used to assess the Talent Management competencies of line managers. In addition, the literature did not

include details of a Talent Management competency model. It was therefore necessary to initially develop a competency model on which to base the questionnaire.

At the outset, a literature search was used to develop this model. Potential competencies were extracted from Talent Management literature and several management competency models. Table 4.2 provides a summary of the sources supporting each of the eight Talent Management competencies identified through the Talent Management literature study.

Table 4.2: Talent Management competency dimensions supported by literature search

Dimension	Source
DISPLAYS A TALENT MANAGEMENT MINDSET	Antonucci (2005); Boudreau and Ramstad (2005); Byham (2001); Chambers, Foulon, et al. (1998); Chambers, Handfield-Jones, et al. (1998); Cohn, Khurana and Reeves (2005); Conger and Fulmer (2003); Fegley (2006); Handfield-Jones, Michaels, et al. (2001); Hiltrop (1999); Jacobs (2005); Lockwood (2006).
ATTRACTS AND RECRUITS TALENT	Bozell (2002); Buckingham and Coffman (1999); Byham (2001); Chowanec and Newstrom (1991); Fegley (2006); Frank and Taylor (2004); Garger (1999); Greengard (2003); Hartley (2004); Hiltrop (1995); Hiltrop (1999); Hiring and keeping the best people (2002); SHL (2000); Sullivan (2002); Terpstra and Rozell (1993); Tucker, Kao and Verma (2005); Wellins (2001); Whiddett and Hollyforde (2000).
IDENTIFIES AND DIFFERENTIATES TALENTED EMPLOYEES	Buckingham and Vosburgh (2001); Byham (2001); Chambers, Foulon, et al. (1998); Cohn, Khurana and Reeves (2005); Conger and Fulmer (2003); DeLong and Vijayaraghaven (2003); Handfield-Jones, Michaels, et al. (2001); Huselid, Beatty and Becker (2005), Jacobs (2005); Kesler (2002); Levy and Williams (1998); Lewis and Heckman (2006); Michaels, Handfield-Jones and Axelrood (2001); Taylor and Pierce (1999).
DEVELOPS OTHERS	Buckingham and Coffman (1999); Byham (2001); Center for Creative Leadership (n.d.); Cohn, Khurana and Reeves (2005); Conger and Fulmer (2003); Chambers, Handfield-Jones, et al. (1998); Fegley (2006); Frank and Taylor (2004); Gandossy and Kao (2004); Garger (1999); Griffen (2003); Hiltrop (1995); Hiltrop (1999); Jacobs (2005); Kesler (2002); SHL (2000); Spencer and Spencer, (1993); Stallworth (2003); Sullivan (2002); Sutherland, Torricelli and Karg (2002); Wellins (2001).
BUILDS AND MAINTAINS POSITIVE RELATIONSHIPS	Antonucci (2005); Birt, Wallis and Winternitz (2004); CLC (2004); Center for Creative Leadership (n.d.); Gaylard, et al. (2005); Goldstein and Rockart (1984); Griffeth, et al. (2000); Hiltrop (1995); Hiltrop (1999);Kaye and Jordan-Evans (2002); Kinicki et al (2002); Levin and Rosse (2001); Martel (2002); Meyer and Allen (1991); Psytech (n.d.); Rayton (2006); SHL (2000); Spector (1985); Taylor (2002).
PROVIDES MEANINGFUL AND CHALLENGING WORK	Abdel-Halim (1981); Birt, Wallis and Winternitz (2004); Chambers, Foulon, et al. (1998); Chambers, Handfield-Jones, et al. (1998); Curry, Wakefield, Price and Mueller (1998); Garger (1999); Greengard (2003); Katz (1978); Goldstein and Rockart (1984); Hiltrop (1999); Kaye and Jordan-Evans (2002); Kinicki et al. (2002); Levin and Rosse (2001); Martel (2002); Michaels, Handfield-Jones and Axelrood (2001); Sutherland and Jordan (2004); Taylor (2002); Wellins (2001).
REMUNERATES AND REWARDS FAIRLY	Buckingham and Coffman (1999); Chambers, Foulon, et al. (1998); CLC (2004); Chambers, Handfield-Jones, et al. (1998); Curry et al. (1998); Garger (1999); Gaylard, et al. (2005); Griffeth, et al. (2000); Hilltrop (1995); Levin and Rosse (2001); Marquez (2006); Martel (2002); Rayton (2006); Scott et al. (2006); Spector (1985); Spencer and Spencer, (1993); Sutherland and Jordan (2004); Sutherland, et al. (2002); Tucker, et al. (2005).
MANAGES WORK-LIFE BALANCE	Chambers, Foulon, et al. (1998); Chambers, Handfield-Jones, et al. (1998); Garger (1999); Gaylard, et al. (2005); Gazioglu and Tansel (2006); Hiltrop (1995); Martel (2002); Scott, et al. (2006); Wellins (2001).

Behavioural denotations for each of the eight Talent Management competencies were identified via the literature study. The Talent Management competencies derived from the

literature as well as their denotations were then augmented and refined using a qualitative research method: Critical Incidents Interviewing Technique (CIT). This technique was developed by Flanagan (1954) as a set of procedures for collecting direct observations of human behaviour in such a way "as to facilitate their usefulness in solving practical problems and developing broad psychological principles" (p. 327). Since its introduction, this technique has evolved from a procedure based on the collection of data through direct observation, to the collection of interview data through retrospective self-report (Butterfield, Borgen, Amundson, & Maglio, 2004). Flanagan highlights two important principles of the CIT: a) reporting of facts regarding behaviour is preferable to the collection of interpretations, ratings, and opinions based on general impressions; b) reporting should be limited to those behaviours which, according to competent observers, make a significant contribution (either positive or negative) to the performance outcomes.

The CIT of data collection was considered to be the most suitable method for obtaining items for the 360° questionnaire as it focuses on critical events, incidents or behaviours that help promote or detract from the effective performance of some activity (Cresswell, 1998). Levine, Ash and Bennett (1980) compared four methods of job analysis: the critical incidents technique, job elements, the position-analysis questionnaire, and task-analysis. The critical incidents technique (CIT) was the method most favoured for providing adequate information to develop content-valid appraisal measures. In a second study, Levine, Ash, Hall and Sistrunk (1983) compared the CIT with those three methods plus four others: ability measurement scales, functional job analysis, task inventory, and threshold trait analysis. The CIT was rated higher than the other methods for developing an appraisal scale.

Butterworth et al. (2004) recommend a series of nine credibility checks to be used to enhance the robustness of CIT findings. Three of these techniques were applied in this study as a means of increasing the soundness of the results from the CIT study: a) *Participant cross-checking* is a method that is used after the data from the interviews have been analyzed and placed into tentative categories. The CIT participants are required to confirm that these categories make sense and that their experiences are adequately represented in the categories. In this study, the tentative categories were submitted to the interviewees for cross-checking; b) *Eliciting expert opinion* is a process of presenting the potential categories to two or more subject-matter experts for review, eliciting input regarding the face value of the categories as well possible areas of omission. The tentative categories and their definitions were submitted

to a panel of subject-matter experts (HR managers responsible for the Talent Management programme within the organisation) for evaluation. Certain unsuitable competencies were removed and the definitions were altered where necessary; c) The third credibility check, *theoretical agreement*, depends on whether there is "consensus within the community concerned with the research about the terms used to characterize the phenomena" (Maxwell, 1992, p. 292). This requires the list of competency categories derived from the CIT interviews to be scrutinized in the light of relevant scholarly literature and to make reasoned decisions about what the support in the literature (or lack of it) means.

Certain of the competencies derived in this manner were then excluded as potential competency dimensions for inclusion in the questionnaire (and the model), based on the criteria listed below.

The compiled list of competencies had to be considered on various levels. First of all, several of the areas of Talent Management could not be included in the questionnaire (and the model) as these did not fall within the scope of line managers' responsibilities (e.g. creating an enticing employee value proposition). Secondly, the competencies which might fall into the scope of line managers on a general basis, did not always apply specifically to the level of managers on the leadership development programme, and had to be excluded (e.g. planning a recruitment strategy). Finally, as these competencies are *behavioural*, it was necessary to ensure that all of the Talent Management competencies included in the model and the questionnaire could be *observed as behaviours* by the employees completing the questionnaire. Latham and Wexley (1994) highlight the importance of behavioural criteria, as these measures have the ability to assess individuals on factors over which they have control and also to specify what the person must do or not do to attain these outcomes.

A group of Talent Management competencies was compiled, each of which had to be defined and described in terms of several behavioural indicators. These Talent Management competency dimensions and their descriptions were submitted to a panel of subject matter experts (HR managers responsible for the Talent Management programme within the organisation) for evaluation. Certain unsuitable competencies were removed and the definitions were altered where necessary. The final list of dimensions used for the compilation of the Talent Management competency model as well as the Talent Management competency

360° questionnaire is shown in Table 4.3. The behavioural indicators uncovered during the CIT interviews were formulated into items under the relevant dimensions and this culminated in the Talent Management competency 360° evaluation questionnaire (see Appendices A, B & C). The questionnaire was tested on a small pilot group who assisted in adjusting wording and items which might have caused confusion.

Table 4.3: Talent Management competency dimensions and their descriptions

A	**DISPLAYS A TALENT MANAGEMENT MINDSET**
Persistently and continuously displays a belief that having better talent at all levels provides the means to outperform other organisations. Regularly emphasizes this view to others.	
B	**ATTRACTS AND RECRUITS TALENT**
Attract and recruits competent and committed employees. Ensures that employees have the correct technical expertise and are achievement orientated and motivated.	
C	**IDENTIFIES AND DIFFERENTIATES TALENTED EMPLOYEES**
Identifies and differentiates different levels of employees according to performance, with the purpose of adjusting management decisions and actions according to this evaluation.	
D	**DEVELOPS OTHERS**
Accurately assesses people's development needs, provides opportunities and ensures that needs are met in order to fully develop the potential of all employees.	
E	**BUILDS AND MAINTAINS RELATIONSHIPS**
Understands the importance of interpersonal awareness and has the ability to establish and maintain relationships with employees.	
F	**PROVIDES MEANINGFUL AND CHALLENGING WORK**
Ensures that subordinates are able to link their individual contribution to organisational and divisional strategic direction. Actively created opportunities for employees to be engaged in work that is challenging.	
G	**REMUNERATES AND REWARDS FAIRLY**
Recognizes the achievements of employees and provides rewards and recognition accordingly.	
H	**MANAGES WORK-LIFE BALANCE**
Controls work factors which might have a negative impact on the employee's personal or family life.	

4.6.1.2 Distribution of the questionnaire

The candidates on the leadership development programme were contacted by the HRD department via email (see Appendix E) informing them that they would be required to complete a 360° evaluation as part of their developmental training. The use of this data for

research purposes was explained and candidates were given the option of excluding their data from the research. The procedures for ethical clearance of research projects as required by the university were abided by and details are given in Appendix D. The questionnaire was distributed to each of the candidates by means of email, along with instructions and a return email address. The candidates were requested to forward the relevant questionnaires and instruction to selected superiors, peers and direct reports via email. On completion, all questionnaires were to be e-mailed directly to the researcher.

4.6.2 Job Satisfaction

Job satisfaction was measured using the abridged version of the Job Descriptive Index (JDI) developed by Smith, Kendall & Hulin (as cited by Kinicki, et al., 2002). The abridged JDI (AJDI) measures five facets of job satisfaction, namely *work itself*, *pay, promotion, supervision* and *co-workers*. These five facet scales of the JDI contain five items each. In addition, there is a separate scale for overall job satisfaction, the *Job in General scale (JIG).* The rationale for the facet approach to measuring job satisfaction is that a job is not a unitary concept and therefore requires separate measures for each aspect of the job (Balzer et al., 2000). Facet measures of job satisfaction overcome the problem of indeterminacy in overall satisfaction measures, by measuring feelings or effective responses to different facets of the job. The JDI measures have been found to possess high levels of disciminant and convergent validity. Convergent validity was demonstrated by correlation with other global measures of satisfaction; correlations with the JIG ranged from 0,66 to 0,80. Studies show the internal reliability for each subscale of the 1997 JDI and JIG to be high, with coefficient alpha values ranging from 0,86 to 0,91 (Balzer et al.). The items of the JDI cannot be reproduced in this research due to copyright agreement.

4.6.3 Affective Commitment

The Affective Commitment subscale has been found to be the single best predictor of intentions to leave (Bagraim, 2003; Boshoff, et al., 2002; Mathieu & Zajac, 1990; Spies, 2006; Stallworth, 2003). Affective commitment was measured using the Affective Commitment Scale (ACS), a subscale of Meyer and Allen's (1991, 1997) Three Component Model (TCM) Employee Commitment Survey. The TCM Employee Commitment Survey measures three forms of employee commitment to the organisation: desire-based (affective commitment), obligation-based (normative commitment), and cost-based (continuance commitment). Use of the TCM Employee Commitment Survey, authorized by John Meyer

and Natalie Allen, was made under license from the University of Western Ontario, London, Canada. The ACS scale is measured on a 7 point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (7). Allen and Meyer's (1996) meta-analysis reports on the internal consistency and construct validity of the measure: the internal consistency of the ACS measure using coefficient alpha has generally found to be high and reliabilities associated with this measure range from 0,74 to 0,89; in addition, considerable evidence supports the construct validity of all three measures of the TCM.

4.6.4 Intention to Quit

Intention to quit the organisation was measured by means of a modified version of Arnold and Feldman's (1982) scale. Responses to each item were on a 5-point frequency scale ranging from *never* (1) to *always* (5). Employees responded to each of the following items: 1) Wanting to leave the organisation, 2) Searching for another position, 3) Planning to leave the organisation, and 4) Actually leaving the organisation within the next year. This scale takes into consideration *intention to quit* and *intention to search for alternatives*, both of which are final cognitive variables immediately preceding (and having a causal effect on) turnover behaviour (Arnold & Feldman, 1982; C.L.C., 1999; Cotton & Tuttle, 1986; Currivan, 1999; Mobley, 1982; Griffeth et al., 2000; Sutherland & Jordaan, 2004; Tett & Meyer, 1993). .

4.7 DATA COLLECTION

Data for this research study was collected by means of a self-administered questionnaire-type survey. A survey is a "structured set of questions or statements given to a group of people in order to measure their attitudes, beliefs, values, or tendencies to act" (Goodwin, 2003, p. 398). Self-administered questionnaires (filled out by the participants in the absence of an investigator) have the advantage of being easily distributed to a large number of people at low cost; in this instance the questionnaire was distributed via email. Prior to the distribution of the questionnaire, all candidates were informed via email from the HRD department (see Appendix E) of the entire process. In order to allow for anonymity, candidates were given the option of replying either by email or post. In attempt to obtain the most candid response, confidentiality was assured in all instances and personal details were not requested in the questionnaire. Surveys also have the advantage of being able to collect a lot of information on a large sample in a relatively short period of time.

It is important to be aware of the disadvantages of self-administered questionnaires. Mitchell and Jolley (2001) highlight the two possible problems of *non-response bias* and *communication errors.* The first problem is due to the characteristic low return rate of self-administered questionnaires, resulting in a few respondents who might not be typical of the targeted survey group (resulting in lowered external validity). In this instance data collection was followed up via emails and telephone until a total of 78 out of the 123 candidates (sample group) were rated and a total of 357 questionnaires were returned by the employees. This represents a return of 63% of the sample. In as far as the 123 candidates were to start with a non-probability sample from the target population, the 37% non-response rate further aggravates the risk in generalizing the findings of this study to the target population of interest. The second problem, *communication errors,* creates problems when misunderstood questions are omitted or answered incorrectly. This was overcome by providing respondents with a contact email address for queries. Questions that were omitted or answered incorrectly were followed up by the researcher via email before data processing. This resulted in a more accurate return of data, with minimal missing data and thus helped to increase the construct validity of the data (Mitchell & Jolley, 2001).

4.8 DATA ANALYSIS

Various statistical techniques were used to analyze the questionnaire data and to test the partial Talent Management competency model as proposed in Figure 4.1. These techniques included a) Item Analysis, b) Factor Analysis, and c) Structural Equation Modelling (SEM). The results of the statistical analysis are presented in Chapter 5. Prior to analysis, it was ensured that the model was identified (details follow below) after which all of the questionnaire data was entered into an Excel file and copied into the Statistical Package for the Social Sciences (SPSS) for processing.

***Model identification*:** It is necessary to ensure that the model is identified to ensure that sufficient information is available to obtain a *unique* solution for the freed parameters to be estimated and tested in the model. "To obtain a unique solution of the parameters in a LISREL model, it is necessary that the number of independent parameters being estimated is less than or equal to the number of non-redundant elements of **S**, the sample matrix of covariances among the observed variables" (Diamantopoulos & Siguaw, 2000, p. 48). This rule of thumb is captured by the following formula:

$$t \leq s/2$$

where:	t =	the number of parameters to be estimated
	s =	the number of variances and covariances amongst the manifest (observable) variables, calculated as $(p + q)(p+q+1)$
	p =	the number of y-variables*
	q =	the number of **x**-variables

Note: See paragraph 5.5 for a description of the formation of parcels.

For the Talent Management competency model, the formula reads:

$$87 \leq (22 + 4)(22 + 4+1)/2$$
$$87 \leq 351$$

This shows the model to be over-identified and consequently the degrees of freedom are positive.

Item analysis was conducted on the items of the Talent Management competency scale, the Intention to Quit scale, the Affective Commitment scale and the Job Descriptive Index by means of the SPSS Reliability Procedure (SPSS 14.0, 2005). This was done in order to identify and eliminate items not contributing to an internally consistent description of the latent variables measured by these scales. Items which, through their removal, indicate a substantial increase in Cronbach's alpha and overall scale reliability will be considered for deletion. High validity and reliability can be built into tests in advance through item analysis, thus improving tests through the selection, substitution or revision of items (Anastasi & Urbina, 1997).

Factor Analysis, using Principal Factor analysis (PFA), also termed Principal axis factoring, with Varimax rotation was performed on each of the subscales of the questionnaire. PFA seeks the least number of factors which can account for the common variance (correlation) of a set of variables, as apposed to the more commonly used Principal Components analysis (PCA) which seeks the set of factors which can account for all the common and unique (specific plus error) variance in a set of variables. PFA is preferred for purposes of SEM: PFA accounts for the covariation among variables, whereas PCA accounts for the total variance of variables. Because of this difference, in theory it is possible under PFA, but not under PCA to

add variables to a model without affecting the factor loadings of the original variables in the model (Garson, 2007).

PFA was performed with the objective of confirming the uni-dimensionality of each sub-scale and to remove the items with insufficient factor loadings and where necessary, to split heterogeneous sub-scales into two or more homogenous subsets of item. In order to determine the number of factors to be extracted, the eigenvalue-greater-than-unity rule of thumb was used. The use of parallel analysis might have provided for a more credible decision-rule to decide the number of factors to extract (O'Connor, 2000). SPSS 14.0 (2005) was used for these analyses.

Certain data testing and preparation is required before the implementation of ***Structural Equation Modelling (SEM).*** This involves an exercise of item parcelling, as well as tests for univariate and multivariate normality on the indicator variables used to fit both the measurement and structural models. A discussion of both these methods follows.

SEM on the Talent Management model using individual items to operationalize the latent variables would have become unwieldy and with too many parameters to be estimated relative to the available number of observations. In order to overcome this problem, an item parcelling exercise was undertaken prior to SEM. As a result of this, fewer parameters will need to be estimated in the measurement model, implying that the estimates will be more stable in small samples. These parcels will typically exhibit distributions that more closely approach normal distribution than the original items (Hoyle, 1995). The particulars of the item-parcelling method are detailed in chapter 5 under the heading "5.5. VARIABLE TYPE".

The LISREL default estimation method when fitting a measurement or structural model analyzed by the covariance matrix is maximum likelihood. Maximum likelihood requires that the independent variables (i.e. parcels) should follow a multivariate normal distribution. Even small departures from multivariate normality can lead to large differences in the chi-square test, undermining its utility. Lack of multivariate normality generally inflates the chi-square statistic such that the overall chi-square fit statistic for the model as a whole is biased toward a Type 1 error (rejecting a model which should not be rejected). In addition, in instances of non-normality, tests of all parameter estimates are expected to be biased, yielding too many significant results (Garson, 2006). This requires a test of multivariate normality to be

performed on both the measurement and structural models prior to SEM. If necessary, an attempt to normalize the data will be made through PRELIS 2.53 (Jöreskog & Sörbom, 1996b).

SEM using the LISREL 8.54 programme (Jöreskog & Sörbom, 1996a) was used to analyze the questionnaire data and to test the model as depicted in Figure 4.1. The programme estimates unknown freed coefficients in the set of linear structural equations by the maximum likelihood method using the correlation/covariance matrix of observed variables. LISREL allows for the evaluation of both a measurement model and a structural equation model (Jöreskog & Sörbom, 1996a). The measurement model specifies a confirmatory factor analysis (CFA) of proposed relationships between the manifest (observed) indicators and the latent (theoretical) constructs, while the structural equation model (SEM) specifies hypothesized relationships among the latent constructs. A set of matrices and column vectors, manipulated following the basic rules of matrix algebra, represents the freed parameters in both components of the comprehensive LISREL model. The purpose of the comprehensive LISREL model is to explain why manifest (observed) indicator variables are correlated in a particular fashion (Hoyle, 1995). The CFA component actually allows researchers to specify a measurement model to assess how well the observed indicators measure the theoretical latent variables they were designed to reflect. Consequently LISREL is particularly useful in this study for estimating the success with which multiple-indicator variables represent their designated latent variables (Currivan, 1999). Chapter 5 presents results of the Structural Equation Modelling.

4.9 SUMMARY

In this chapter, the research methodology of the study was explicated. This included the stating of the hypotheses, the details of the measuring instruments used as well as the statistical analyses performed on the resultant data. The following chapter (Chapter 5) details the results of the research and this is followed by the interpretation of these results in Chapter 6.

CHAPTER 5
RESULTS: PRESENTATION OF RESEARCH RESULTS

5.1 INTRODUCTION

The theoretical Talent Management competency model has been derived from the literature and is stated in the form of hypothesized structural relationships between the latent variables (depicted in Figure 4.1). These hypothesized structural relationships were used to formulate specific statistical hypotheses. The purpose of this chapter is to report the results of the statistical analyses used for the testing of these hypotheses.

This chapter will initially present the treatment of missing values and provide results of the item and dimensionality analyses performed in order to establish the psychometric integrity of the indicator variables used to represent the various latent variables. Once this has been established, the univariate and multivariate normality of the indicator variables will evaluated. Finally the evaluation of the Talent Management measurement model, the two-factor Job Descriptive Index measurement model and the Talent Management competency structural model will be completed.

5.2 MISSING VALUES

Missing values presented a problem that had to be addressed before evaluation could proceed. A relatively small number of respondents failed to respond to any individual item. On a number of items on the Talent Management competency questionnaire a rather alarming number of respondents chose the ‘unable to respond’ option. In the analysis of the data these responses also had to be treated as missing values. The number of missing values due to omission and inability to respond on the Talent Management competency questionnaire are indicated in Table 5.1.

Table 5.1: Number of missing values per item for the Talent Management competency questionnaire.

	N				
	Valid	Missing		Valid	Missing
Mindset1	318	39	Relate1	351	6
Mindset2	320	37	Relate2	352	5
Mindset3	332	25	Relate3	339	18
Mindset4	326	31	Relate4	347	10
Recruit1	236	121	Relate5	352	5
Recruit2	281	76	Relate6	347	10
Recruit3	230	127	Challan1	321	36
Recruit4	250	107	Challan2	309	48
Recruit5	227	130	Challan3	307	50
Identif1	331	26	Challan4	318	39
Identif2	215	142	Challan5	320	37
Identif3	320	37	Reward1	215	142
Identif4	303	54	Reward2	251	106
Identif5	249	108	Reward3	289	68
Identif6	277	80	Reward4	175	182
Develop1	331	26	Reward5	140	217
Develop2	296	61	Reward6	272	85
Develop3	314	43	WLB1	315	42
Develop4	314	43	WLB2	309	48
Develop5	289	68	WLB3	302	55
Develop6	245	112	WLB4	306	51
			WLB5	318	39

Imputation by matching (Jöreskog & Sörbom,1996b) was investigated as a possible solution to the missing values problem encountered on the Talent Management questionnaire. Five items with 10 or less missing values were used as matching variables. Imputation by matching resulted in an effective sample size of 126 cases. Although this constitutes a dramatic reduction in the original sample size of 357 cases it could have served as a less than satisfactory but nonetheless viable solution to the missing values problem.

The dilemma with this approach, however, was that for the evaluation of the proposed Talent Management structural model (depicted in Figure 4.1), the only cases that could be included in the analysis were those cases that had subordinates and where those subordinates provided ratings of their commitment, satisfaction and intention to quit. Of the 126 successfully imputed cases, only 46 cases met this requirement. This would have meant fitting a model in which more parameters are estimated than there are observations in the data set, which would not have resulted in a credible verdict on the merits of the model.

Consequently it was decided to perform the item and dimensionality analyses under a condition of listwise deletion for each subscale separately. This still resulted in a severe reduction in the effective sample size for these specific analyses (see Table 5.3) but had the advantage that it allowed the possibility of calculating the Talent Management item parcels (see paragraph 5.5) for the majority of the original sample. The item parcels scores, would however, under these conditions be derived only from those items allocated to a particular item parcel on which each respondent had valid observations. Not all items assigned to a particular item parcel would therefore contribute to the formation of each respondent's item parcel scores. In the case of 146 respondents this dilemma had the effect of producing missing values on one or more item parcels. In the fitting of the Talent Management measurement model utilizing listwise deletion this resulted in an effective sample size of 211. The situation that not all items assigned to an item parcel actually contribute to the formation of the item parcel score also threatens the credibility of the eventual verdict on the merits of the proposed Talent Management structural model. Under the circumstances the latter option seemed the lesser of two methodological evils.

In the fitting of the Talent Management structural model, listwise deletion would have resulted in an effective sample size of 75. This again would have meant fitting a model in which more parameters are estimated (in this case 87) than there are observations in the data set, which would not have resulted in a credible verdict on the merits of the model. The possibility of using imputation by matching on the item parcel data set was consequently explored to salvage the situation. Four item parcels with three or less missing values were used as matching variables. The PRELIS programme (Jöreskog & Sörbom, 1996b) was used to impute missing values. The subsequent PRELIS run on the reduced item set proved to be relatively effective in countering the missing value problem. By default, cases with missing values after imputation are eliminated. After imputation, 107 cases (out of 110) with observations on all 26 items parcels remained in the validation sample.

The number of missing values due to omission on the Affective Commitment, Job Satisfaction and Intention to Quit questionnaires are indicated in Table 5.2.

Table 5.2: Number of missing values per item for the Affective Commitment, Job Satisfaction and Intention to Quit questionnaires.

	N				
	Valid	Missing		Valid	Missing
AC2	108	7	PR1	104	11
AC3	108	7	PR2	104	11
AC4	107	8	PR3	103	12
AC5	108	7	PR4	103	12
AC6	108	7	PR5	103	12
W1	104	11	S1	103	12
W2	104	11	S2	103	12
W3	104	11	S3	103	12
W4	104	11	S4	103	12
W5	104	11	S5	103	12
P1	104	11	C1	103	12
P2	104	11	C2	103	12
P3	104	11	C3	103	12
P4	104	11	C4	103	12
P5	104	11	C5	103	12
			JIG1	103	12
			JIG2	103	12
			JIG3	103	12
			JIG4	103	12
			JIG5	103	12

The low number of missing values in this instance suggested the use of listwise deletion as a feasible solution to the treatment of the missing values problem. Listwise deletion is recommended where the sample is fairly large and the number of cases to be dropped is small and the cases are MCAR (missing completely at random). A rule of thumb is to use listwise deletion when this would lead to elimination of 5% of the sample or less (Garson, 2006). This applies in this instance and listwise deletion would result in a correlation matrix with a minimal variation in N-values (a maximum of 110 and a minimum of 103 for the Intention to Quit scale, the Affective Commitment scale and the Job Descriptive Index).

Table 5.3 depicts the number of valid observations remaining in the sample after listwise deletion of cases with missing values within each subscale. These effective sample size statistics only apply to the item analysis and the dimensionality analysis.

Table 5.3: Missing values before and after listwise deletion

Scale	Sub-scale	Valid cases	Total cases	Excluded cases
TM Competency	Mindset	295	357	62
	Recruit	186	357	171
	Identif	172	357	185
	Develop	222	357	135
	Relate	328	357	29
	Challang	275	357	82
	Reward	104	357	353
	WLB	275	357	82
Intention to Quit		107	110	3
Affective Commitment		108	110	2
Job Satisfaction	Work	105	110	5
	Pay	105	110	5
	Promotion	104	110	6
	Superiors	104	110	6
	Co-workers	104	110	6
	JIG	104	110	6

The effective sample size varied according to the application of the data. For the fitting of the Talent Management measurement model the effective sample size was 211, due to the dilemma that a number of respondents had missing values on one or more of the calculated item parcels. For the fitting of the Job Descriptive Index measurement model the effective sample size was 105, and for the fitting of the structural model the effective sample size was 107. This was due to the fact that data for employees without subordinates had to be excluded in these instances, as the variables required for these analyses were only included in the questionnaire to be completed by "direct reports" (see questionnaire, Appendix C).

5.3 ITEM ANALYSIS

Item analysis was conducted on the items of the Talent Management competency scale, the Intention to Quit scale, the Affective Commitment scale and the Job Descriptive Index by means of the SPSS Reliability Procedure (SPSS 14.0, 2005). This was done in order to identify and eliminate items not contributing to an internally consistent description of the latent variables measured by these scales. High validity and reliability can be built into tests in advance through item analysis, thus improving tests through the selection, substitution or revision of items (Anastasi & Urbina, 1997).

Each of the eight Talent Management competency sub-scales was item analyzed. One of the items in one of the subscales was flagged as problematic. Item 2 of the *Identifies and*

Differentiates Talented Employees subscale was identified as an item that lowers the homogeneity of the scale. The relative magnitude of the corrected item-total correlation (0,443), the squared multiple correlation (0,239) and the increase in alpha affected by the removal of this item (0,810 from 0,787) justified the deletion of this item.

All eight of these subscales returned Cronbach alpha values greater than 0,80. The relatively high homogeneity found for each subscale, as indicated by the Cronbach alpha values are presented in Table 5.4.

Table 5.4: Reliability of Talent Management competency measures

Subscale	Sample size (n)	Alpha	Mean	Variance	Number of items in final scale	Number of items deleted
MINDSET	295	0,822	16,4	8,241	4	0
RECRUIT	186	0,843	21,66	10,971	5	0
IDENTIF	225	0,827	21,84	10,141	5	1
DEVELOP	222	0,900	24,33	19,517	6	0
RELATE	328	0,906	26,61	15,015	6	0
CHALLAN	275	0,859	20,87	12,005	5	0
REWARD	104	0,910	22,34	36,691	6	0
WLB	275	0,868	21,26	13,550	5	0

The *Intention to Quit* and *Affective Commitment* subscales were subsequently item analyzed. A number of the items in these subscales were flagged as problematic. Item 2 of the *Intention to Quit* subscale was flagged a problematic item. The relative magnitude of the squared multiple correlation (0,332) and the increase in alpha affected by the removal of this item (0,867 from 0,848) justified the deletion of this item. The small number of items in this scale, however, argued against the deletion of the item. Item 2 of the *Affective Commitment* subscale presented itself as a problematic item in as far as the relative magnitude of the corrected item-total correlation (0,383), the squared multiple correlation (0,309) and the increase in alpha affected by the removal of this item (0,888 from 0,864) suggested that the item was not successfully reflecting the same underlying latent variable than the majority of the items in the subscale were reflecting. This item was consequently deleted. The deletions of item 2 of the *Affective Commitment* subscale, however, now resulted in item 1 coming to the fore as a problematic item. The relative magnitude of the squared multiple correlation (0,341) and the increase in alpha affected by the removal of this item (0,906 from 0,888) also justified the culling of his item from the *Affective Commitment* subscale.

The item analysis of the four items of the *Intention to Quit* scale revealed an alpha coefficient of 0,848. The remaining four items of the *Affective Commitment* scale also revealed a high level of homogeneity, with a Cronbach's alpha of 0,906. The results of these two scales are detailed in Table 5.5.

Table 5.5: Reliability of Intention to Quit and Affective Commitment measures

Scale	Sample size (n)	Alpha	Mean	Variance	Number of items in final subscale	Number of items deleted
ITQ	107	0,848	9,19	14,361	4	0
AFF COMM	108	0,906	19,51	33,392	4	2

The final scale, the Job Descriptive Index, comprises six subscales, each of which was also item-analyzed. Three items were flagged as problematic; item 1 (C1) of the *Satisfaction with People on Present Job (coworkers)* subscale, item 1 (W1) of the *Work on Present Job* subscale, and item 2 (S2) of the *Supervision* subscale were identified as items that lower the homogeneity of the scales.

Item C1 of the *Satisfaction with people on present job (co-workers)* subscale was flagged as an item that contributed towards lowering the homogeneity of the scale. The deletion of the item from this subscale was justified by the magnitude of the corrected item-total correlation (0,209), the squared multiple correlation (0,079) and the increase in alpha affected by the removal of this item (0,673 from 0,654).

Items W1 and S2 were flagged as problematic due to the corrected item-total correlation (0,423 and 0,375) and the squared multiple correlation (0,246 and 0,250). These items did not reflect extreme means or small standard deviations. In addition, the increase in alpha affected by the removal of these items was rather modest (0,010). It was also necessary to take into consideration the limited number of items included in each subscale, as well as the high degree of internal psychometric quality of this widely used scale (Stanton et al., 2002). Taking all of these facts into consideration, it was nonetheless felt that the removal of these items was warranted.

The Job Descriptive Index did not return the high level of homogeneity that the previous three scales did. The only subscale to achieve a Cronbach alpha value of above 0,800 was the

Satisfaction with work subscale. Cronbach's alpha is deemed to judge a set of indicators as reliable should they lie above the generally accepted value of 0,700 (Garson, 2006). The alpha scores for the *Satisfaction with people on present job (co-workers)* and the *Job in general* subscales (0,673 and 0,681) are disappointing in that they detract from the ability to credibly test the merits of the structural model. Based on the overall results of the Job Descriptive Index as well as time constraints, it was decided to maintain the Job Descriptive Index as the measure of job satisfaction for this study. Results of the reliability analysis for the Job Descriptive Index are presented in Table 5.6.

Table 5.6: Reliability of the Job Descriptive Index measures

Subscale	Sample size (n)	Alpha	Mean	Variance	Number of items in final subscale	Number of items deleted
WORK	105	0,814	9,32	14,336	4	1
PAY	105	0,759	7,82	23,630	5	0
PROMOTION	104	0,797	7,63	24,855	5	0
SUPERVISION	104	0,767	10,01	10,553	4	1
COWORKERS	104	0,673	9,89	9,319	4	1
JIG	104	0,681	11,63	13,732	5	0

It should be stressed that the item analysis served the purpose of screening the suitability of items for inclusion into item parcels that would be used to operationally represent the latent variables in the present empirical testing of the proposed Talent Management structural model and not to propose permanent modifications to any of the scales in question.

5.4 DIMENSIONALITY ANALYSIS

Principal axis factoring with Varimax rotation was performed on each of the subscales of the questionnaire. This was performed with the objective of confirming the uni-dimensionality of each sub-scale and to remove the items with insufficient factor loadings and where necessary, to split heterogeneous sub-scales into two or more homogenous subsets of item. In order to determine the number of factors to be extracted, the eigenvalue-greater-than-unity rule of thumb was used. SPSS 14.0 (2005) was used for these analyses. The decision (based on the results of the item analyses) to delete specific items was honored in the dimensionality analyses. The deleted items were excluded from exploratory factor analysis performed on each of the subscales.

Talent Management competency scale: All of the eight subscales of the Talent Management competency scale passed the uni-dimensionality test. The application of the eigenvalue-greater-than-unity rule indicated that a single factor adequately explained the observed correlation matrix. Factors loadings were generally satisfactory, varying between 0,569 and 0,895 with a mean of 0,755 and a median of 0,762.

The high residuals (> 0,05) reported for the subscales *Remunerates and rewards fairly* and *Work life balance* are somewhat disappointing and suggest that other influences than just the extracted factor play a significant role. The single factor does not take into account the amount of scree but there is not a single dominant second factor that expresses itself in the scores. Results of the Principal axis factoring are detailed in Table 5.7.

Table 5.7: Principal axis factoring of Talent Management competency sub-scales

Subscale	Determinant	KMO	% Variance explained	Max λ	Min λ	% Residual r > 0.05
MINDSET	0,231	0,797	65,694	0,826	0,610	0
RECRUIT	0,124	0,838	61,932	0,856	0,706	0
IDENTIF	0,171	0,843	59,651	0.838	0,569	0
DEVELOP	0,034	0,902	67,227	0,825	0,748	13
RELATE	0,026	0,901	68,375	0,885	0,751	20
CHALLAN	0,097	0,825	64,034	0,853	0,607	30
REWARD	0,008	0,790	69,335	0,851	0,743	46
WLB	0,079	0,826	65,706	0,895	0,614	40

Intention to Quit scale: The Intention to Quit scale passed the uni-dimensionality test and the observed inter-item correlation matrix can be explained by a single factor. Factor loadings were generally satisfactory, varying between 0,600 and 0,922 with a mean of 0,773 and a median of 0,785.

Affective Commitment scale: This scale also proved to be uni-dimensional. Factor loadings were generally satisfactory, varying between 0,408 and 0,873 with a mean of 0,728 and a median of 0,827. Results of the Principal axis factoring are detailed in Table 5.8.

Table 5.8: Principal axis factoring of Intention to Quit and Affective Commitment scales

Scale	Determinant	KMO	% Variance explained	Max λ	Min λ	% Residual r > 0.05
ITQ	0,148	0,797	69,835	0,922	0.600	0
AFF. COM	0,032	0,835	61,926	0,873	0,408	26

Job Descriptive Index: Only one factor was extracted for each of the subscales of the Job Descriptive Index. Factor loadings varied between 0,398 and 0,835 with a mean of 0,623 and a median of 0,633. It must be noted that the high residual (> 0,05) for the *Supervision* subscale could be of concern. The possibility exists that further influences, other than just the extracted factor, may play a significant role in determining this subscale. During the item analysis, item 1 (W1) of the *Work on present job* subscale, and item 2 (S2) of the *Supervision* subscale were flagged as suspect. These items returned loadings of 0.470 and 0.398, thus confirming their borderline status. Table 5.9 summarizes the results of this factor analysis.

Table 5.9: Principal axis factoring of Job Descriptive Index

Subscale	Determinant	KMO	% Variance explained	Max λ	Min λ	% Residual r > 0.05
WORK	0,252	0,768	64,305	0,783	0,649	33
PAY	0,323	0,785	51,076	0,735	0,514	20
PROMOTION	0.208	0.778	55,336	0,799	0,510	40
SUPERVISION	0,269	0,645	60,165	0,874	0,546	66
PEOPLE	0.532	0,686	50,699	0,829	0.429	16
JIG	0,465	0,741	44,948	0,633	0,481	30

The Job Descriptive Index measurement model was subsequently fitted using the satisfaction subscale scores as indicator variables. The measurement model containing a single latent variable expressing itself in six subscales as indicator variables, fitted poorly. As a result of this, the possibility was explored that more than one job satisfaction factor actually underlies the Job Descriptive Index. This was explored using (second-order) exploratory factor analysis. The matrix of correlations between the six job satisfaction sub-scale scores were factor analyzed using principle axis factor analysis. In terms of the eigenvalue-greater-than-one rule of thumb two factors had to be extracted. Varimax rotation was used to rotate the extracted solution to a simple structure. The rotated factor matrix is depicted in Table 5.10.

Table 5.10: Principal axis factoring of Job Descriptive Index subscale score

	Factor	
	1	2
WORK	0,092	0,859
PAY	0,975	0,159
PROMOTE	0,102	0,549
SUPERV	0,060	0,499
PEOPLE	0,964	0,182
JOBIG	0,278	0,734

Note: Extraction Method: Principal Axis Factoring.
Rotation Method: Varimax with Kaiser Normalization.
Rotation converged in 3 iterations.

Exploratory factor analysis revealed that two factors underlie the observed correlation matrix calculated for the Job Descriptive Index scores. Table 5.10 indicates that PAY and PEOPLE load on to Factor 1; while WORK, PROMOTION, SUPERVISION and JOB IN GENERAL load on to Factor 2. The identities of the two extracted factors were subsequently determined based on the common theme in the job satisfaction sub-scales loading on each factor. Based on an inspection of the common theme in the job satisfaction sub-scales load on each factor, it would appear as if the Job Descriptive Index can be subdivided into two independent, uni-dimensional subscales, namely (1) Organisational Job Satisfaction and (2) Supervisory Job Satisfaction. The first subscale refers to employee's perception of facets of their job which fall under the *organisational level* of control. Interviews with employees have revealed that the facets of PAY (salary allocation and increases) and PEOPLE (the recruitment and selection of co-workers) are considered to fall under the influence of executive management and HR, at an organisational level. The second subscale incorporates areas of work that can be directly influenced at a *departmental or supervisory* level. Supervisors and middle management are perceived to be responsible for the outcomes of the job satisfaction facets of WORK (allocating challenging and meaningful work); PROMOTION (proposal of candidates into the Leadership Development Programme; recommendations for promotions); SUPERVISION; and JOB IN GENERAL (employee's attitude towards his own specific job). The rather modest loading of SUPERV on factor 2 does on the other hand, tends to erode the credibility of this interpretation somewhat.

Table 5.10 indicates that all job satisfaction sub-scale measures allocated to each the two extracted job satisfaction factors loaded satisfactorily ($0{,}499 < \lambda > 0{,}964$). The loading of the *Satisfaction with supervision* measure on the *Supervisory Job Satisfaction* factor is the only loading that could be regarded as somewhat worrisome. The extracted two-factor solution

depicted in Table 5.10 can be regarded as credible in as far as it could successfully reproduce the observed correlation matrix. Further results of the principal axis factoring are summarized in Table 5.11.

Table 5.11: Principal axis factoring of two-factor Job Satisfaction scale

Subscale	KMO	% Variance explained	Max λ	Min λ	% Residual r > 0.05
ORG JOB SATISFACTION	0,657	48,289	0,975	0,964	00
SUP JOB SATISFACTION		24,474	0,859	0,499	

The results of the foregoing analysis on each of the four scales seem to suggest that the items of each of the scales generally do systematically reflect their designated latent variables with reasonable success. It is not possible to derive conclusive evidence in this regard from this data-set but it is nonetheless assumed that the scales do reflect the intended latent variables.

Based on the introduction of the two-factor model of job satisfaction, the structural model was modified to make provision for two job satisfaction latent variables (refer to Figure 4.1).

5.5. VARIABLE TYPE

Structural equation modelling on the Talent Management competency model using individual items to operationalize the latent variables would have become unwieldy with many parameters to be estimated. In order to overcome this problem, an item parcelling exercise was undertaken. The foregoing results justify this decision. These newly created parcels will typically exhibit distributions that more closely approach a normal distribution than the original items and will have the added advantage that fewer parameters will be estimated in the measurement model, implying that the estimates will be more stable in smaller samples (Hoyle, 1995). The method for item-parcelling used the factor loadings as a guide; the factor loadings were ranked-ordered and every alternate rank-ordered loading was placed into the first item parcel and the remainder was placed into the second item parcel. The variable type of the item parcels was treated as that of a continuous variable and the covariance matrix was therefore analyzed.

5.6 MULTIVARIATE NORMALITY

The LISREL default estimation method when fitting a measurement or structural model when analyzing the covariance matrix is maximum likelihood. Maximum likelihood requires that the independent variables (i.e. parcels) should follow a multivariate normal distribution. Even small departures from multivariate normality can lead to large differences in the chi-square test, undermining its utility. Lack of multivariate normality generally inflates the chi-square statistic such that the overall chi-square fit statistic for the model as a whole is biased toward a Type 1 error (rejecting a model which should not be rejected). In addition, in instances of non-normality, tests of all parameter estimates are expected to be biased, yielding too many significant results (Garson, 2006).

The multivariate normality assumption was tested separately for each set of indicator variables used in the evaluation of the fit of the Talent Management competency measurement model, the evaluation of the fit of the Job Descriptive Index measurement model and the evaluation of the fit of the comprehensive Talent Management structural model.

Talent Management competency measurement model: The univariate and multivariate normality of the indicator variables were evaluated using PRELIS 2.53 (Jöreskog & Sörbom, 1996b). The results presented in Table 5.12 indicate that the null hypothesis of multivariate normality had to be rejected ($p<0,05$). A solution was to use PRELIS to normalize the composite Talent Management competency indicator variables.

Table 5.12: Test of multivariate normality before and after normalization for continuous Talent Management competency variables

Before normalization							
Skewness			**Kurtosis**			**Skewness and Kurtosis**	
Value	**Z-Score**	**P-Value**	**Value**	**Z-Score**	**P-Value**	**Chi-Square**	**P-Value**
66.955	25.416	0,000	393.357	14.222	0.000	848.247	0,000
After normalization							
Skewness			**Kurtosis**			**Skewness and Kurtosis**	
Value	**Z-Score**	**P-Value**	**Value**	**Z-Score**	**P-Value**	**Chi-Square**	**P-Value**
31.678	6.429	0,000	314.305	6.403	0.000	82.331	0,000

Table 5.12 indicates that although normalization improved the situation, the results continue to reflect high levels of skewness and kurtosis. As a result of this, the null hypothesis of multivariate normality still has to be rejected ($p<0,05$). Consequently it was decided to use

robust maximum likelihood rather than maximum likelihood to fit the Talent Management competency measurement model (Du Toit & Du Toit, 2001).

Job Descriptive Index measurement model: Once again, the assumption of multivariate normality is not warranted for the variables on hand (p<0,05). Attempts using PRELIS to normalize the composite Job Descriptive Index indicator variables improved the data slightly, but not sufficiently to reject the null hypothesis of multivariate normality (p<0,05). The changes in the data before and after normalization are summarized in Table 5.13. Robust maximum likelihood, rather than maximum likelihood, was again deemed to be the best solution to fit the Job Descriptive Index measurement model (Du Toit & Du Toit, 2001).

Table 5.13: Test of multivariate normality before and after normalization for continuous Job Descriptive Index variables

Before normalization							
Skewness			**Kurtosis**			**Skewness and Kurtosis**	
Value	**Z-Score**	**P-Value**	**Value**	**Z-Score**	**P-Value**	**Chi-Square**	**P-Value**
7,392	5,107	0,000	47,561	0,335	0,737	26,192	0,000
After normalization							
Skewness			**Kurtosis**			**Skewness and Kurtosis**	
Value	**Z-Score**	**P-Value**	**Value**	**Z-Score**	**P-Value**	**Chi-Square**	**P-Value**
5,021	2,576	0,010	47,676	0,393	0,694	6,793	0,033

Comprehensive Talent Management competency structural model: The Talent Management competency structural model indicator variables failed the test of multivariate normality ($p < 0.05$). The null hypothesis that the data follow a multivariate normal distribution thus also had to be rejected ($\chi^2 = 300{,}975$; $p < 0.05$). The data were consequently normalized through PRELIS. Although the process of normalization using PRELIS assisted in improving the multivariate normality problem on all indicator variables, the assumption of multivariate normality for the transformed data was also not tenable ($\chi^2 = 40{,}046$; $p < 0.05$). These results are summarized in Table 5.14.

Table 5.14: Test of multivariate normality before and after normalization for comprehensive structural model variables

Before normalization							
Skewness			Kurtosis			Skewness and Kurtosis	
Value	Z-Score	P-Value	Value	Z-Score	P-Value	Chi-Square	P-Value
262.717	15.387	0,000	814.099	8.014	0,000	300.975	0,000
After normalization							
Skewness			Kurtosis			Skewness and Kurtosis	
Value	Z-Score	P-Value	Value	Z-Score	P-Value	Chi-Square	P-Value
206.747	4.887	0,000	751.633	4.020	0,000	40.046	0,000

Covariance matrices were subsequently computed from each of the transformed/normalized data sets, to serve as input for the LISREL analyses. In this instance of non-normality, robust maximum likelihood estimation was best suited for the estimation of the parameters set free in the fitted measurement and structural models. The utilization of robust maximum likelihood estimation also necessitated the calculation of the asymptotic covariance matrices (Mels, 2003).

5.7 MEASUREMENT MODEL FIT

The measurement model describes how each latent variable is operationalized by corresponding manifest indicators and provides information about the validities and reliabilities of the observed indicators (Diamantopoulos & Siguaw, 2000). Measurement model fit refers to the extent to which a hypothesized model fits (is consistent with or explains) the data. Evaluation of model fit should derive from a variety of sources and be based on several criteria that can assess model fit from a diversity of perspectives (Diamantopoulos & Siguaw, 2000). Traditionally, overall model fit has been based on the χ^2 statistic; however, due to the known sensitivity of χ^2 to variations in sample size, numerous alternative indices of fit have been proposed and evaluated (Hoyle, 1995). These various fit statistics have been conveniently categorized by Kelloway (1998) into goodness-of-fit indices for assessing; a) *absolute fit*, b) *comparative fit*, and c) *parsimonious fit*. These categories are used in the presentation of the goodness-of-fit statistics for this study and a description of each follows:

Absolute indices of goodness-of-fit directly assess how well an a priori model reproduces the sample data (Hoyle, 1995). The conventional overall test of fit in covariance structure analysis assesses the magnitude of the discrepancy between the sample and fitted covariance matrices.

The parameters are estimated so that the discrepancy between the sample covariance matrix **S** and the implied sample covariance matrix $\hat{\Sigma}(\theta)$ is minimal (Hoyle, 1995). The following exact fit null hypothesis is then tested with regards to the population:

$$H_0: \Sigma = \Sigma(\theta)$$

$$H_0: \Sigma \neq \Sigma(\theta)$$

This null hypothesis is tested via the Satorra Bentler χ^2 statistic (Mels, 2003). The aim is *not* to reject the null hypothesis (i.e. obtain a finding of p>0,05) as a non-significant χ^2 indicates that the model 'fits' the data, in that the model can reproduce the sample covariance matrix to a degree of accuracy that could be explained in terms of sampling error only under the exact fit null hypothesis (Kelloway, 1998).

The null hypothesis of exact model fit is, however, rather unrealistic. If it were *apriori* assumed that the measurement or structural model being evaluated only approximates the processes that operated in reality to create the observed covariance matrix it would be more appropriate to test the following close fit null hypothesis (Browne and Cudeck, 1993):

$$Ho: RMSEA \leq 0{,}05$$

$$Ha: RMSEA > 0{,}05.$$

Comparative indices of goodness-of-fit, also termed *incremental indices,* measure the proportionate improvement in fit by comparing a target model with a more restricted, nested baseline model. (Bentler & Bentler, 1980, as cited in Hoyle, 1995). In this instance, rather than comparing against a model that provides a perfect fit to the data, indices of comparative fit typically choose as the baseline a model that is known a priori to provide a poor fit to the data. The most common baseline model is the 'null' or 'independence' (as termed in LISREL) model in which all the observed variables composing the model are uncorrelated.

Parsimonious indices of goodness-of-fit are based on the recognition that one can always obtain a better fitting model by estimating more parameters. It is however necessary to be concerned with the cost-benefit trade-off of fit and degrees of freedom (Kelloway, 1998). Parsimonious indices have been developed to adjust for bias of fit indices resulting from model complexity. This is done because the fit of highly parameterized models tend to be greater than simpler models due to of the loss of degrees of freedom in the complex model

(Hoyle, 1995). This allows researchers to select the less complex model with the best fit, especially for small sample sizes.

The reporting on the research results for the fitting of the measurement model that follows will include the fitting of Talent Management competency model to the total sample and the fitting of the two-factor Job Descriptive Index model to the 'direct report' sample.

5.7.1 Fitting the Talent Management competency model to total sample

LISREL 8.54 (Jöreskog & Sörbom, 1996a) was used to perform a confirmatory factor analysis on the Talent Management competency measurement model to determine the fit of the model. Robust maximum likelihood estimation method was used to produce the estimates due to the failure of the data to satisfy the multivariate normality assumption. An admissible final solution of parameter estimates was obtained after 8 iterations.

The resultant path diagram of the fitted measurement model is depicted in Figure 5.1.

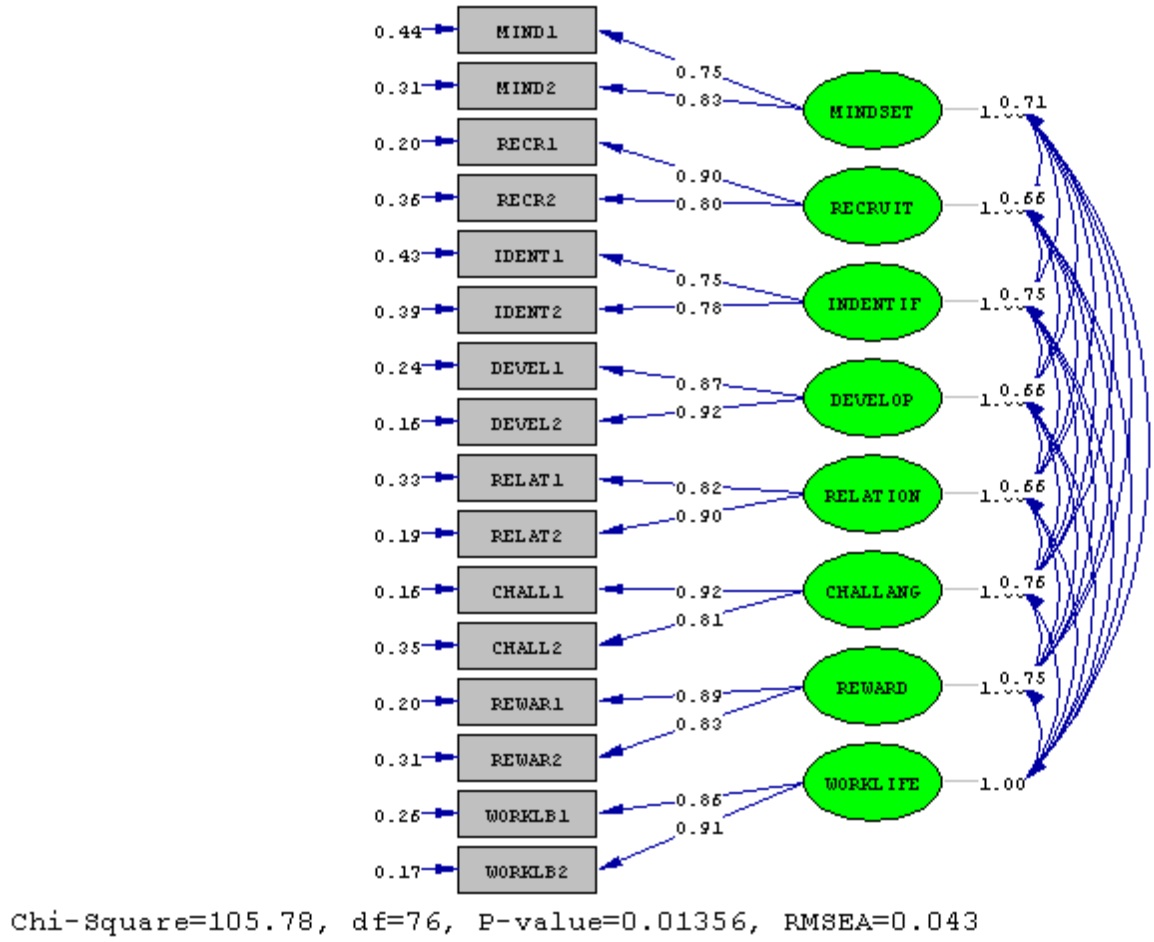

Figure 5.1: Talent Management competency measurement model.

The full spectrum of the indices provided by LISREL to assess the absolute and comparative fit of the data is shown in Table 5.15.

Table 5.15: Goodness of fit statistics for the Talent Management competency model

Degrees of Freedom = 76
Minimum Fit Function Chi-Square = 112,69 (P = 0.0040)
Normal Theory Weighted Least Squares Chi-Square = 113,88 (P = 0,0032)
Satorra-Bentler Scaled Chi-Square = 105,78 (P = 0,014)
Chi-Square Corrected for Non-Normality = 151,14 (P = 0,00)
Estimated Non-centrality Parameter (NCP) = 29,78
90 Percent Confidence Interval for NCP = (6,65 ; 60,95)
Minimum Fit Function Value = 0,54
Population Discrepancy Function Value (F0) = 0,14
90 Percent Confidence Interval for F0 = (0,032 ; 0,29)
Root Mean Square Error of Approximation (RMSEA) = 0,043
90 Percent Confidence Interval for RMSEA = (0,021 ; 0,062)
P-Value for Test of Close Fit (RMSEA < 0,05) = 0,70

Expected Cross-Validation Index (ECVI) = 1,09
90 Percent Confidence Interval for ECVI = (0,97 ; 1,24)
ECVI for Saturated Model = 1,31
ECVI for Independence Model = 33,62
Chi-Square for Independence Model with 120 Degrees of Freedom = 6960,56
Independence AIC = 6992,56
Model AIC = 225,78
Saturated AIC = 272,00
Independence CAIC = 7062,03
Model CAIC = 486,32
Saturated CAIC = 862,56
Normed Fit Index (NFI) = 0,98
Non-Normed Fit Index (NNFI) = 0,99
Parsimony Normed Fit Index (PNFI) = 0,62
Comparative Fit Index (CFI) = 0,99
Incremental Fit Index (IFI) = 0,99
Relative Fit Index (RFI) = 0,97
Critical N (CN) = 199.58
Root Mean Square Residual (RMR) = 0,016
Standardized RMR = 0,028
Goodness of Fit Index (GFI) = 0,94
Adjusted Goodness of Fit Index (AGFI) = 0,89
Parsimony Goodness of Fit Index (PGFI) = 0,52

5.7.1.1 Goodness of fit.

***Absolute fit statistics*:** *The chi-square statistic* is the traditional measure for evaluating overall model fit in covariance structure models and provides a test of perfect fit in which the null hypothesis states that the model fits the population data perfectly (Diamantopoulos & Siguaw, 2000). A statistically significant chi-square causes rejection of the null hypothesis, implying imperfect model fit and possible rejection of the model. The aim is *not* to reject the null hypothesis. The Satorra-Bentler Scaled Chi-Square has shown good performance regardless of the degree of non-normality in large samples when the model has been correctly specified. Large samples are considered to be in the range of 1000 to 5000. For sample sizes 200 to 500 the Satorra-Bentler Scaled Chi-Square statistic appears to have the best properties and is used to test the hypothesis of exact fit. For smaller sample sizes with non-normal distribution, Hoyle (1995) recommends the Satorra-Bentler Scaled Chi-Square statistic for instances where the distributions begin to depart substantially from normality (eg skewness = 2; kurtosis = 7). Particularly for smaller samples a recommendation is made to inspect the Comparative Fit Index (CFI) or Incremental Fit Index (IFI) which only have a small downward bias (3% to

4%) even under severely non-normal conditions (Hoyle, 1995). In this model (Table 5.15) the Satorra-Bentler Scaled Chi-square value comes to 105.78 with 76 degrees of freedom, and p = 0,014, implying that the null hypothesis of exact fit is rejected. This could imply imperfect model fit and possible rejection of the model. As recommended by Hoyle, due to the small sample size (355) the CFI and the IFI have been inspected; the values of both are 0,99. CFI and IFI (indices of comparative fit, not absolute fit) values close to 1 represent good fit (Diamantopoulos & Siguaw, 2000) as shown in these results.

The Root Mean Square Residual (RMR) is the square root of the mean of the squared discrepancies between the implied and observed sample covariance matrices. The reported RMR of 0,026 is below the required value of 0,05 or less value, indicated by Kelloway (1998) as that of a model that fits the data well. This index is sensitive to the unit of measurement of the model variables (Diamantopoulos & Siguaw, 2000) and can vary from variable to variable. In order to overcome this problem, the Standardized RMR (the fitted residuals divided by their estimated standard errors) provides a more stable result. For this index, values less than 0,05 (this model reflects a standardized RMR = 0,032) are interpreted as indicating a good fit to the data.

The Root Mean Square Error of Approximation (RMSEA) shows how well the model, with unknown but optimally chosen parameters values, would fit the population covariance matrix if it were available (Diamantopoulos & Siguaw, 2000). This is a measure of *closeness* of fit. RMSEA values below 0,10 indicate a reasonable to good fit to the data, and values below 0,05 a very good fit to the data (Brown & Cudeck, 1993; Kelloway, 1998). In this instance the RMSEA is 0,043, indicating a very good fit. LISREL also supplies a 90% confidence interval for RMSEA and is shown in Table 5.15 (0,021 – 0,062) indicating that the fit of the Talent Management competency measurement model could be regarded as good and that the null hypothesis of close fit is not rejected. LISREL also explicitly tests the null hypothesis of close fit. Table 5.15 indicates that Ho: RMSEA ≤ 0,05 can not be rejected at a 5% significance level (p>0,05).

The Goodness-of-fit index (GFI) and the *Adjusted GFI (AGFI)* should be between zero (poor fit) and unity (perfect fit) with values exceeding 0,9 indicating good fit to the data (Kelloway, 1998). The GFI result of 0,94 in this study expresses a good fit to the data. The AGFI adjusts

the GFI for degrees of freedom in the model and also ranges from 0 to 1, with values above 0,9 indicating a good fit to the data. A discrepancy between the GFI and the AGFI (which in this instance is minimal) typically indicates the inclusion of trivial (i.e. small) and often non-significant parameters. The GFI is considered by Diamantopoulos and Siguaw (2000) to be the most reliable index of absolute in fit in most studies.

Comparative fit statistics: The *Normed Fit Index (NFI)* represents the proportion of total covariance among observed variables explained by a target model when using the null model as a baseline model (Hoyle, 1995). This index is 'normed' and thus has a 0 to 1 range; values exceeding 0,9 indicate good fit. For this study the NFI of 0,98 indicates that that the model is 98% better fitting than the null model. Kelloway (1998) expresses concern that this index may underestimate the fit of the model in small samples; but with the NFI of 0,98 in this instance, this concern is irrelevant.

The *Non-Normed Fit Index (NNFI)* adjusts the NFI for the number of degrees of freedom in the model. This adjustment may result in numbers above the 0 to 1 range, however as with the result of this study (NNFI=0,99), a good fit is still considered to be NNFI > 0,90 (Kelloway, 1998).

The *Incremental Fit Index (IFI)* includes the scaling factor, so that the IFI ranges between 0 and 1. The *Comparative Fit Index (CFI)* is based on the non-central χ^2, with the same range. In both instances indices > 0,90 indicate a good fit to the data. In this study both of these indices returned values of 0,99 indicating a good fit to the data for the relatively small sample size.

***Parsimonious fit statistics*:** The *Parsimonious goodness-of-fit index (PGFI)* adjusts the GFI for the degrees of freedom in the model, while the *Parsimonious normed fit index (PNFI)* adjusts the NFI for model parsimony. Both of these indices have a range from 0 to 1, but do not have a recommendation for how high these scores should be in order to indicate parsimonious fit. It is unlikely that the PGFI and the PNFI will reach the usually quoted cut off score of 0,90 for other indices. (Kelloway, 1998). These indices are best put to use when comparing two alternative models in order to choose the model with the highest level of parsimonious fit.

***Conclusion*:** For the Talent Management competency measurement model the null hypothesis of exact fit is rejected, but the null hypothesis of close fit is not rejected. Therefore it can be said this model approximately reproduces the observed covariance matrix, but not perfectly. The null hypothesis of exact model fit is, however, rather unrealistic. Browne and Cudeck (1993) consequently argue:

> In applications of the analysis of covariance structures in the social sciences it is implausible that any model that we use is anything more than an approximation to reality. Since a null hypothesis that a model fits exactly in some population is known a priori to be false, it seems pointless even to try to test whether it is true (p. 137).

5.7.1.2 Factor loading matrix

All indicator variables (i.e., item parcels) load significantly on the latent variables that they were designed to reflect (as indicated in Table 5.16). Significant factor loadings are indicated by t-values $\geq |1{,}96|$.

Table 5.16: Completely standardized LAMDA-X factor loading matrix for the Talent Management competency measurement model

	MINDSET	RECRUITS	IDENTIFY	DEVELOPS	RELATION	CHALLAN	REWARDS	WLB
MIND 1	**O,75** (0,05) 11,83*							
MIND2	**0,83** (0,04) 14,72*							
RECR1		**0,90** (0,04) 15,22*						
RECR2		**0,80** (0,05) 13,77*						
IDENT1			**0,75** (0,05) 11,91*					
IDENT2			**0,78** (0,05) 12,58*					
DEVEL1				**0,87** (0,04) 15,81*				
DEVEL2				**0,92** (0,04) 18,52*				
REALT1					**0,82** (0,04) 13,52*			
RELAT2					**0,90** (0,03) 17,00*			

CHALL1						**0,92** (0,04) 18,95*		
CHALL2						**0,81** (0,04) 14,72*		
REWAR1							**0,89** (0,05) 18,50*	
REWAR2							**0,83** (0,06) 15,01*	
WLB1								**0,86** (0,04) 16,42*
WLB2								**0,91** (0,03) 19,03*

Note: Completely standardized factor loadings in **bold type**; standard error estimates in brackets; significant factor loadings are indicated by *t*-values ≥ | 1,96 | *

Determining the reliability of the indicators requires the investigation of the squared multiple correlations (R^2**)** of the indicators. A high R^2 value would be indicative of high reliability for the concerned indicator. A satisfactory proportion of the variance in each indicator variable is explained by its underlying latent variable ($0{,}56 \leq R^2 \leq 0{,}84$). These results are reflected in Table 5.17. Variance reflects how well each item measures its designated Talent Management competency dimension. The first item parcel of the *Talent Management Mindset* subscale (MIND1) and the first item parcel of the *Identifies and Differentiates Talent* subscale (IDENT1) are the only indicator variables that might have a questionable relevance to the Talent Management competency dimension to which it is linked. Only approximately 56% of the variance in MIND1 can be explained in terms of the first latent variable, while the remaining approximately 44% of the variance in this item parcel should be attributed to systematic and random measurement error. A very similar situation prevails with regards to IDENT1.

Table 5.17: R^2 for Talent Management competency variables

	R^2		R^2		R^2		R^2
MIND1	0,56	**IDENT1**	0,57	**RELAT1**	0,67	**REWAR1**	0,80
MIND2	0,69	**IDENT2**	0,61	**RELAT2**	0,81	**REWAR2**	0,69
RECR1	0,80	**DEVEL1**	0,76	**CHALL1**	0,84	**WLB1**	0,74
RECR2	0,64	**DEVEL2**	0,84	**CHALL2**	0,65	**WLB2**	0,83

5.7.1.3 Standardized residuals

The residual covariance matrix reflects the difference between the values of the observed covariance matrix and the values of the reproduced covariance matrix predicted by the

parameter estimates of the fitted structural model. Residuals are, in brief, errors in prediction (Vogt, 1999). Standardized residuals can be interpreted as standard normal deviates (i.e. z-scores), with absolute values greater than 2,58 being considered large (Diamantopoulos & Siguaw, 2000). Residuals therefore provide diagnostic information on the sources of lack of fit of the model (Kelloway 1998). The number of extreme residuals (9 out of a total of 120) resulting from the fitted measurement model are modest (smallest standardized residual, -4,61; median residual 0,00; largest standardized residual 3,56).

The stem-leaf plot (refer Figure 5.2) is characterized by residuals which are clustered modestly negatively skewed around the zero point, with most of the residuals lying in the middle of the distribution and a slightly elevated negative tail. This is an indication of reasonable model fit. The slight dominance of negative residuals suggests that there is a slight tendency for the model to overestimate the covariance terms in the observed covariance matrix.

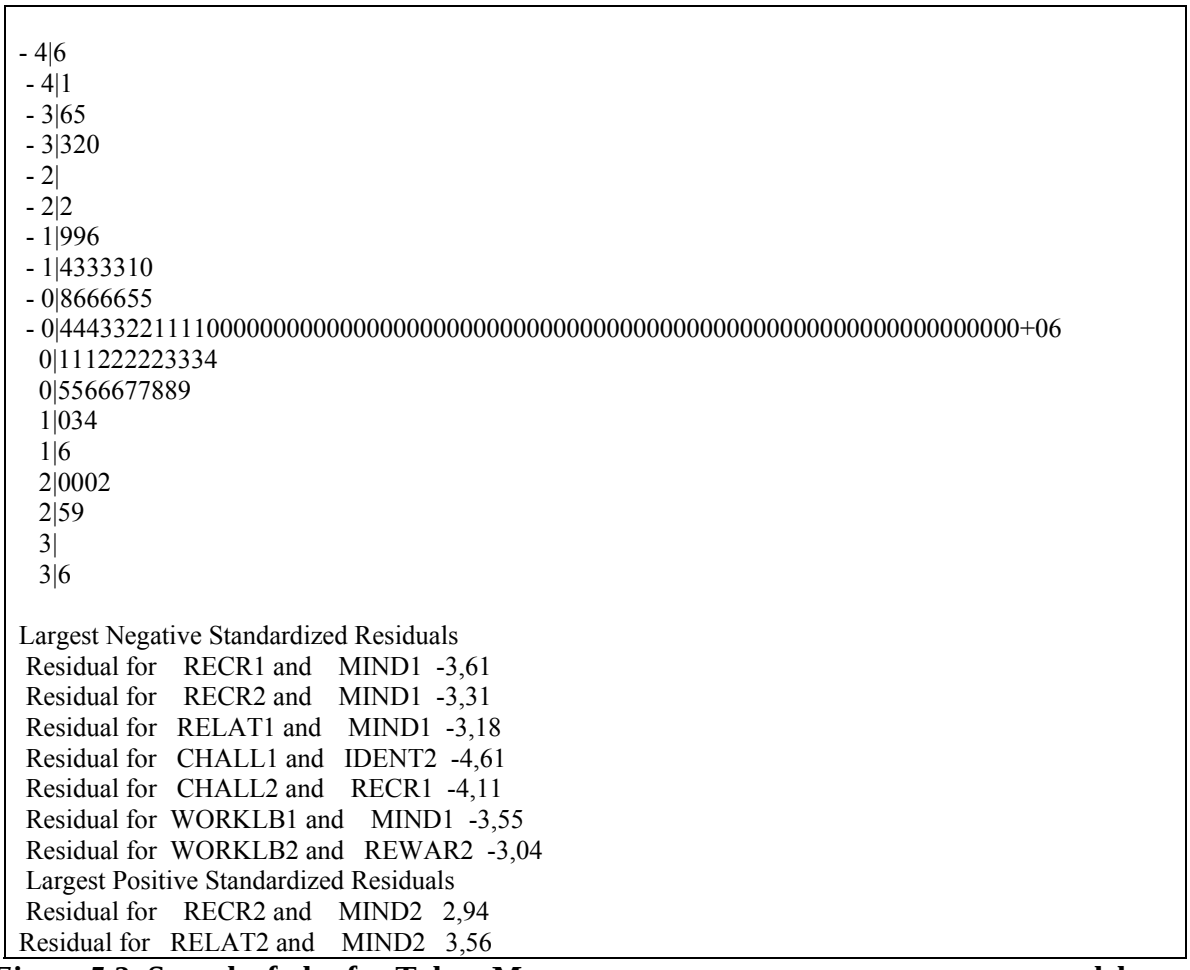

Figure 5.2: **Stem-leaf plot for Talent Management competency measurement model**

Further evidence of reasonable model fit is provided by the fact that the standardized residuals for all pairs of observed variables tend to moderately depart from the 45° reference line on the Q-plot (Figure 5.3).

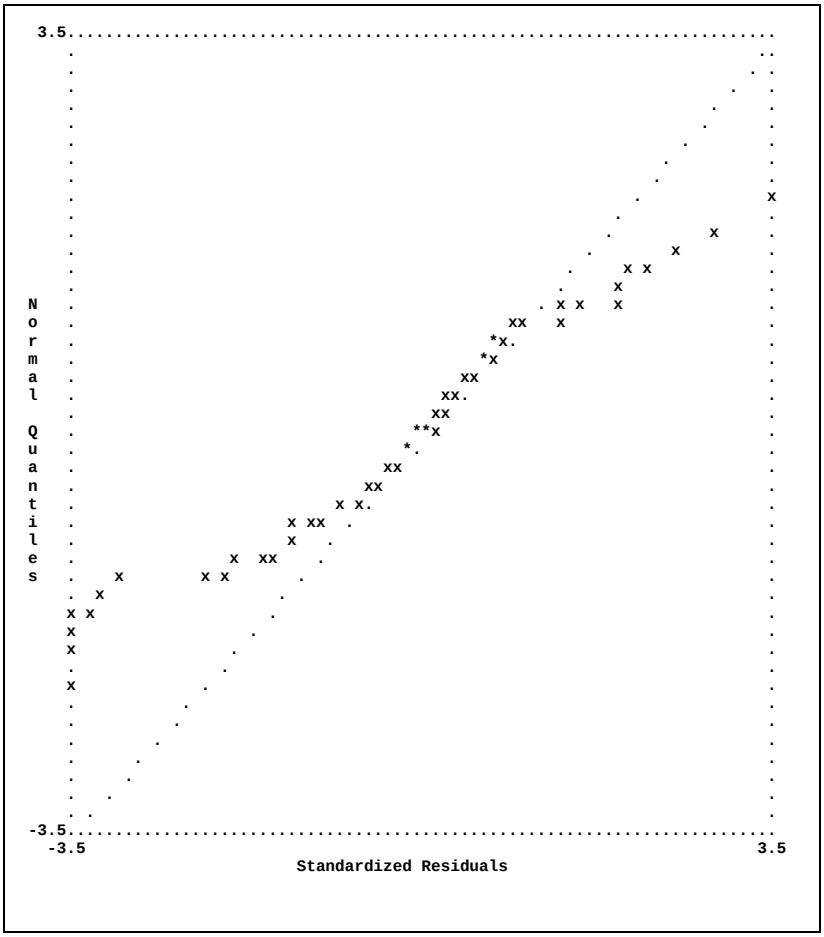

Figure 5.3: **Q-plot of standardized residuals for Talent Management competency measurement model**

5.7.1.4 Modification indices

A modification index shows the minimum decrease in the model's χ^2 value if a previously fixed parameter is set free and the model re-estimated (Diamantopoulos & Siguaw, 2000; Hoyle, 1995; Kelloway, 1998). Modification indices are aimed at answering the question whether freeing of the current fixed parameters within the model, would significantly improve the parsimonious fit of the model.

The proposed Talent Management competency measurement model depicted in Figure 5.1 seems to fit the data reasonably well. The analysis of the standardized residuals does not seem to suggest that the model might be improved through the addition of one or more paths in as

far as a preponderance of large negative residuals would rather suggest a need to remove paths from the model. No insignificant factor loadings occur in Λ^X though. The modification indices were nonetheless analyzed in order to decide which paths, when added to the model, would significantly improve the parsimonious fit of the model. Large modification index values (> 6,64 at a significance level of 0,01) provide an indication as to which parameters, if set free, would improve the fit of the model significantly (Diamantopoulos & Siguaw, 2000). Kelloway (1998) points out that it is important to remember that modifications of the model based on modification indices alone are not ideal unless they are supported by convincing theoretical justification. Examination of the Λ^X matrix shows an additional 16 paths that would significantly improve the fit of the model. This is considered minimal as it only represents 12,5% of the total possible paths. The completely standardized expected change for the majority of these indices is quit substantial but with mostly inappropriate negative signs. These results are of sufficient magnitude to consider freeing these paths. Substantive justification could, however, not be found for these proposed additional factor loadings. Specific Talent Management items were explicitly and intentionally written to serve as behavioural indicators of specific latent Talent Management dimensions. The foregoing results (see Table 5.17) suggest that the indicator variable parcels formed out of these items do generally succeed in providing empirical grasp on the underlying latent variables they were meant to reflect. The magnitude of the modification index values would, however suggest that many of them also provide information on latent variables they were not designed to reflect. The question is whether these capacities should be utilized in the evaluation of the structural model fit? It was not felt that the use of a set of items that were designed to reflect specific latent Talent Management dimensions could also be used to reflect other Talent Management dimensions they were not initially meant to represent. The more prudent and conservative option would therefore be to remain faithful to the design intentions and not free any additional elements in Λ^X.

Examination of the θ^δ modification indices and completely standardized expected parameter changes associated with the fixed parameters in this matrix reveals fifteen covariance terms that, if set free, would result in significant decreases in the χ^2 measure. The magnitude of the completely standardized expected changes (maximum 0,09) does not warrant seriously considering setting these parameters free. Neither is there a persuasive theoretical argument to justify allowing for correlated measurement errors.

It appears that the Talent Management competency measurement model would not in any major way benefit from model modification in the form of either adding or removing model paths. The operationalization of the latent Talent Management competency dimensions in terms of the item parcels formed on the Talent Management competency sub-scales thus seems to have been reasonably successful. The rather modest proportions of variance explained in a number of the item parcels (see Table 5.17) do, however, provide reason for some concern.

5.7.2 Fitting the two-factor Job Descriptive Index model to the 'direct report' sample

LISREL 8.54 (Jöreskog & Sörbom, 1996a) was used to perform a confirmatory factor analysis on the two-factor Job Descriptive Index measurement model derived through exploratory factor analysis earlier (see Table 5.10) to determine the fit of the model. Robust maximum likelihood estimation method was used to produce the estimates. An admissible final solution of parameter estimates was obtained after 6 iterations. The full spectrum of the indices provided by LISREL to assess the goodness-of-fit of the data is shown in Table 5.18. The measurement model (Figure 5.4) and the goodness-of-fit statistics (Table 5.18) for this measurement model are presented first and the more detailed presentation of these results is given thereafter.

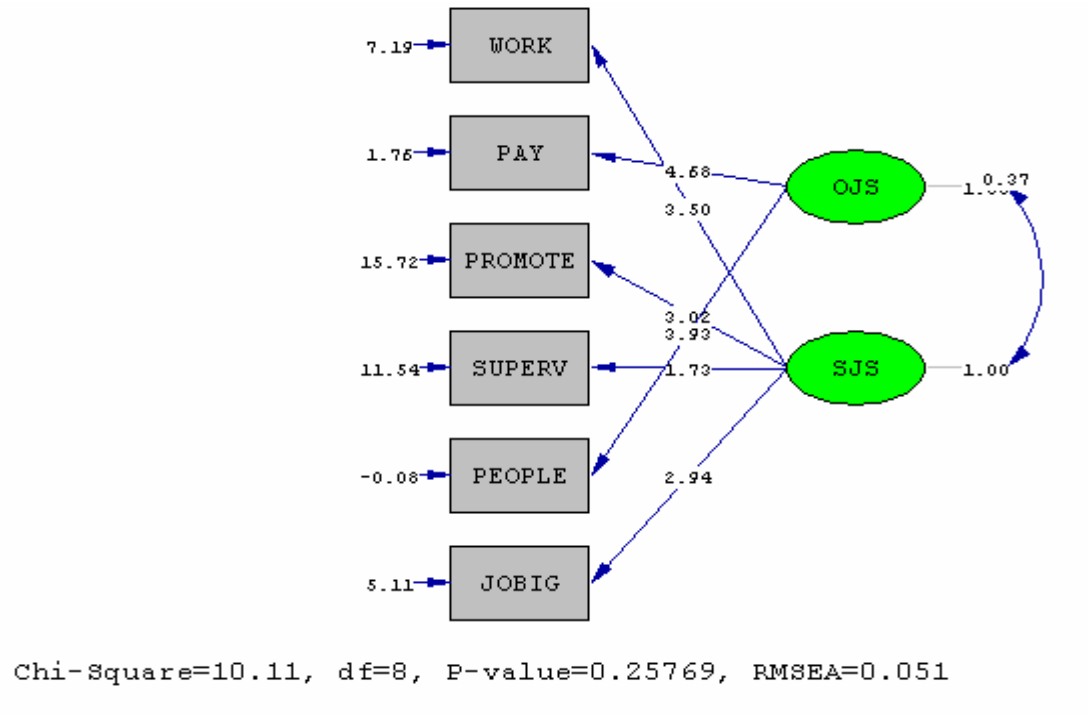

Figure 5.4: Two-factor Job Descriptive Index measurement model.

The full spectrum of the indices provided by LISREL to assess the absolute and comparative fit of the data is shown in Table 5.18.

Table 5.18: Goodness of fit statistics the two-factor Job Descriptive Index model

Degrees of Freedom = 8
Minimum Fit Function Chi-Square = 9,92 (P = 0,27)
Normal Theory Weighted Least Squares Chi-Square = 9,61 (P = 0,29)
Satorra-Bentler Scaled Chi-Square = 10,11 (P = 0,26)
Chi-Square Corrected for Non-Normality = 9,93 (P = 0,27)
Estimated Non-centrality Parameter (NCP) = 2,11
90 Percent Confidence Interval for NCP = (0,0 ; 14,49)
Minimum Fit Function Value = 0,096
Population Discrepancy Function Value (F0) = 0,020
90 Percent Confidence Interval for F0 = (0,0 ; 0,14)
Root Mean Square Error of Approximation (RMSEA) = 0,051
90 Percent Confidence Interval for RMSEA = (0,0 ; 0,13)
P-Value for Test of Close Fit (RMSEA < 0,05) = 0,43
Expected Cross-Validation Index (ECVI) = 0,35
90 Percent Confidence Interval for ECVI = (0,33 ; 0,47)
ECVI for Saturated Model = 0,41
ECVI for Independence Model = 2,77
Chi-Square for Independence Model with 15 Degrees of Freedom = 273,46
Independence AIC = 285,46
Model AIC = 36,11
Saturated AIC = 42,00
Independence CAIC = 307,33
Model CAIC = 83,48
Saturated CAIC = 118,53
Normed Fit Index (NFI) = 0,96
Non-Normed Fit Index (NNFI) = 0,99
Parsimony Normed Fit Index (PNFI) = 0,51
Comparative Fit Index (CFI) = 0,99
Incremental Fit Index (IFI) = 0,99
Relative Fit Index (RFI) = 0,93
Critical N (CN) = 209,65
Root Mean Square Residual (RMR) = 0,84
Standardized RMR = 0,046
Goodness of Fit Index (GFI) = 0,97
Adjusted Goodness of Fit Index (AGFI) = 0,92
Parsimony Goodness of Fit Index (PGFI) = 0,00.

As the theory behind each of these statistics has already been elaborated under the Talent Management competency measurement model section, only the level of goodness-of-fit of each index will be presented in this section.

5.7.2.1 Goodness of fit

***Absolute fit statistics*:** The *Satorra-Bentler Scaled Chi-Square* = 10,11 with a P value of 0,26 indicates that the null hypothesis of exact fit H_0: $\Sigma = \Sigma(\theta)$ cannot be rejected. This is possibly as a result of the small degrees of freedom = 8. Rejection of the null hypothesis could imply imperfect model fit and possible rejection of the model. The *Root Mean Square Residual (RMR)* of 0,84 indicates poor fit, but as this is known to be an unreliable index the *Standardized RMR* of 0,046 is a more stable figure and, in this instance, is indicative of a model that fits the data well. The result (0,051) of the *Root Mean Square Error of Approximation (RMSEA)* shows that the model fits the data closely in the sample. The p-value for Test of Close Fit (RMSEA < *0,05)* is 0,43 and therefore the null hypothesis of close fit is not rejected and the model can be said to show close fit. Both the *GFI* and the *AGFI* are >0.90 and indicate a good fit. This is corroborated by the *90 Percent Confidence Interval for RMSEA* = (0,0 ; 0,13).

***Comparative fit statistics*:** The NFI, NNFI, CFI and IFI all fall above the 0,90 cut-off indicating good fit.

***Parsimonious fit statistics*:** The PGFI = 0,00 and the PNFI = 0,51. These low results could indicate that the two-factor Job Descriptive Index measurement model could be adjusted for a more parsimonious fit. The extreme value of the PGFI is somewhat unusual and does raise some concern.

Conclusion: For the Job Descriptive Index measurement model, H_0 of exact fit is not rejected, and the H_0 of close fit is therefore also not rejected. This indicates that the model 'fits' the data well, in that the model can reproduce the observed sample covariance matrix to a degree of accuracy that can be explained solely in terms of sampling error. The two-factor Job Descriptive Index measurement model can therefore be said to provide a credible explanation for the observed covariance matrix.

5.7.2.2 Factor loading matrix

The LAMBDA –X matrix (Table 5.19), reflecting the regression of X_i on ξ_i is used to evaluate the significance of the factor loadings hypothesized by the two-factor Job Descriptive Index measurement model as depicted in Figure 5.4. The indicator variables all load significantly

($p<0,05$) on the latent variables that they were allocated to, based on the results of the exploratory (second-order) factor analysis performed earlier. The factor loadings, moreover, are all quite high with one rather surprising exception. The weak, but still significant loading of SUPERVISION on *Supervisory Job Satisfaction* is unexpected in as far as one would have expected this dimension to be a marker variable for the factor

Table 5.19: Completely standardized LAMDA-X Factor loading matrix for two-factor Job Descriptive Index model

	ORG JOB SATISFACTION	SUPERV. JOB SATISFACTION
WORK		**0,79** (0,36) 9,62*
PAY	**0,96** (0,34) 13,75*	
PROMOTE		**O,61** (0,47) 6,50*
SUPERVISION		**0,45** (0,42) 4,10*
PEOPLE	**1,00** (0,25) 15,50*	
JIG		**0,79** (0,34) 8,64*

Note: Completely standardized factor loadings in **bold type**; standard error estimates in brackets; significant factor loadings are indicated by *t*-values $\geq |1,96|$ *

The value of R^2 is used to assess the proportion of the variance in each indicator variable explained by its underlying latent variable. These results are reflected in Table 5.20. Variance reflects how well each JDI subscale measures its designated second-order factor Job Descriptive Index dimension. Two of these indicator values are low enough to question their relevance to the second-order factor Job Descriptive Index dimension to which they are linked. Only approximately 37% of the variance in PROMOTE and 21% of the variance in SUPERVISE can be explained in terms of their respective latent variables, while the remaining approximately 63% (PROMOTE) and 78% (SUPERVISE) of the variance in this subscale should be attributed to systematic and random measurement error. Some concern is also raised by the fact that the all of the variance in the PEOPLE subscale is explained by the latent variable to which it is linked.

Table 5.20: R^2 for two-factor Job Descriptive Index variables

.

	R^2		R^2
WORK	0,63	**SUPERVISE**	0,21
PAY	0,93	**PEOPLE**	1.01
PROMOTE	0,37	**JIG**	0,63

5.7.2.3 Standardized residuals

An examination of the stem-leaf plot (Figure 5.5) shows that the residuals are distributed symmetrically around the zero point, and that the distribution is leptokurtic in nature. The small number of extreme residuals (4 out of 15) indicate good model fit but the magnitude of the negative residuals (-6,92 and -5,15) as well as the magnitude of the two positive residuals (11,03 and 7,78) is a cause for concern. Large positive residuals would indicate that the model underestimates the covariance between two observed variables. This problem could be rectified by adding paths to the model. In contrast, large negative residuals would indicate that the model overestimates the covariance between the observed variables and this is normally remedied through the pruning away of the paths that are associated with the indicator variables in question. Examination of the variables associated with these extreme residuals reveals no clear identifiable suggestions for possible model modification. In addition, the established use of the Job Descriptive Index and the high degree of internal psychometric quality of this widely used scale (Stanton et al., 2002) suggest that the model should not be modified. .

```
- 0|75
- 0|1000000000000000
0|1
0|8
1|1

Largest Negative Standardized Residuals
Residual for     PAY and     WORK  -5,15
Residual for    JOBIG and  PROMOTE  -6,92
Largest Positive Standardized Residuals
Residual for    JOBIG and      PAY   7,78
Residual for    JOBIG and   PEOPLE  11,03
```

Figure 5.5: **Stem-leaf plot for two-factor Job Descriptive Index measurement model**

The less than perfect fit of this model is further indicated by the sharp deviation of the aforementioned extreme standardized residuals of the observed variables from the 45° reference line in the Q-plot (Figure 5.6), both in the upper and lower region of the X-axis.

The relative close hugging of the 45° reference line in the Q-plot in the middle region of the X-axis on the other hand indicates good model fit.

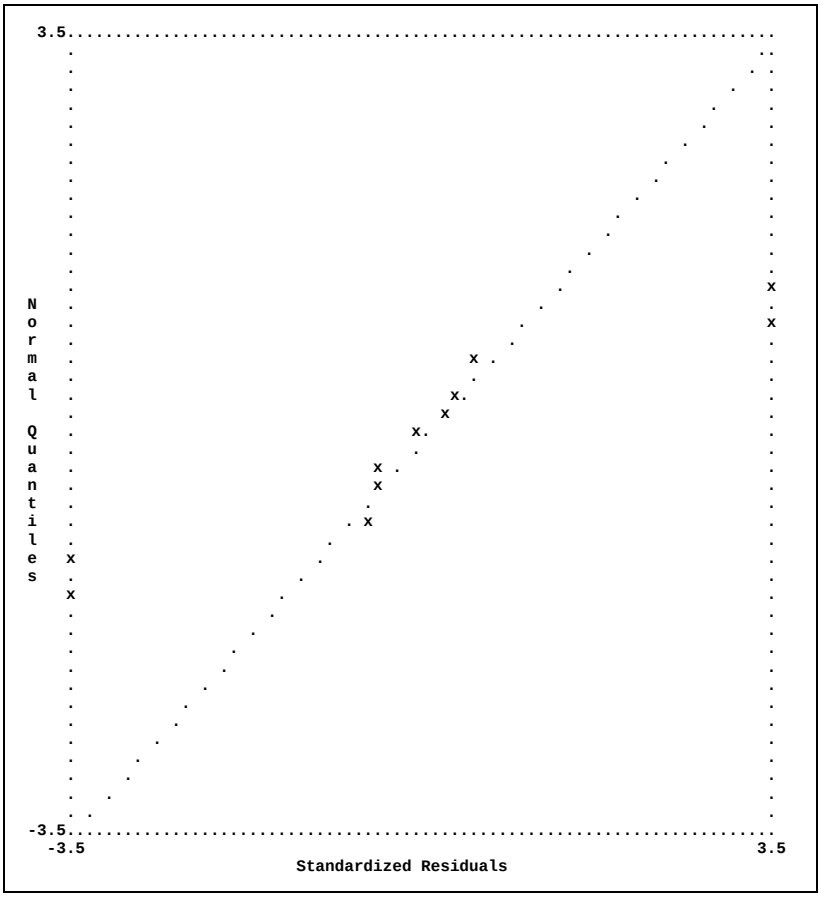

Figure 5.6: **Q-plot of Standardized Residuals for two-factor Job Descriptive Index measurement model**

5.7.2.4 Modification indices

Examination of the Λ^X matrix reveals that all the modification indices are below the critical chi-square modification index value of 6,64 (p=0,01) as stated by Diamantopoulos and Siguaw (2000). The completely standardized expected change to all of these indices is below 0,08, indicating that this measurement model would not benefit by the freeing of these parameters. The magnitude of the θ^{δ} modification indices (maximum 4,45) and completely standardized expected parameter changes (maximum 0,09) associated with the fixed parameters in this matrix do not warrant setting any of these parameters free.

Despite less than perfect fit of the two-factor Job Descriptive Index measurement model, modification of the model in the form of either adding or removing model paths is not indicated.

5.8 STRUCTURAL MODEL FIT

The structural model is that component of the general model that prescribes relations between latent variables and observed variables that are not indicators of latent variables (Hoyle, 1995). The purpose of the model is to explain why variables are correlated in a particular fashion. The structural model describes the relationships between the latent variables themselves and indicates the amount of unexplained variance. When evaluating the structural part of a model it is necessary to focus on the substantive relationships of interest (i.e. the linkages between various endogenous and exogenous latent variables). The aim of this process is to determine whether the theoretical relationships specified in the research are supported by the data (Diamantopoulos & Siguaw, 2000).

LISREL 8.54 (Jöreskog & Sörbom, 1996a) was used to evaluate the fit of the comprehensive Talent Management competency structural model. Robust maximum likelihood estimation method was used to produce the estimates. An admissible final solution of parameter estimates was obtained after 26 iterations. The full spectrum of the indices provided by LISREL to assess the goodness-of-fit of the data is shown in Table 5.21.

The structural model (Figure 5.7) and the goodness-of-fit statistics (Table 5.21) for the comprehensive Talent Management competency structural model are presented first and a more detailed presentation of these results follows thereafter.

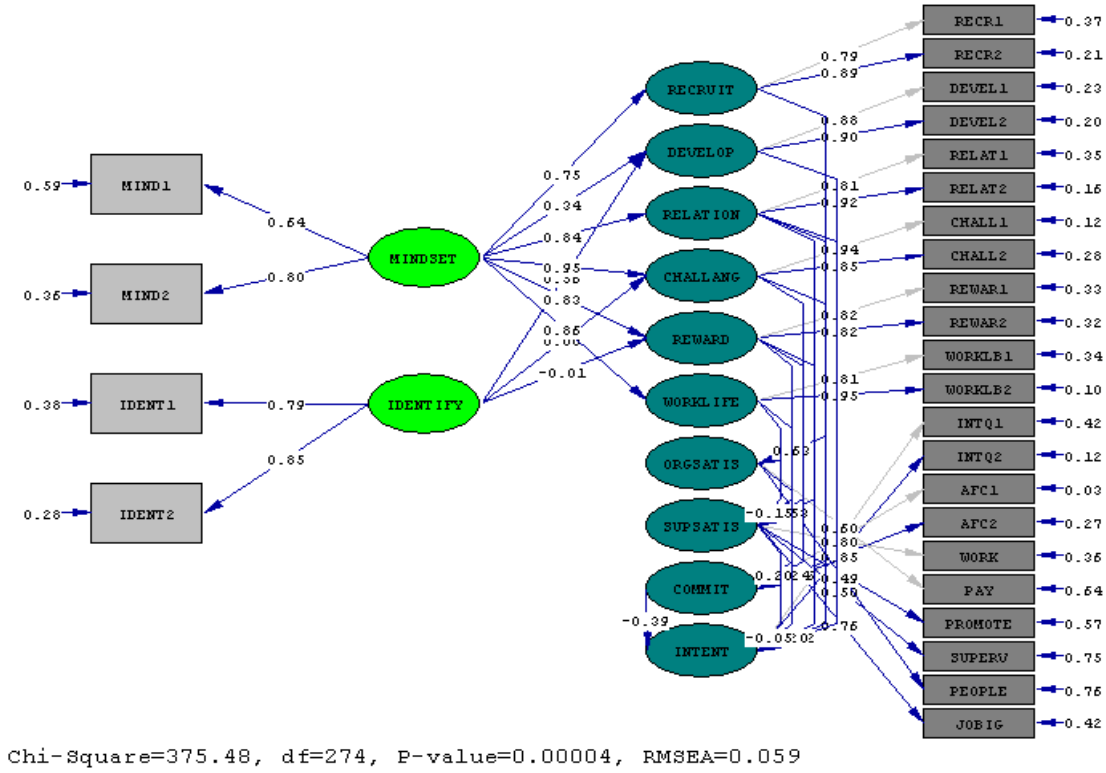

***Figure 5.7*: Talent Management competency structural model.**

The full spectrum of the indices provided by LISREL to assess the absolute and comparative fit of the data is shown in Table 5.21.

Table 5.21: Goodness of Fit Statistics for structural model fit

Degrees of Freedom = 274
Minimum Fit Function Chi-Square = 443,64 (P = 0,00)
Normal Theory Weighted Least Squares Chi-Square = 405,16 (P = 0,00)
Satorra-Bentler Scaled Chi-Square = 375,48 (P = 0,00)
Estimated Non-centrality Parameter (NCP) = 101,48
90 Percent Confidence Interval for NCP = (54,67 ; 156,34)
Minimum Fit Function Value = 4,19
Population Discrepancy Function Value (F0) = 0,96
90 Percent Confidence Interval for F0 = (0,52 ; 1,47)
Root Mean Square Error of Approximation (RMSEA) = 0,059
90 Percent Confidence Interval for RMSEA = (0,043 ; 0,073)
P-Value for Test of Close Fit (RMSEA < 0,05) = 0,16
Expected Cross-Validation Index (ECVI) = 5,00
90 Percent Confidence Interval for ECVI = (4,55 ; 5,51)
ECVI for Saturated Model = 6,62
ECVI for Independence Model = 59,53

Chi-Square for Independence Model with 325 Degrees of Freedom = 6257,86
Independence AIC = 6309,86
Model AIC = 529,48
Saturated AIC = 702,00
Independence CAIC = 6405,36
Model CAIC = 812,28
Saturated CAIC = 1991,16
Normed Fit Index (NFI) = 0,93
Non-Normed Fit Index (NNFI) = 0,97
Parsimony Normed Fit Index (PNFI) = 0,78
Comparative Fit Index (CFI) = 0,97
Incremental Fit Index (IFI) = 0,97
Relative Fit Index (RFI) = 0,92
Critical N (CN) = 80,18
Root Mean Square Residual (RMR) = 0,58
Standardized RMR = 0,081
Goodness of Fit Index (GFI) = 0,77
Adjusted Goodness of Fit Index (AGFI) = 0,71
Parsimony Goodness of Fit Index (PGFI) = 0,60

5.8.1 Goodness of fit

Determining and evaluating the fit of the structural model is concerned with the ability of the fitted model to reproduce the observed sample covariance matrix (Kelloway, 1998).

***Absolute fit statistics*:** The *Satorra-Bentler Scaled Chi-Square* = 341,32 (p = 0,0035) indicates that the null hypothesis of exact fit H_{01}: $\Sigma = \Sigma(\theta)$ is rejected ($p<0,05$). A significant χ^2 implies that there is significant discrepancy between the covariance matrix implied by the model and the observed covariance matrix. Rejection of the null hypothesis could imply imperfect model fit and possible rejection of the model (Kelloway, 1998). Both the *Root Mean Square Residual (RMR)* of 0,58 and the *Standardized RMR* of 0,081 indicate reasonable to mediocre fit. The *Root Mean Square Error of Approximation (RMSEA)* of 0,059 reflects a value that is on the borderline of very good fit and shows that the model fits the sample data closely. The fact that the *p-value for Test of Close Fit (RMSEA < 0,05)* is at 0,16 indicates that the null hypothesis of close fit (stated earlier as H_{02}) can not be rejected and therefore the structural model shows reasonable fit. The *90 Percent Confidence Interval for RMSEA* = (0,043 ; 0,073) confirms this conclusion and suggests good to reasonable model fit. Both the *GFI* and the *AGFI* indices (0,77 and 0,71) are, however, low and tend to contradict the RMSEA conclusion of reasonable to good model fit.

***Comparative fit statistics*:** The indices for comparative fit range between 0,92 and 0,97; all of which indicate a very good fit to the data.

***Parsimonious fit statistics*:** *PNFI* = 0,77 and *PGFI* = 0,61. These indices would have greater relevance if they were being used to compare alternative models.

***Conclusion*:** For the structural model the null hypothesis of exact fit is rejected, however the null hypothesis of close fit is not rejected. These results together with the synthesis of several of the other goodness-of-fit indices indicate that the data therefore approximately reproduces the observed covariance matrix, but not perfectly.

5.8.2. Standardized residuals

The stem-leaf plot (Figure 5.8) shows the distribution of the standardized residuals to be distributed slightly positively skewed. The extreme negative and positive residuals seem to be mostly of only modest magnitude except for two very large negative residuals and one very large positive residual (smallest, -7,22 and -6,67; largest, 11,70). Four large negative residuals and 23 large positive residuals indicate 27 observed covariance terms (out of 325) in the observed sample covariance matrix being poorly estimated by the derived model parameter estimates.

```
- 7|2
 - 6|7
 - 5|
 - 4|
 - 3|74
 - 2|33211000
 - 1|9888777766555554444444433332222111111110000000
 - 0|998888888887777766666666665555444444444333333332222222222222221110000000+02
   0|11122222222223333333344555555566677888889999999
   1|00000000000111112222333333444444455566677889 9
   2|0122334667788999
   3|01123334899
   4|46
   5|
   6|
   7|
   8|
   9|
  10|
  11|7
```

Figure 5.8: **Stem-leaf plot for structural model**

No clear specific possibilities for model modification have arisen out of inspection of the variables associated with these standardized residuals. The predominance of indicator variables associated with Job Satisfaction and Affective Commitment (see Table 5.22) suggests that these latent variables should be considered as possible areas for improvement in the model.

Table 5.22: Extreme negative and positive residuals for structural model

Largest Negative Standardized Residuals
Residual for DEVEL1 and RECR1 -6.67
Residual for WORKLB2 and DEVEL1 -7.22
Residual for AFC2 and REWAR1 -3.41
Residual for WORK and REWAR1 -3.65
Largest Positive Standardized Residuals
Residual for CHALL2 and DEVEL1 2.69
Residual for CHALL2 and DEVEL2 11,70
Residual for AFC2 and CHALL2 4,41
Residual for WORK and AFC1 2,92
Residual for WORK and AFC2 2,92
Residual for PAY and AFC1 2,59
Residual for PAY and AFC2 2,77
Residual for PROMOTE and DEVEL2 2,95
Residual for PROMOTE and AFC1 2,71
Residual for PROMOTE and AFC2 3,85
Residual for PEOPLE and AFC2 2,78
Residual for PEOPLE and WORK 2,64
Residual for PEOPLE and PROMOTE 3,78
Residual for PEOPLE and SUPERV 3,06
Residual for JOBIG and AFC1 3,35
Residual for JOBIG and AFC2 3,02
Residual for JOBIG and PAY 3,15
Residual for JOBIG and PEOPLE 3,25
Residual for MIND1 and DEVEL2 3,93
Residual for MIND2 and REWAR1 4,56
Residual for MIND2 and MIND1 3,13
Residual for IDENT1 and WORKLB2 3,36
Residual for IDENT2 and CHALL2 3,34

Further evidence of a slightly problematic model fit is indicated in the deviation tendency of the standardized residuals for all pairs of observed variables from the 45° reference line in the Q-plot in both the upper and lower regions of the x-axis (refer figure 5.9).

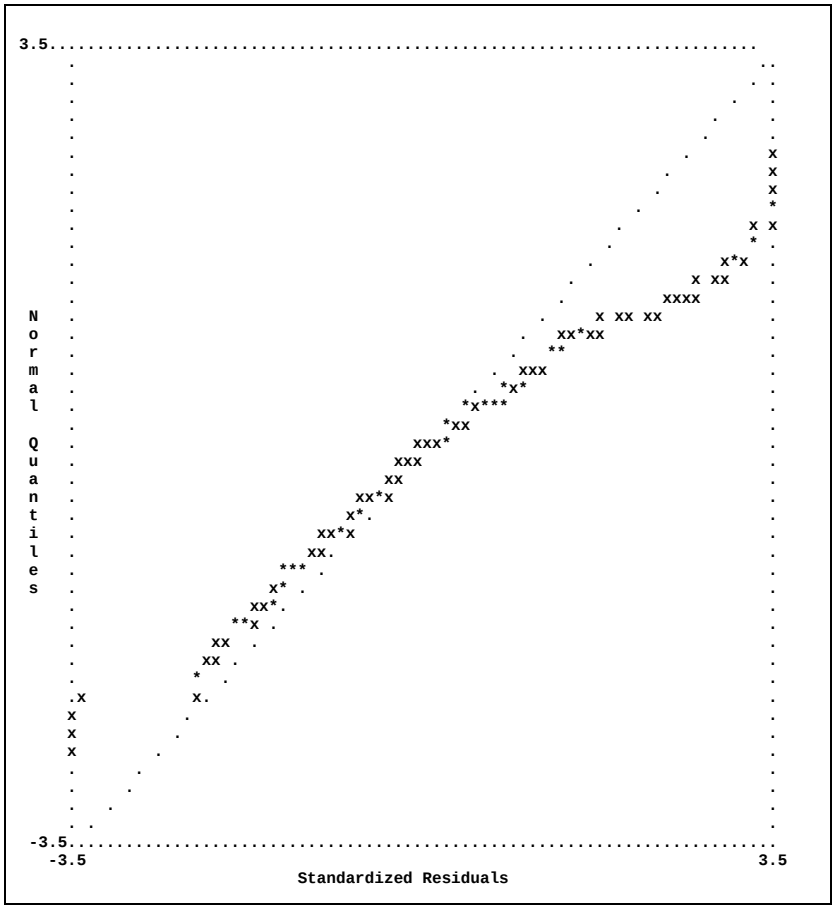

Figure 5.9: **Q-plot of Standardized Residuals for structural model**

5.8.3 Parameter estimates

The theoretical linkages proposed by the Talent Management competency model depicted in Figure 5.7 and Figure 4.1 are investigated by testing the null hypotheses shown in Table 4.1. Depending on the outcome of these hypothesis tests the research hypotheses will either be confirmed or rejected.

The aim of evaluating the structural model is to determine whether the theoretical relationships specified at the conceptualization stage are indeed supported by the data. Here the focus is on the linkages between the various endogenous and exogenous variables. Three issues that are of relevance when evaluating the structural model include: a) The signs of the parameters representing the paths between the latent variables will indicate whether the direction of the hypothesized relationships is as predicted (i.e. positive or negative). b) The magnitudes of the estimated parameters provide important information on the strength of the hypothesized relationships; (at the very least these parameters should be significant ($p<0,05$) as indicated by t-values in excess of $|1,96|$). In this instance the null hypothesis will be rejected. c) The squared multiple correlations for the structural equations indicate the amount

of variance in each endogenous latent variable that is accounted for by the latent variables that are expected to impact upon it; the higher the squared multiple correlation, the greater the joint explanatory power of the hypothesized antecedents (Diamantopoulos & Siguaw, 2000)

In order to evaluate the structural model, LISREL provides completely standardized parameters for the Beta (B) and Gamma (Γ) matrices, including their standard error and *t*-values. The B matrix describes the relationship(s) between the endogenous variables and reflects the slope of the regression of η_i on η_j. The results depicted in Table 5.23 provide information with which to evaluate each of the relevant statistical hypotheses formulated earlier in this study (Table 4.1). Each of these parameter estimates provides information which can be used when assessing the hypothesized relationships between the endogenous variables within the structural model.

It is necessary at this stage to point out that obtaining a significant β or Γ path coefficient estimate does not mean proof of a causal effect. The primary purpose of SEM is the testing of causal theories using non-experimental data. Specifically, the first step in SEM is that an unambiguous causal theory be specified (Martin, 1987). When using correlational data obtained via an *ex post facto* research design (as in this study), it is not possible to isolate the empirical system sufficiently so that the nature of the relationships among the variables can be described as *causal* (Cliff, 1988). The *ex post facto* nature of the research design therefore precludes the drawing of causal inferences from significant path coefficients (Theron, Spangenberg and Henning, 2004).

Table 5.23: Completely standardized BETA path coefficient matrix for the structural model

	Recruit	Develop	Relation	Challan	Reward	Worklife	Commit	Intent	Orgsatis	Supsatis
Recruit										
Develop										
Relation										
Challan										
Reward										
Worklife										
Commit		**0,06** (0,17) 0,37	**0,04** (0,20) 0,22		**0,32** (0,18) 1,74	**0,20** (0,19) 1,04				
Intent			**0,17** (0,17) 1,01	**-0,02** (0,21) -0,11	**-0,20** (0,23) -0,85		**-0,39** (0,11) -3,56*		**-0,42** (0,18) -2,38*	**-0,05** (0,14) -0,34
Orgsatis	**0,63** (0,16) 4,03*									
Supsatis			**-0,03** (0,19) -0,16	**0,35** (0,24) 1,45	**0,47** (0,24) 1,98*	**-0,15** (0,18) -0,84				

Note: Completely standardized path coefficients in **bold type**; standard error estimates in brackets; *t*-values ≥ |1,96| indicate significant parameter estimates*

Hypothesis 10: H_{012}: $\beta_{91} = 0$; H_{a12}: $\beta_{91} > 0$

This hypothesis states that the Talent Management competency *Attracts and Recruits Talent* has a positive significant affect on *Organisational Job Satisfaction*: As the *t*-value falls above 1,96, β_{91} is significant and the null hypothesis H_{012} is rejected in favour of H_{a12}. Moreover, the estimate of the slope of the regression of η_9 on η_1 (β_9 =0,63) suggests that *Organisational Job Satisfaction* is only moderately related to *Attracts and Recruits Talent*.

Hypothesis 11: H_{013}: $\beta_{72} = 0$; H_{a13}: $\beta_{72} > 0$

In this instance the null hypothesis is not rejected (*t* = 0,37), indicating that *Develops Others* does not have a significant effect on *Affective Commitment*.

Hypothesis 12: H_{014}: $\beta_{103} = 0$; H_{a14}: $\beta_{103} > 0$

Builds and Maintains Relationships has not been found to have a significant effect on *Supervisory Job Satisfaction* as the null hypothesis is not rejected (p>0,05).

Hypothesis 13: H_{015}: $\beta_{83} = 0$; H_{a15}: $\beta_{83} < 0$

Builds and Maintains Relationships has not been found to have a significant effect on *Intention to Quit* as the null hypothesis is not rejected (p>0,05).

Hypothesis 14: H_{016}: $\beta_{73} = 0$; H_{a16}: $\beta_{73} > 0$

Builds and Maintains Relationships has not been found to have a significant effect on *Affective Commitment* as the null hypothesis is not rejected (p>0,05).

Hypothesis 15: H_{017}: $\beta_{104} = 0$; H_{a17}: $\beta_{104} > 0$

Provides Meaningful and Challenging Work has not been found to have a significant effect on *Supervisory Job Satisfaction* as the null hypothesis is not rejected (p>0,05).

Hypothesis 16: H_{018}: $\beta_{84} = 0$; H_{a18}: $\beta_{84} < 0$

Provides Meaningful and Challenging Work has not been found to have a significant effect on *Intention to Quit* as the null hypothesis is not rejected (p>0,05).

Hypothesis 17: H_{019}: $\beta_{75} = 0$; H_{a19}: $\beta_{75} > 0$

Remunerates and Rewards Fairly has not been found to have a significant effect on *Affective Commitment* as the null hypothesis is not rejected (p>0,05).

Hypothesis 18: H_{020}: $\beta_{105} = 0$; H_{a20}: $\beta_{105} > 0$

Remunerates and Rewards Fairly has been found to have a significant effect on *Supervisory Job Satisfaction* as the null hypothesis H_{020} is rejected in favour of H_{a20} (p<0,05).

Hypothesis 19: H_{021}: $\beta_{85} = 0$; H_{a21}: $\beta_{85} < 0$

The null hypothesis is not rejected (t = -0,85 at p= 0,50). *Remunerates and Rewards Fairly* does not have a significant and negative effect on *Intention to Quit*.

Hypothesis 20: H_{022}: $\beta_{106} = 0$; H_{a22}: $\beta_{106} > 0$

Manages Work-life Balance has not been found to have a significant effect on *Supervisory Job Satisfaction* as the null hypothesis is not rejected (p>0,05).

Hypothesis 21: H_{023}: $\beta_{76} = 0$; H_{a23}: $\beta_{76} > 0$

Manages Work-life Balance has not been found to have a significant effect on *Affective Commitment* as the null hypothesis is not rejected (p>0,05).

Hypothesis 22: H_{024}: $\beta_{89} = 0$; H_{a24}: $\beta_{89} < 0$

In this instance the null hypothesis is rejected (*t* = -2,38, at p= 0,50). Organisational *Job Satisfaction* has a significant, negative but moderate effect on *Intention to Quit* (p<0,05).

Hypothesis 23: H_{025}: $\beta_{810} = 0$; H_{a25}: $\beta_{810} < 0$

Supervisory Job Satisfaction has not been found to have a significant effect on *Intention to Quit* as the null hypothesis is not rejected (p>0,05).

Hypothesis 24: H_{026}: $\beta_{87} = 0$; H_{a26}: $\beta_{87} > 0$

In this instance the null hypothesis is rejected (*t* = -3,56, at p= 0,50). *Affective Commitment* has a significant, negative but modest effect on *Intention to Quit*.

The Γ matrix describes the relationships between the exogenous variables and the endogenous variables and reflects the slope of regression of η_i on ξ_j. This matrix is used to evaluate the significance of the parameter estimates for the causal paths hypothesized by the structural model depicted in Figure 5.7. The results depicted in Table 5.24 indicate that the majority of the path coefficient estimates are significant ($t \geq |1,96|$ at p = 0,05), except for the causal effect of *Talent Management Mindset* on *Develops Others* and the causal of *Identifies and Differentiates Talent* on *Provides Meaningful and Challenging Work* and *Remunerates and Rewards Fairly*.

Table 5.24: Completely standardized GAMMA matrix of path coefficients for the structural model

	Mindset	Identify
Recruit	**0,75** (0,11) 6,99*	
Develop	**0,34** (0,20) 1,72	**0,56** (0,21) 2,64*
Relation	**0,84** (0,11) 7,76*	
Challan	**0,95** (0,17) 5,51*	**0,00** (0,17) 0,02
Reward	**0,83** (0,21) 3,96*	**-0,01** (0,22) -0,02
Worklife	**0,86** (0,10) 8,91*	
Commit		
Intent		
Orgsatis		
Supsatis		

Note: Completely standardized path coefficients in **bold type**; standard error estimates in brackets; *t*-values ≥ |I,96| indicate significant parameter estimates*

Hypothesis 1: H_{03}: $\gamma_{11} = 0$; H_{a3}: $\gamma_{11} > 0$

In this instance the null hypothesis is rejected (t = 6,99, at p= 0,50). *Talent Management Mindset* has a significant, positive and reasonably strong effect on *Attracts and Recruits Talent.*

Hypothesis 2: H_{04}: $\gamma_{21} = 0$; H_{a4}: $\gamma_{21} > 0$

Talent Management Mindset has not been found to have a significant effect on *Develops Others* as the null hypothesis is not rejected (p>0,05).

Hypothesis 3: H_{05}: $\gamma_{31} = 0$; H_{a5}: $\gamma_{31} > 0$

In this instance the null hypothesis is rejected (t = 7,76, at p= 0,50). *Talent Management Mindset* has a significant, positive and reasonably strong effect on *Builds and Maintains Relationships*.

Hypothesis 4: H_{06}: $\gamma_{41} = 0$; H_{a6}: $\gamma_{41} > 0$

In this instance the null hypothesis is rejected (t = 5,51, at p= 0,50). *Talent Management Mindset* has a significant, positive and reasonably strong effect on *Provides Meaningful and Challenging Work*.

Hypothesis 5: H_{07}: $\gamma_{51} = 0$; H_{a7}: $\gamma_{51} > 0$

In this instance the null hypothesis is rejected (t = 3,96, at p= 0,50). *Talent Management Mindset* has a significant, positive and reasonably strong effect on *Remunerates and Rewards Fairly*.

Hypothesis 6: H_{08}: $\gamma_{61} = 0$; H_{a8}: $\gamma_{61} > 0$

The null hypothesis is rejected (t = 8,91, at p= 0,50). *Talent Management Mindset* has a significant, positive and reasonably strong effect on *Manages Work-life Balance*.

Hypothesis 7: H_{09}: $\gamma_{22} = 0$; H_{a9}: $\gamma_{22} > 0$

In this instance the null hypothesis is rejected (t = 2,64, at p= 0,50). *Identifies and Differentiates Talented Employees* has a significant, positive and moderate effect on *Develops Others.*

Hypothesis 8: H_{010}: $\gamma_{42} = 0$; H_{a10}: $\gamma_{42} > 0$

Identifies and Differentiates Talented Employees has not been found to have a significant effect on *Provides Meaningful and Challenging Work* as the null hypothesis is not rejected (p>0,05).

Hypothesis 9: H_{011}: $\gamma_{52} = 0$; H_{a11}: $\gamma_{52} > 0$

Identifies and Differentiates Talented Employees has not been found to have a significant effect on *Remunerates and Rewards Fairly* as the null hypothesis is not rejected (p>0,05).

5.8.4 Direct and indirect effects

The direct effect between variables is a directional relation between two variables. Within a model, each direct effect characterizes the relation between an independent and a dependent variable, although the dependent variable in one direct effect can be the independent variable in another. A dependent variable can be related to multiple independent variables, and an independent variable can be related to multiple dependent variables.

The indirect effect is the effect of an independent variable on a dependent variable through one or more intervening, or mediating, variables. The sum of direct and indirect effects of an independent variable, on a dependent variable is termed the *total effect* of the independent variable (Kelloway, 1998). The ability to evaluate the indirect effect of variables is stressed as important by Kelloway, as this allows researchers to consider the implications of indirect relationships posited in their models. The indirect relationship of variables X, mediated through Y on to Z may be appropriately thought of as one of sequential causation.

LISREL reports both the indirect and the total effects, followed by the standard error of the effects and a significance test (*t*-test) of these effects. The indirect and total effects of the structural model are reported in Tables 5.25 through to 5.24.

Table 5.25: Total effects of KSI on ETA

	Mindset	Identify
Recruit	**0,75** (0,11) 6,99*	
Develop	**0,34** (0,20) 1,72	**0,56** (021) 2,64*
Relation	**0,84** (0,11) 7,76*	
Challan	**0,95** (0,17) 5,51*	**0,00** (0,17) 0,02
Reward	**0,19** (0,19) 1,02*	**-0,0**1 (0,22) -0,02
Worklife	**0,83** (0,21) 3,96*	
Commit	**0,49** (0,13) 3,92*	**-0.03** (0,12) 0,27
Intent	**-0,46** (0,14) -3,31	**-0,01** (0,09) -0,13
Orgsatis	**0,48** (0.13) 3,65*	
Supsatis	**0,57** (0,17) 3,31*	**0,00** (0,14) -0,01

Note: Completely standardized path coefficients in **bold type**; standard error estimates in brackets; *t*-values ≥ |I,96| indicate significant parameter estimates*

The total effect of *Talent Management Mindset* on the endogenous Talent Management competencies are equal to the direct effects reported in the Γ-matrix due to the nature of the structural model. The same is true with regards to *Identifies and Differentiates Talent*. The total effect of *Talent Management Mindset* on the Talent Management outcome latent variables are all significant (p<0,05). In the case of *Identifies and Differentiates Talent* the total effect on the Talent Management outcome latent variables are all insignificant (p>0,05).

Table 5.26: Indirect effects of KSI on ETA

	Mindset	**Identify**
Commit	**0,49** (0,13) 3,92*	**-0,03** (0,12)) 0,27
Intent	**-0,46** (0,14) -3,31*	**-0,01** (0,09) -0,13
Orgsatis	**0,48** (0,13) 3,65*	
Supsatis	**0,57** (0,17) 3,31*	**0,00** (0,14) -0,01

Note: Completely standardized path coefficients in **bold type**; standard error estimates in brackets; *t*-values ≥ |I,96| indicate significant parameter estimates*

The in-direct effect of *Talent Management Mindset* on the Talent Management outcome latent variables are all significant (p<0,05). In the case of *Identifies and Differentiates Talent* the indirect effect on the Talent Management outcome latent variables are all insignificant (p>0,05). Due to the nature of the structural model no indirect effects exist for *Talent Management Mindset* and *Identifies and Differentiates Talent* on the endogenous Talent Management latent variables.

Table 5.27: Total effects of ETA on ETA

	Recruit	Develop	Relation	Challan	Reward	Worklife	Commit	Orgsatis	Supsatis
Commit		**0,06** (0,17) 0,37	**0,04** (0,20) 0,22		**0,32** (0,18) 1,74	**0,20** (0,19) 1,04			
Intent	**-0,27** (0,11) -2,45*	**-0,02** (0,07) -0,37	**0,16** (0,19) 0,83	**-0,04** (0,21) -0,19	**-0,34** (0,21) -1,61	**-0,07** (0,08) -0,88	**-0,39** (0,11) -3,56*	**-0,42** (0,18) -2,38*	**-0,05** (0,14) -0,34
Orgsatis	**0,63** (0,16) 4,03*								
Supsatis			**-0,03** (0,19) -0,16	**0,35** (0,24) 1,45	**0,47** (0,24) 1,98*	**-0,15** (0,18) -0,84			

Note: Completely standardized path coefficients in **bold type**; standard error estimates in brackets; *t*-values ≥ |I,96| indicate significant parameter estimates*

Table 5.27 indicates that the total effect of *Attracts and Recruits Talent* on *Intention to Quit* is statistically significant (p<0,05). The total effect of *Affective Commitment* (Commit) and *Organisational Satisfaction* (Orgsatis) on *Intention to Quit* corresponds to their direct effects.

Table 5.28: Indirect effects of ETA on ETA

	Recruit	Develop	Relation	Challan	Reward	Worklife
ITQ	**-0,27** (0,11) -2,45*	**-0,02** (0,07) -0,37	**-0,02** (0,08) -0,20	**-0,02** (0,05) -0,33	**-0,15** (0,11) -1,28	**-0,07** (0,08) -0,88

Note: Completely standardized path coefficients in **bold type**; standard error estimates in brackets; *t*-values ≥ |I,96| indicate significant parameter estimates*

Table 5.28 reveals (as did Table 5.27) that the effect of *Attracts and Recruits Talent* on *Intention to Quit* mediated by *Organisational Job Satisfaction* is statistically significant (p<0,05).

5.8.5 Variance explained in endogenous latent variables

The squared multiple correlations for the endogenous latent variables in the model are shown in Table 5.29. A satisfactory proportion of the variance in the endogenous Talent Management latent variables (Recruit, Develop, Relation, Challang, Reward, & Worklife) is explained by the latent variables in the model, that are directly or indirectly linked to it (0,56 ≤ R^2 ≤ 0,91).

Table 5.29: R^2 for structural equations

	R^2		R^2
Recruit	0,56	Worklife	0,74
Develop	0,75	Commit	0,31
Relation	0,71	Intent	0,51
Challang	0,91	Orgsatis	0,40
Reward	0,68	Supsatis	0,41

The model's inability to account for the variance in the *Affective Commitment* latent variable is somewhat disappointing. The ability of the model to explain variance in the remainder of the Talent Management latent outcome variables is encouraging. Approximately 40% of the variance in the two Job Satisfaction latent variables can be explained in terms of the latent variables currently linked to them. Approximately 50% of the variance on the Intention to Quit latent variable can be explained in terms of the model.

5.8.6 Modification indices and possible model modification options

Examination of the modification index values calculated for the B matrix show an additional 6 paths that would significantly improve the fit of the model. The standardized expected change values associated with the paths in question all are substantive enough and all are in the expected direction. The modification indices calculated for B suggest a causal linkage between *Intention to Quit* and *Supervisory Job Satisfaction* (MI=23,38; EC=11,01). This suggests that the higher the intention to leave, the lower the satisfaction with supervision/management. At first glance such a feedback mechanism does not make theoretical sense. It could, however, be that once a decision had been made to leave, this feeds back onto *Supervisory Job Satisfaction* so as to justify the decision. The modification indices calculated for B, moreover, suggest a reciprocal causal relationship between *Affective Commitment* and *Supervisory Job Satisfaction*. That *Supervisory Job Satisfaction* could positively affect *Affective Commitment* makes theoretical sense (MI=18,41; EC=0,57). The opposite causal relationship between *Affective Commitment* and *Supervisory Job Satisfaction* (MI=17,27; EC=0,47) makes somewhat less theoretical sense, but is not altogether implausible either. It could be argued that to the extent that an employee forms an emotional attachment to, identification with, and involvement in the organisation he/she thereby would tend to evaluate the organisation and its management more favourably. The modification index associated with the path from *Affective Commitment* to *Organisational Job Satisfaction* is also significant (MI=9,90; EC=0,46). The modification indices calculated for B, finally also, suggest a reciprocal causal relationship between *Organisational Job Satisfaction* and

Supervisory Job Satisfaction. *Supervisory Job Satisfaction* is indicated to have a stronger causal effect on *Organisational Job Satisfaction* (MI=13,93; EC=0,0,62) than the effect *Organisational Job Satisfaction* is indicated to have on *Supervisory Job Satisfaction* (MI=8,63; EC=0,44). Both these proposed causal linkages make conceptual sense.

Examination of the Γ matrix reveals that all the modification indices are below the critical chi-square modification index value of 6,64 (p=0,01) as stated by Diamantopoulos and Siguaw (2000). The completely standardized expected change for currently fixed elements of Γ is below 0,30, indicating that this measurement model would not benefit by the freeing of any of the currently fixed parameters.

The original Talent Management structural model was subsequently adapted by freeing the currently fixed β parameter with the highest modification index for which a convincing theoretical justification could be formulated. A causal path from *Supervisory Job Satisfaction* to *Affective Commitment* was therefore inserted into the existing model. Inserting a feedback path from *Intention to Quit* to *Supervisory Job Satisfaction* was not deemed advisable. Although this path carried the highest modification index it could not be justified theoretically. The modification indices calculated for the B-matrix was again inspected for the fitted expanded model. The highest modification index now suggested freeing the path from *Supervisory Job Satisfaction* to *Organisational Job Satisfaction*. Since this path made substantive theoretical sense the model was again adapted by also adding this path to the model. The modification indices calculated for the B-matrix for the twice modified model now all fell below the critical value of 6,64. All modification index values calculated for the Γ-matrix still fell below the critical value of 6,64. No further structural modifications to the model are thus indicated.

The RMSEA of the expended model improved to 0,052 (p>0,05). *Supervisory Job Satisfaction* had a significant and positive impact on *Affective Commitment* (0,60; t=5,05). The added path from *Supervisory Job Satisfaction* to *Organisational Job Satisfaction* also was significant (0,81; t=4,07). Expanding the model in this manner, however, had the effect of making three of the previously significant β parameter estimates insignificant (p>0,05). In the expanded structural model the path from *Attracts and Recruits Talent* on *Organisational Job Satisfaction*, the paths from *Remunerates and Rewards Fairly* to *Supervisory Job Satisfaction*

and the path from *Organisational Job Satisfaction* to *Intentional to Quit* no longer were statistically significant.

5.9 SUMMARY

The purpose of this chapter was to report on the results obtained from this study. The following chapter will discuss in greater depth the general conclusions drawn from the research. Recommendations for future research and possible model modification options for this model will be presented in conclusion.

CHAPTER 6
DISCUSSION OF RESEARCH RESULTS AND RECOMMENDATIONS FOR FUTURE RESEARCH

6.1 INTRODUCTION

This chapter aims to discuss the general conclusions that derive from the results obtained from this study (presented in chapter 5). This will be done by connecting these results with the original objectives of this study, as well as the theory and research used to support the arguments of the study. The conclusions will also include the practical implications and recommendations for future research of this investigation.

6.2 BACKGROUND

The main practical aim behind this research study was to provide empirical evidence in order to assist a specific organisation in identifying the Talent Management competencies required by line managers in order to result in certain measurable organisational outcomes such as reduced turnover. The first step in the process involved identifying the Talent Management competencies required by line managers in order to successfully implement the organisation's Talent Management strategy. These competencies were then formulated within a model and were tested to determine how they related to the specific Talent Management outcomes of job satisfaction, affective commitment and intention to quit. It was theorized that the outcome of this research would provide the organisation with the means to constructively, rationally and purposefully manage the Talent Management performance of line managers. The objective of this study was to establish the nature of the causal linkages between the eight Talent Management competency variables and the outcomes variables of Job Satisfaction, Affective Commitment and Intention to Quit. The *ex post facto* nature of this research design, however, precludes the drawing of definite causal inferences from significant path coefficients.

6.3 SUMMARY OF FINDINGS

The data obtained from the Talent Management competency questionnaires were analyzed by means of SEM. Details of these findings are discussed as follows.

6.3.1 Model fit

Measurement model fit refers to the extent to which a hypothesized model fits (is consistent with or describes) the data and provides information about the validities and reliabilities of the observed indicators (Diamantopoulos & Siguaw, 2000). Measurement model fit was analyzed for both the Talent Management competency measurement model and the two-factor Job Descriptive Index measurement model. The structural model is that component of the general model that prescribes relations between the latent variables and between latent and observed variables that are not indicators of latent variables (Hoyle, 1995). The Comprehensive Talent Management competency structural model was assessed for goodness-of-fit, with the purpose of explaining why the indicator item parcel variables are correlated in the manner expressed in the observed covariance matrix. A summary of findings therefore considers the results of the fitting exercises as well as the establishment (or absence) of any significant links between the variables of the model. The results of the goodness-of-fit hypothesis tests for exact-fit and close-fit are summarized in Table 6.1.

Table 6.1: Summary of exact-fit and close-fit statistics

MODEL	SATORRA-BENTLER SCALED CHI-SQUARE (exact fit)	RMSEA (close fit)
Talent Management competency measurement model	105.78 (P = 0.014) exact H_0 fit rejected	0.043 (P = 0,70) close fit H_0 not rejected
Two-factor Job Descriptive Index measurement model	10,11 (P=0,26) exact fit H_0 not rejected	0,051 (P = 0,43) close fit H_0 not rejected
Talent Management competency structural model	375.48 (P = 0.00) exact fit H_0 rejected	0.059 (P = 0,16) close fit H_0 not rejected

As reflected in Table 6.1, in the case of the Talent Management competency measurement model, the null hypothesis of exact fit is rejected, but the null hypothesis of close fit is not rejected. Therefore it can be said this measurement model approximately reproduces the observed covariance matrix, but not perfectly. The fit indices for the two-factor Job Descriptive Index measurement model show that both the exact-fit and the close-fit hypothesis can not be rejected, allowing for the conclusion that the model has an excellent fit to the data. Finally, the fitting of the composite structural model fit resulted in a rejection of the null hypothesis of exact-fit, while the null hypothesis of close-fit is not rejected. In this instance it can be concluded that the structural model allows for a reasonable approximation of the observed covariance matrix.

These exact-fit and close-fit statistics, together with a synthesis of the spectrum of goodness-of-fit indices (presented in chapter 5) permit the conclusion that, overall, the proposed theoretical Talent Management competency model shows a good to reasonable, but not perfect, fitting model.

When assessing the suitability of a model, χ^2 detects the degree of fit between the causal model and the data set to which it is applied. If the causal model truly does not fit the data set, the result is an unambiguous non-confirmation of the model as a whole (Biddle and Marlin, 1987). From this, a conclusion would follow that the model does not provide an acceptable explanation for the observed covariance matrix. In contrast to this, a high degree of fit between the observed and estimated covariance matrices (successful fitting of a model) does not "equate to 'truth' or validity" (Kelloway, 1998, p. 40). This is clarified further by Cliff (1988):

> The fitting of the data does not confirm a model; it only fails to disconfirm it. With this comes the corollary that when the data do not disconfirm a model, there are many other models that are not disconfirmed either. The very form of the equations underlying LISREL *guarantee* that in virtually every application there are an infinity of models that will fit the data equally well. While only a small minority of these may be legitimate alternative explanations of the data, the fact that an author's model is not disconfirmed means that these are not disconfirmed either (p. 118).

Given the acceptable structural model fit (see Table 6.1), an examination of the B and Γ matrices was undertaken in order to establish the significance of the theoretical linkages proposed by the Talent Management competency model depicted in Figure 5.7. The interpretation of these results will provide information with which to determine whether the theoretical relationships specified at the conceptualization stage are indeed supported by the data. Here the focus is on the proposed causal linkages between the various endogenous and exogenous variables. A discussion regarding the interpretation of these results follows.

6.3.2 Gamma matrix

A notable unique result of this research presents itself in the significant positive relationships uncovered between the exogenous latent variable, *Talent Management Mindset*, and the endogenous Talent Management latent variables of *Attracts and Recruits Talent, Builds and*

Maintains Relationships, Provides Meaningful and Challenging Work, and *Manages Work-life Balance*. These significant positive relationships provide empirical evidence for the first time of the importance of instilling a Talent Management mindset within the line managers. The magnitude of the γ-coefficient (t = 6,99; γ = 0,75) for *Attracts and Recruits Talent* is fairly substantial, indicating that the influence of a Talent Management mindset on this variable is rather strong. The size of the γ-coefficient for the remainder of the variables, i.e. *Builds and Maintains Relationships* (t = 7,76**;** γ = 0,84)**,** *Provides Meaningful and Challenging Work* (t = 5,51**;** γ = 0,95)**,** *Remunerates and Remunerates Fairly* (t=3,96**;** γ = 0,83) and *Manages Work-life Balance* (t = 8,91**;** Γ = 0,86) are all exceptionally large, indicating a substantial influence of *Talent Management Mindset* on these variables**.** *Displaying a Talent Management Mindset* was defined for the purposes of this study (detailed in Table 4.3) as: "Persistently and continuously displays a belief that having better talent at all levels provides the means to outperform other organisations. Regularly emphasizes this view to others". The importance of instilling a Talent Management mindset at both executive and line management level has been discussed extensively in the literature (Antonucci, 2005; Boudreau & Ramstad 2005; Byham 2001; Chambers, Foulon, et al. 1998; Chambers, Handfield-Jones, et al. 1998; Cohn, Khurana & Reeves 2005; Conger & Fulmer 2003; Fegley 2006; Handfield-Jones, Michaels, et al., 2001; Hiltrop 1999; Jacobs 2005; Lockwood 2006). In almost all instances this proposition has not been empirically researched, but the cited literature nonetheless with confidence suggests that an organisation's Talent Management strategies will not prove to be successful unless they are driven by the Talent Management mindset of both executives and line managers. The only instance of researched support for this claim is the study by Antonucci (2005), which found a direct negative link between the level of executive commitment to Talent Management and the incidence of significant leadership shortages within organisations.

The only non-significant relationship revealed for this exogenous latent variable is the one with the endogenous Talent Management latent variable of *Develops Others***.** This is contrary to the initial theoretical expectations. One possible explanation for this might be partly explicated by the HRD structures and procedures within this specific organisation. As this studied organisation operates within a highly competitive ICT market, a strategic decision has been made at executive level to ensure that the philosophy and practices regarding compensation and benefits, as well as the approach to the development of employees, creates

for them a position as an employer of choice. Evidence for this is found in the (unnamed) organisation's Chief Human Resources Officer's (2005) annual review report regarding employee development:

> Investment in employee development and training continues to be a focus to support [the organisation's] strategy in empowering its human talent, so as to enhance their knowledge base and to maximise their potential and performance. The Group's HR development strategy is driven by the passion to be the best in whatever we do and to win. We believe that the focus on building capacity through the developing of managerial, leadership and functional competencies achieves this and creates a sustainable competitive advantage for [the organisation]. The Group's commitment to employee development is demonstrated by the heavy investment it continues to make in employee development (p. 68).

It could therefore be argued that this facet of Talent Management is viewed within the organisation to be under the direct control of the HRD department and that the competencies of the line manager would not have as much impact on this variable as a result. This line of reasoning is, however, eroded by the fact that this also applies to the organisation's remuneration strategy. The organisation's Chief Human Resources Officer's (2005) annual review report namely also stated with regards to remuneration:

> The Group has a Remuneration Committee (REMCO) that is charged with the responsibility of overseeing, on behalf of the Board, the Group's Compensation Policy, as well as the compensation and benefit programmemes of senior management. The REMCO seeks to provide rewards and incentives that are highly leveraged to performance and clearly linked to the Group's and individual's results. The thrust is to ensure that our compensation and benefits are at levels that enable the Group to attract and retain executive talent. The Group has introduced a remuneration philosophy and practices which aim to codify our approach to compensation and benefits to solidify our position as an employer of choice. The Group upholds internal remuneration equity, as well as external equity to remain market competitive. This is achieved through participation in niche salary surveys (p. 68).

A second prominent finding of this study is that the endogenous latent variable of *Identifies and Differentiates Talented Employees* has been found to have a significant and positive effect (t = 2,64; γ = 0,56) on *Develops Others***,** but has not been found, contrary to theoretical expectations, to have a significant effect on *Remunerates and Rewards Fairly* and on *Provides Meaningful and Challenging Work*. *Identifies and Differentiates Talented*

Employees has been defined for the purposes of this study as: "Identifies and differentiates different levels of employees according to performance, with the purpose of adjusting management decisions and actions according to this evaluation" (detailed in Table 4.3). Measures for this management competency within the Talent Management competency 360° evaluation questionnaire include items which refer to performance appraisal processes and the addressing of the poor performance of direct reports. With regard to these actions, specific HR policies and procedures are in place within the organisation in order to ensure that both are handled equitably at all levels. The possibility therefore exists that *Identifies and Differentiates Talented Employees* is viewed by employees as a function of HR procedures such as the performance appraisal process (i.e. organisationally imposed) and therefore has an impact on the competency of *Develops Others.* Stated differently, line managers who align themselves with the standard HR procedures such as the performance appraisal process (expressed in the competency of *Identifies and Differentiates Talented Employees***)** will be seen to display the competency *Develops Others***.** *Develops others* is defined for the purposes of this study as: "Accurately assesses people's development needs, provides opportunities and ensures that needs are met in order to fully develop the potential of all employees" (detailed in Table 4.3). In terms of this argument one would, however, have expected the Talent Management competency *Remunerates and Rewards Fairly* also to have been significantly linked to the competency of *Identifies and Differentiates Talented Employees*. The existence of a line manager's *Talent Management Mindset* is not prescribed by organisational policy and procedure, but is rather an expression of his/her own beliefs and as a result is not linked to the ability to remunerate employees fairly.

6.3.3 Beta matrix

The *Affective Commitment* component of the Three Component Model of organisational commitment has been used in this study as a measure of the employee's commitment towards their organisation. It was hypothesized that *Affective Commitment* will have a negative direct influence on *Intention to Quit*. In this instance the null hypothesis was rejected (t = -3,56, at p= 0,50), showing that *Affective Commitment* is significantly and negatively related to (β=-0,39) *Intention to Quit***.** This finding is consistent with the large body of research that has shown organisational commitment to have a significant negative effect on turnover or turnover intentions (Arnold & Feldman, 1982; Elangovan, 2001; Griffeth, et al., 2000; Steers, 1977; Wiener & Vardi, 1980;). More specifically, studies support the view that affective

commitment appears to be the strongest predictor of intention to leave the organisation (Bagraim, 2003; Boshoff, et al., 2002; Mathieu & Zajac, 1990; Spies, 2006; Stallworth, 2003).

Job Satisfaction as measured by the Job Descriptive Index was found through exploratory factor analysis to consist of two factors which underlie the observed (inter-JDI dimension) correlation matrix calculated for the Job Descriptive Index dimension scores. The Job Descriptive Index could be subdivided into two independent, uni-dimensional subscales, namely; 1) Organisational Job Satisfaction and 2) Supervisory Job Satisfaction. *Organisational Job Satisfaction* was found to have a significant and negative effect on *Intention to Quit.* (t = *-2,36;* β = -0,42) The Job Descriptive Index facets of PAY and PEOPLE load on *Organisational Job Satisfaction.* There is considerable empirical evidence to show that job satisfaction has a negative affect on intention to search for an alternative position (Arnold & Feldman, 1982), intention to quit (Chen, 2006; Elangovan, 2001; Rasch & Harrel, 1990; Spector, 1985; Scott et al., 2006), and actual quitting (Arnold and Feldman, 1982; Freeman, 1978). It appears that the job satisfaction facets of PAY and PEOPLE are indirectly linked to *Intention to Quit*.

Further analysis of the results of the Job Descriptive Index regarding the facet of PAY provides some interesting information. The satisfaction with PAY facet addresses attitude towards pay and is based on the perceived difference between actual pay and expected pay. Expected pay is based both on the perceived inputs and outputs of the job and the pay of other employees holding similar jobs or possessing similar qualifications. Pay satisfaction is also influenced by the personal financial situation of the employee, the economy, and the amount of pay an employee has received previously (Balzer et al., 2000). The Job Descriptive Index results show that, for this organisation, the satisfaction score for this facet, PAY, reflects a notable dissatisfaction with current remuneration. As this particular organisation makes considerable effort to ensure that compensation levels are extremely competitive, at percentiles noticeably higher than market norms, the possibility exists that there is a disparity between the actual level of compensation and the employees' perception of this level of compensation. It is possible that this level of dissatisfaction has heightened the employee's awareness towards their considerations of intention to quit. Research has shown that an employee's satisfaction with their total compensation will increase their intent to stay (CLC, 2004; Gaylard, et al., 2005; Marquez, 2006; Sutherland & Jordaan, 2004). This significant

negative direct link between *Organisational Job Satisfaction* and *Intention to Quit* therefore corroborates these findings.

Remuneration and Rewards Fairly is significantly related to *Supervisory Job Satisfaction* (t=1,98; β=0,47) but the latter is not significantly related to *Intention to Quit.* The total effect of *Remunerates and Rewards Fairly* on *Intention to Quit* was also found not to be significant (p>0,05).

In contrast, *Supervisory Job Satisfaction* has not been found to have a significant effect on *Intention to Quit* as the null hypothesis was not rejected. The facets of WORK, PROMOTION, SUPERVISION and JOB IN GENERAL load on to *Supervisory Job Satisfaction***.** This does not seem to be consistent with the many studies which find job satisfaction to be a direct and negative antecedent to intention to quit. Possibilities for this contradiction will be discussed further on in this chapter.

Attracts and Recruits Talent has been found to be significantly related to *Organisational Job Satisfaction* (t=4,03: β=0,63). The indirect effect of *Talent Management Mindset* on *Organisational Job Satisfaction*, mediated by *Attracts and Recruits Talent,* moreover, has been found to be significant (t=3,31L:β=0,57).

The B matrix fails to provide support for the remaining hypotheses, as the null hypothesis in each instance is not rejected. These results therefore conclude that: a) *Develops Others* does not have a significant effect on *Affective Commitment***;** b) *Builds and Maintains Relationships* does not have a significant effect on *Supervisory Job Satisfaction***;** c) *Builds and Maintains Relationships* does not have a significant effect on *Intention to Quit***;** d) *Builds and Maintains Relationships* has not been found to have a significant effect on *Affective Commitment***;** e) *Provides Meaningful and Challenging Work* has not been found to have a significant effect on *Supervisory Job Satisfaction***;** f) *Remunerates and Rewards Fairly* has not been found to have a significant effect on *Affective Commitment*; h) *Remunerates and Rewards Fairly* has not been found to have a significant effect on *Intention to Quit***;** i) *Manages Work-life Balance* has not been found to have a significant effect on *Supervisory Job Satisfaction***;** j) *Manages Work-life Balance* has not been found to have a significant effect on *Affective Commitment***;** and k)

Supervisory Job Satisfaction has not been found to have a significant effect on *Intention to Quit***.** A discussion regarding this lack of significant pathways follows.

6.4 DISCUSSION OF FINDINGS

These results are somewhat disconcerting, as they basically state that the line managers' Talent Management competencies are not as significantly linked to job satisfaction as the original theoretical argument contended and that line managers' Talent Management competencies do not affect affective commitment directly. It is enigmatic that, according to the fitted model, the Talent Management competencies did not have any direct effect on the affective commitment outcomes variable. The conclusion that affective commitment is totally unaffected by the competencies and behaviours of line managers is implausible in light of the extensive research to the contrary. It is not feasible to argue that management competencies and behaviour are unable to effect affective commitment.

An additional area of concern is that *Supervisory Job Satisfaction* has not been found to have a significant effect on *Intention to Quit***,** as the null hypothesis was not rejected. The direct and negative link between job satisfaction and intention to quit has been well established through research (Chen, 2006; Elangovan, 2001; Scott et al., 2006; Spector, 1985; Rasch & Harrel, 1990). It is therefore necessary to consider the possible reasons for these contradictory findings.

The first area to consider is the process of developing the theoretical framework of the model (model conceptualization). Diamantopoulos and Siguaw (2000) point out that a poorly conceptualized model is unlikely to produce useful results with LISREL methodology and they provide several areas for consideration: 1) The hypothesized relationships between the latent variables must be specified by clearly specifying between the exogenous and endogenous variables in the model. This includes the specific ordering of the exogenous and endogenous variables, as well as the number and expected direction of the linkages between these variables. The variables and their linkages within the Talent Management competency model are well specified and based on sound theory. 2) The omitting of important or critical variables from the model results in specification error and as a result the proposed model will not be a true characterization of the population and the variables under study. It is possible that certain variables might mediate or moderate the relationship between the Talent

Management competency variables and the outcomes variables. The inclusion of mediator or moderator variables as a potential explanation for the lack of causal pathways between these variables will be discussed further under the heading "Recommendations for future research". 3) It is necessary to select multiple indicators when operationalizing both exogenous and endogenous latent variables. Where this is not the case, multi-item scales can be split to create multiple measures for each latent variable. In this instance item parcels resulting in two indicator variables for each of the latent variables, with exception of the job satisfaction variable, were created. The facets of the Job Descriptive Index were used as indicator variables in this instance. 4). Consideration should be given to the complexity of the model due to the number of latent and manifest variables in the model. Diamantopoulos and Siguaw (2000) recommend a maximum of 20 variables (5-6 latent variables each measured by 3-4 indicators) in order to avoid problems in model fit. As this number is exceeded in the model in this research, it is possible that the complexity of the model has contributed to the lack of significant pathways within this model. 5) In addition to ensuring model identification, it is necessary to ensure that all latent variables in the model have been assigned a defined scale. This requirement has been met. 6) The LISREL diagnostic facility for detecting identification problems automatically generates warnings regarding non-identification; this was not applicable in this instance.

The Talent Management competency model has met the requirement for model conceptualization, with the exception of potential model complexity and the exclusion of moderator variables. These two possible factors will be discussed further under the heading "Recommendations for future research".

The second area of consideration for contributions to model error is that of model fit. Despite the fact that both the measurement and structural models resulted in reasonable to good fit, there are some areas which can be taken into account in order to improve the model. 1) Affective commitment was essentially equated to organisational commitment, as studies support the view that affective commitment appears to be the strongest predictor of intention to leave the organisation (Bagraim, 2003; Boshoff, et al., 2002; Mathieu & Zajac, 1990; Spies, 2006; Stallworth, 2003). It is possible that the Talent Management competencies investigated in this study could lead to normative and/or continuous commitment, rather than affective commitment. A recommendation is therefore made that future research in this area includes all three forms of commitment (affective, normative and continuance) in the Three

Component model of organisational commitment. 2) On the one hand, the two-factor Job Descriptive Index measurement model showed reasonable, but less than perfect fit, while on the other hand, some statistics raised areas for concern regarding this measurement model (issues regarding factor loadings, high and low extreme residuals and the proportion of variance of the indicators: see chapter 5 for details). It is possible that the facets of the Job Descriptive Index are not suitable measures of job satisfaction for this study. In a meta-analysis investigating the construct validity of the Job Descriptive Index, Kinicki et al. (2002) suggest that the Minnesota Satisfaction Questionnaire (MSQ) may be a better overall measure of pay, promotion, co-worker, and supervision satisfaction than the Job Descriptive Index. In addition, the MSQ provides the ability to study broader conceptualizations of job satisfaction as it contains subscales that assess satisfaction with many aspects of the job (e.g., achievement, ability utilization, activity, creativity, independence and variety). It is recommended that consideration be given to refit this model with a different operationalization of the job satisfaction measure (possibly the MSQ). The Job Descriptive Index cannot be considered in this study to be an inherently poor measure, as a significant link was found between Supervisory Job Satisfaction and Intention to Quit.

The third area for consideration is that of model modification. Modification indices are aimed at answering the question whether freeing of the current fixed parameters within the model, would significantly improve the parsimonious fit of the model. The various matrices did indicate additional paths that would significantly improve the fit of the model. The modification indices and completely standardized expected change statistics provided reasonably convincing grounds for model modification. Examination of the B matrix showed an additional 6 paths that would significantly improve the fit of the model. The standardized expected change associated with freeing these currently fixed elements of B was sufficient in magnitude to justify the serious consideration of modifying the model. Plausible theoretical arguments, moreover, could be mobilized to justify a number of these proposed modifications to the model. Examination of the Γ matrix revealed that all the modification indices are below the critical chi-square modification index value of 6,64 (p=0,01) as stated by Diamantopoulos and Siguaw (2000).

6.5 SUGGESTIONS FOR FUTURE RESEARCH

The discussion of the results of this study has already revealed several areas for consideration in future research regarding Talent Management competencies. This section summarizes and, where necessary, elaborates on these possible areas of importance.

Firstly, future studies in this area should endeavour to increase the sample size with regards to the measures for the Talent Management competency outcomes variables of *Job Satisfaction*, *Affective Commitment* and *Intention to Quit*. After the treatment of missing values, the effective sample size varied according to the application of the data. For the fitting of the Talent Management measurement model the effective sample size was 211. For the fitting of the Job Descriptive Index measurement model the effective sample size was 105, and for the fitting of the structural model the effective sample size was 107 after imputation of missing values. Kelloway (1998) recommends a sample of at least 200 observations for SEM.

Secondly, the use of all three components (affective commitment, normative commitment, and continuance commitment) of the Three Component Model of organisational commitment should be included as measures of this variable. Affective Commitment refers to the employee's emotional attachment to, identification with, and involvement in the organisation; Continuance Commitment refers to an awareness of the costs associated with leaving an organisation; and Normative Commitment reflects a feeling of obligation to continue employment (Meyer & Allen, 1991). "Employees with strong affective commitment remain because they *want* to, those with strong continuance commitment because they *need* to, and those with strong normative commitment because they *ought* to do so" (Allen & Meyer, 1990, p. 3). Continuance Commitment has subsequently been shown to consist of two underlying dimensions: *personal sacrifice* and *perceived lack of employment alternatives*. Both of these could increase the employee's perceived costs associated with leaving the organisation (Meyer & Allen, 2004). It is possible that employees consider working for an organisation where line managers display strong Talent Management competencies as a benefit, and that they would not want to sacrifice this through leaving the organisation (i.e. they develop continuance commitment, as the loss of working under a manager with Talent Management competencies is seen as a personal *sacrifice*).

Thirdly, the Job Descriptive Index as a measure of job satisfaction for this study might not be the most suitable measure to use. The use of other measures, such as the MSQ should be investigated as an alternative.

Fourthly, the testing of the model has provided compelling suggestions for specific model modification, based on the modification indices calculated for the B-matrix it seems expedient that this should be investigated further. Some of these suggestions have been explored within this study. Indications are that the model might have to be adapted so that *Commitment* becomes the primary portal through which the remainder of the latent variables exert their influence on *Intention to Quit*. The suggested modification, however, needs to be explored on a new sample first.

Finally, a possible explanation for the lack of significant linkages between the Talent Management competency variables and the outcomes variables was considered to be the result of the omission of possible moderator variables or mediator variables, or perhaps both. Baron and Kenny (1986) define a moderator variable by stating that; "moderation implies that the causal relation between two variables changes as a function of the moderator variable. The statistical analysis must measure and test the differential effect of the independence variable on the dependent variable as a function of the moderator" (p. 1174). In contrast, a variable may be said to function as a mediator "to the extent that it accounts for the relation between the predictor and the criterion" (p. 1176). One such example of a possible moderator is explored in a study by Jex and Bliese (1999) which found that respondents with high levels of *self-efficacy* responded more positively in terms of job satisfaction to tasks with high significance than did those with low efficacy. The results also revealed that *group-level collective efficacy* moderated the relationship between work overload and job satisfaction and between task significance and organisational commitment. In addition, *equity sensitivity* (how sensitive people are to over-reward and under-reward situations) has been found to play a moderating role between self-efficacy and job satisfaction (O'Neill & Mone, 1998). A mediator variable relevant to this research, which should be considered for future investigation, is that of *trust-in-management* which has been found to partially mediate the relationship between perceived organisational support and organisational commitment (Whitener, 2001).

6.6 PRACTICAL APPLICATIONS

The most important implication resulting from this study is the confirmation of the significant link between the exogenous latent variable, *Talent Management Mindset***,** and the endogenous latent variables of *Attracts and Recruits Talent***,** *Builds and Maintains Relationships***,** *Provides Meaningful and Challenging Work***,** *Remunerates and Rewards Fairly* and *Manages Work-life Balance***.** The magnitude of these path coefficients indicates a substantial influence of *Talent Management Mindset* on these Talent Management competency variables. The conclusion to be drawn from this is that line managers who display a Talent Management mindset, could also be expected to be competent in management skills which include attracting and recruiting talented employees; building and maintaining excellent relations with these employees; providing the employees with meaningful and challenging work; and managing their work-life balance. The benefit to the organisation in each of these instances would be of great value. An important and relevant matter connected to this point was raised during the CIT interviews with various employees: the likelihood was highlighted that it was possible for a manager to both possess a Talent Management mindset, and also to be inefficient at displaying this mindset. Intentions to provide meaningful and challenging work or to be efficient at recruiting talented employees are not always noticed by all direct reports in the department. It would be of benefit to the organisation to ensure that *all levels* of management (from line managers to executives) commit themselves to supporting Talent Management strategy within the organisation, and that various methods of *displaying the behaviours* behind this support are included in this approach.

The Talent Management competency 360° evaluation questionnaire has been validated against the outcomes variables of *Job Satisfaction*, *Affective Commitment* and *Intention to Quit*, and in the process a fair amount of evidence has come to light that this measure is reliable and possess internal consistency. Moreover, promising indications exist that the competencies measured by the Talent Management competency 360° evaluation questionnaire are linked to the outcome variables Talent Management is endeavoring to affect. The failure of the present study to corroborate the majority of the hypothesized linkages between the Talent Management competencies and the outcome variables is offset by the promising model modification suggestions uncovered by the study. Indications are that further refinement to the current model could prove to be successful in providing the theoretical and empirical

justification for the use of the Talent Management competency 360° evaluation questionnaire as a method of evaluating the Talent Management competency levels of line managers. The intention of this research study was to provide the organisation with a method to constructively, rationally and purposefully manage the Talent Management performance of line managers. The study provided some tentative evidence to warrant the use of this measure to establish the Talent Management development needs of the line managers and to structure training programmes accordingly. Further research on the questionnaire and the proposed modifications to the current model are, however, required to allow the Talent Management competency 360° evaluation questionnaire to be used with confidence for this purpose.

6.7 CONCLUDING REMARKS

The proposed Talent Management competency model has proved to be an interesting case to study. The noteworthy results of the model analysis include the adequate to good fit of the model, as well as the significant model parameters and paths that were established. On the other hand, the inability to confirm certain hypotheses (links between Talent Management competencies and outcomes variables) has been disappointing. Overall, it can be said that this model shows close fit, while some paths were corroborated and others were not. It is therefore reasonable to conclude that the investigation into the suitability of this model should not be abandoned and that future research should focus on the investigation into the links between the Talent Management competency variables and the outcomes variables.

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APPENDIX A: TALENT MANAGEMENT COMPETENCY 360° EVALUATION QUESTIONNAIRE FOR CANDIDATES

360° QUESTIONNAIRE
TALENT MANAGEMENT

PURPOSE OF THIS QUESTIONNAIRE

The purpose of this questionnaire is to help provide details regarding the Talent Management ability of the SDP candidates and to use this for developmental purposes. In addition, results from these questionnaires will be used for a research study on Talent Management.

The research study being conducted involves the development and testing of a Talent Management model and relating the competencies in this model to various outcomes, such as job satisfaction and commitment.

WHAT IS TALENT MANAGEMENT

In order to gain a competitive advantage in the business market, organisations need to ensure that they engage highly talented employees. This is driven by means of Talent Management strategies which focus on five primary areas: attracting, selecting, engaging, developing and retaining employees. Line Managers play an important role in placing a focus on Talent Management priorities and managing their departments accordingly. This questionnaire will help to rate the Talent Management competencies of the SDP candidates for developmental purposes.

INSTRUCTIONS

Your response to this questionnaire is **completely confidential.**

1. Please indicate your response to each question by checking off with a cross (x) one of the alternatives provided. Please answer all the questions.
2. Once you have completed the questionnaire, please ***save the document*** and return it, as an attachment, to [email address withheld].
3. Please ensure that your questionnaire is returned by Friday 26 August 2006.

Thank you for completing this questionnaire. Your participation is appreciated.

NAME						
I HAVE DISTRIBUTED THE QUESTIONNAIRE TO THE FOLLOWING NUMBER OF PEOPLE	**SUPERIOR**		**PEERS**		**DIRECT REPORTS**	

I GRANT CONSENT FOR THE INFORMATION COLLECTED IN THIS FORM TO BE USED FOR RESEARCH PURPOSES	**YES**		**NO**	

For the following statements, please indicate the **FREQUENCY** that the behaviour listed below has been displayed by yourself in the last six months. Indicate your response by placing a cross (x) in the relevant column. If you are unable to rate your behaviour, please mark the UNABLE TO RATE column, but please use this sparingly.		Never	Rarely	Some-times	Often	Always	Unable to rate
A	**Displays a Talent Management mindset**						
	I remind team members of the importance of retaining high calibre employees.						
	I prioritize issues which concern the development of employees.						
	I remind team members of the importance of recognizing exceptional performance.						
	I ensure that all team members have an understanding approach towards the personal and family needs of others.						
B	**Attracts and recruits talent**						
	I prioritize time to interview potential candidates when a vacancy arises.						
	I possess a good overall knowledge of HR recruitment processes and policies.						
	I consistently appoint high calibre employees.						
	I devote time and energy to attend to the filling of a vacancy.						
	I ensure that vacancies do not remain open for a long period of time.						
C	**Identifies and differentiates talented employees**						
	I am aware of the level at which team members are performing.						
	I make use of assessment tools (OPQ, MBTI, Assessment Centres etc) available within the company.						
	I encourage talented employees to develop their careers.						
	I address performance problems in a timely way – do not let poor performance continue.						
	I rate the performance levels of employees candidly during the performance appraisal process.						
	I adjust managerial decisions and actions to be appropriate for the performance levels of employees.						

(continued…)

		Never	Rarely	Some-times	Often	Always	Unable to rate
D	**Develops others**						
	I possess a genuine interest to foster the learning and development of people.						
	I make an objective assessment of individuals' development needs.						
	I coach staff one-on-one.						
	I give honest feedback for developmental purposes.						
	I actively create developmental opportunities for subordinates.						
	I meet with team members for formal career planning sessions.						
E	**Establishes and maintains positive relationships.**						
	I am sensitive to the needs, attitudes and perspectives of others and display sincere interest.						
	I take time and effort to maintain contact with team members.						
	I manage to resolve conflict efficiently and effectively.						
	I build trust with team members.						
	I demonstrate sound ethical behaviour with colleagues.						
	I communicate openly with staff.						
F	**Provides meaningful and challenging work.**						
	I discuss a clear vision for the future and connect team activities to this vision.						
	I ensure that team members are able to link their individual contributions to the strategic objectives of the division.						
	I actively create opportunities for team members to participate in challenging assignments.						
	I delegate decision-making where appropriate.						
	I equip team members with the necessary information and expected outcomes when delegating tasks.						

(continued…)

		Never	Rarely	Some-times	Often	Always	Unable to rate
G	**Remunerates and rewards fairly.**						
	I nominate employees for various company awards (such as “on-the-spot” and “circle-of-excellence” awards).						
	I reward employees for exemplary work in a variety of ways.						
	I provide verbal or written recognition for individual contribution where appropriate.						
	I allocate increases fairly, according to individual performance.						
	I ensure that salaries are market related.						
	I celebrate exceptional performance of employees in our team.						
H	**Manages work-life balance.**						
	I allow flexibility of time for others to attend to personal and family matters.						
	I ensure that employees have adequate resources to complete their work.						
	I protect employees from excess stress.						
	I assure that workload is full but not excessive.						
	I make the effort to be aware of family and personal circumstances of team members that might impact on their work.						

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE. YOUR PARTICIPATION IS APPRECIATED.

APPENDIX B: TALENT MANAGEMENT COMPETENCY 360° EVALUATION QUESTIONNARE FOR SUPERIORS AND PEERS

360° QUESTIONNAIRE
TALENT MANAGEMENT

PURPOSE OF THIS QUESTIONNAIRE

The purpose of this questionnaire is to help provide details regarding the Talent Management ability of the SDP candidates and to use this for developmental purposes. In addition, results from these questionnaires will be used for a research study on Talent Management.

The research study being conducted involves the development and testing of a Talent Management model and relating the competencies in this model to various outcomes, such as job satisfaction and commitment.

WHAT IS TALENT MANAGEMENT

In order to gain a competitive advantage in the business market, organisations need to ensure that they engage highly talented employees. This is driven by means of Talent Management strategies which focus on five primary areas: attracting, selecting, engaging, developing and retaining employees. Line Managers play an important role in placing a focus on Talent Management priorities and managing their departments accordingly. This questionnaire will help to rate the Talent Management competencies of the SDP candidates for developmental purposes.

INSTRUCTIONS

Your response to this questionnaire is **completely confidential.** No identification is required. Your answers will be grouped with those of other employees who complete the questionnaire as well. In the instance of "SUPERVISOR" ratings, this does not apply, as you will be the only rater in this category.

4. Please indicate your response to each question by checking off with a cross (x) one of the alternatives provided. Please answer all the questions.
5. Once you have completed the questionnaire, please ***save the document*** and return it, as an attachment, to [email address withheld].
6. Please ensure that your questionnaire is returned by Friday 26 August 2006.

Thank you for completing this questionnaire. Your participation is appreciated.

NAME OF SDP CANDIDATE YOU ARE RATING						
I AM THIS SDP CANDIDATE'S ……..	**SUPERIOR**		**PEER**		**DIRECT REPORT**	

I GRANT CONSENT FOR THE INFORMATION COLLECTED IN THIS FORM TO BE USED FOR RESEARCH PURPOSES	**YES**		**NO**	

For the following statements, please indicate the **FREQUENCY** that the behaviour listed below has been displayed by the person you are rating in the last six months. Indicate your response by placing a cross (x) in the relevant column. If you are unable to rate their behaviour, please mark the UNABLE TO RATE column, but please use this sparingly.		Never	Rarely	Some-times	Often	Always	Unable to rate
A	**Displays a Talent Management mindset**						
	Reminds team members of the importance of retaining high calibre employees.						
	Prioritizes issues which concern the development of employees.						
	Reminds team members of the importance of recognizing exceptional performance.						
	Ensures that all team members have an understanding approach towards the personal and family needs of others.						
B	**Attracts and recruits talent**						
	Prioritizes time to interview potential candidates when a vacancy arises.						
	Possesses a good overall knowledge of HR recruitment processes and policies.						
	Consistently appoints high calibre employees.						
	Devotes time and energy to attend to the filling of a vacancy.						
	Ensures that vacancies do not remain open for a long period of time.						
C	**Identifies and differentiates talented employees**						
	Is aware of the level at which team members are performing.						
	Makes use of employee assessment tools (OPQ, MBTI, Assessment Centres etc) available within the company.						
	Encourages talented employees to develop their careers.						
	Addresses performance problems in a timely way – does not let poor performance continue.						
	Rates the performance level of employees candidly during the performance appraisal process.						
	Adjusts managerial decisions and actions to be appropriate for the performance levels of employees.						

(continued…)

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		Never	Rarely	Some-times	Often	Always	Unable to rate
D	**Develops others**						
	Possesses a genuine interest to foster the learning and development of people.						
	Makes an objective assessment of individuals' development needs.						
	Coaches staff one-on-one.						
	Gives honest feedback for developmental purposes.						
	Actively creates developmental opportunities for subordinates.						
	Meets with subordinates for formal career planning sessions.						
E	**Builds and maintains positive relationships.**						
	Is sensitive to the needs, attitudes and perspectives of others and displays sincere interest.						
	Takes time and effort to maintain contact with team members.						
	Manages to resolve conflict efficiently and effectively.						
	Builds trust with team members.						
	Demonstrates sound ethical behaviour with colleagues.						
	Communicates openly with staff.						
F	**Provides meaningful and challenging work.**						
	Discusses a clear vision for the future and connects team activities to this vision.						
	Ensures that team members are able to link their individual contributions to the strategic objectives of the division.						
	Actively creates opportunities for team members to participate in challenging assignments.						
	Delegates decision making where appropriate.						
	Equips team members with the necessary information and expected outcomes when delegating tasks.						

(continued…)

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		Never	Rarely	Some-times	Often	Always	Unable to rate
G	**Remunerates and rewards fairly.**						
	Nominates employees for various company awards (such as “on-the-spot” and “circle-of-excellence” awards).						
	Rewards employees for exemplary work in a variety of ways.						
	Provides verbal or written recognition for individual contribution where appropriate.						
	Allocates increases fairly, according to individual performance.						
	Ensures that salaries are market related.						
	Celebrates exceptional performance of employees in our team.						
H	**Manages work-life balance.**						
	Allows flexibility of time for others to attend to personal and family matters.						
	Ensures that employees have adequate resources to complete their work.						
	Protects employees from excess stress.						
	Assures that workload is full but not excessive.						
	Makes the effort to be aware of family and personal circumstances of team members that might impact on their work.						

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE. YOUR PARTICIPATION IS APPRECIATED.

APPENDIX C: TALENT MANAGEMENT COMPETENCY 360° EVALUATION QUESTIONNAIRE FOR DIRECT REPORTS

360° QUESTIONNAIRE
TALENT MANAGEMENT

PURPOSE OF THIS QUESTIONNAIRE

The purpose of this questionnaire is to help provide details regarding the Talent Management ability of the SDP candidates and to use this for developmental purposes. In addition, results from these questionnaires will be used for a research study on Talent Management.

The research study being conducted involves the development and testing of a Talent Management model and relating the competencies in this model to various outcomes, such as job satisfaction and commitment.

WHAT IS TALENT MANAGEMENT

In order to gain a competitive advantage in the business market, organisations need to ensure that they engage highly talented employees. This is driven by means of Talent Management strategies which focus on five primary areas: attracting, selecting, engaging, developing and retaining employees. Line Managers play an important role in placing a focus on Talent Management priorities and managing their departments accordingly. This questionnaire will help to rate the Talent Management competencies of the SDP candidates for developmental purposes.

INSTRUCTIONS

Your response to this questionnaire is **completely confidential.** No identification is required. Your answers will be grouped with those of other employees who complete the questionnaire as well.

7. Please indicate your response to each question by checking off with a cross (x) one of the alternatives provided. Please answer all the questions.
8. Once you have completed the questionnaire, please ***save the document*** and return it, as an attachment, to [email address withheld].
9. Please ensure that your questionnaire is returned by Friday 26 August 2006.

Thank you for completing this questionnaire. Your participation is appreciated.

NAME OF SDP CANDIDATE THAT YOU ARE RATING	

DEMOGRAPHIC DETAILS OF PERSON FILLING OUT THIS FORM (FOR RESEARCH PURPOSES ONLY)

AGE		**JOB TITLE OR POSITION**				
GENDER		**TIME IN CURRENT JOB**	**YEARS**		**MONTHS**	
I GRANT CONSENT FOR THE INFORMATION COLLECTED IN THIS FORM TO BE USED FOR RESEARCH PURPOSES			**YES**		**NO**	

For the following statements, please indicate the **FREQUENCY** that the behaviour listed below has been displayed by the person you are rating in the last six months. Indicate your response by placing a cross (x) in the relevant column. If you are unable to rate their behaviour, please mark the UNABLE TO RATE column, but please use this sparingly.		Never	Rarely	Some-times	Often	Always	Unable to rate
A	**Displays a Talent Management mindset**						
	Reminds team members of the importance of retaining high calibre employees.						
	Prioritizes issues which concern the development of employees.						
	Reminds team members of the importance of recognizing exceptional performance.						
	Ensures that all team members have an understanding approach towards the personal and family needs of others.						
B	**Attracts and recruits talent**						
	Prioritizes time to interview potential candidates when a vacancy arises.						
	Possesses a good overall knowledge of HR recruitment processes and policies.						
	Consistently appoints high calibre employees.						
	Devotes time and energy to attend to the filling of a vacancy.						
	Ensures that vacancies do not remain open for a long period of time.						
C	**Identifies and differentiates talented employees**						
	Is aware of the level at which team members are performing.						
	Makes use of assessment tools (OPQ, MBTI, Assessment Centres etc) available within the company.						
	Encourages talented employees to develop their careers.						
	Addresses performance problems in a timely way – does not let poor performance continue.						
	Rates the performance level of employees candidly during the performance appraisal process.						
	Adjusts managerial decisions and actions to be appropriate for the performance levels of employees.						

(continued…)

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		Never	Rarely	Some-times	Often	Always	Unable to rate
D	**Develops others**						
	Possesses a genuine interest to foster the learning and development of people.						
	Makes an objective assessment of individuals' development needs.						
	Coaches staff one-on-one.						
	Gives honest feedback for developmental purposes.						
	Actively creates developmental opportunities for subordinates.						
	Meets with subordinates for formal career planning sessions.						
E	**Builds and maintains positive relationships.**						
	Is sensitive to the needs, attitudes and perspectives of others and displays sincere interest.						
	Takes time and effort to maintain contact with team members.						
	Manages to resolve conflict efficiently and effectively.						
	Builds trust with team members.						
	Demonstrates sound ethical behaviour with colleagues.						
	Communicates openly with staff.						
F	**Provides meaningful and challenging work.**						
	Discusses a clear vision for the future and connects team activities to this vision.						
	Ensures that team members are able to link their individual contributions to the strategic objectives of the division.						
	Actively creates opportunities for team members to participate in challenging assignments.						
	Delegates decision making where appropriate.						
	Equips team members with the necessary information and expected outcomes when delegating tasks.						

(continued…)

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		Never	Rarely	Some-times	Often	Always	Unable to rate
G	**Remunerates and rewards fairly.**						
	Nominates employees for various company awards (such as “on-the-spot” and “circle-of-excellence” awards).						
	Rewards employees for exemplary work in a variety of ways.						
	Provides verbal or written recognition for individual contribution where appropriate.						
	Allocates increases fairly, according to individual performance.						
	Ensures that salaries are market related.						
	Celebrates exceptional performance of employees in our team.						
H	**Manages work-life balance.**						
	Allows flexibility of time for others to attend to personal and family matters.						
	Ensures that employees have adequate resources to complete their work.						
	Protects employees from excess stress.						
	Assures that workload is full but not excessive.						
	Makes the effort to be aware of family and personal circumstances of team members that might impact on their work.						

(continued…)

For the following statements, please indicate the **HOW FREQUENTLY** you consider the following: Indicate your response by placing a cross (x) in the relevant column. Please respond to ***all*** of the statements.	**Never**	**Rarely**	**Some-times**	**Often**	**Always**
Wanting to leave this organisation.					
Searching for another position.					
Planning to leave this organisation.					
Actually leaving this organisation within the next year.					

Listed below is a series of statements that represent feelings that individuals might have about the company or organisation for which they work. With respect to your own feelings about the particular organisation for which you are now working, please indicate the degree of your **AGREEMENT** or **DISAGREEMENT** with each statement by marking the relevant column with a cross (x). Please respond to ***all*** of the statements.	**strongly disagree**	**disagree**	**slightly disagree**	**undecided**	**slightly agree**	**agree**	**strongly agree**
Items of Affective Commitment Scale withheld due to copyright agreement.							

(continued…)

Please ensure that you place a cross (x) in your selected column next to *all of the words* listed below.		**Yes**	**No**	**?**
WORK ON PRESENT JOB Think of the work that you do at present. How well does each of the following words or phrases describe your work? Mark the relevant column with a cross (x); "Yes" if it describes your work "No" if it does not describe it "?" if you cannot decide	Items of the Job Descriptive Index withheld due to copyright agreement			
PRESENT PAY Think of the pay you get now. How well does each of the following words or phrases describe your present pay?				
OPPORTUNITIES FOR PROMOTION Think of the opportunities for promotion that you have now. How well does each of the following words or phrases describe you opportunities for promotion?				
SUPERVISION Think of your supervisor and the kind of supervision that you get on your job. How well does each of the following words or phrases describe your supervision?				
PEOPLE AT WORK Think of the majority of people that you work with now or the people you meet in connection with your work. How well does each of the following words or phrases describe these people?				
JOB IN GENERAL Think of your job in general. All in all, what is it like most of the time? For each of the following words or phrases, mark a cross (x) in the relevant column.				

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE. YOUR PARTICIPATION IS APPRECIATED.

APPENDIX D: ETHICS COMMITTEE APPLICATION FORM

ETHICS COMMITTEE APPLICATION FORM

UNIVERSITY OF STELLENBOSCH

SUBCOMMITTEE A

6 September 2004

Application to the University of Stellenbosch SUBCOMMITTEE A for clearance of new/revised research projects

This application must be typed or written in capitals

Name: Prof/Dr/Mr/Ms: Mrs Anne-Marguerite Oehley

Position/Professional Status: Student

Affiliation: Research Programmeme/Institution: MA Industrial Psychology

Telephone and extension no.

Fax:

Email address:

Title of research project: (Do not use abbreviations)

The development and evaluation of a partial Talent Management competency Model.

Where will the research be carried out?

Organisation name withheld.

All the following sections must be completed (Please tick all relevant boxes where applicable)

1. FUNDING OF THE RESEARCH: How will the research be funded?

No funding required

2. PURPOSE OF THE RESEARCH:

The organisation requiring this study is a large telecommunications company within the ICT sector. In order to remain the market leader in this field, their employees need to be competent to cope with continual specialized technological updates and a rapidly increasing customer base. Due to the organisation's heightened awareness of the limited availability of talented employees with ICT experience (especially engineers, IT personnel and senior management) an integrated Talent Management process has been introduced. The intention within this organisation is for the line managers to understand the impact of such a strategy and to take accountability for their involvement in the process.

In order to regulate and monitor the success of line managers in implementing the Talent Management process, the HR department would like to identify specifically why line managers differ in the extent to which they impact on their subordinates' turnover intentions. The intention of this study is to assist the organisation in identifying the Talent Management competencies required by line managers in order to result in certain measurable organisational outcomes such as reduced turnover.

3. AIMS AND OBJECTIVES OF THE RESEARCH: (Please list objectives)

1. To identify the Talent Management competencies required by line managers in order to successfully implement the organisation's Talent Management strategy.
2. To formulate these competencies within a model.
3. To determine what the desired Talent Management outcomes are and how these relate to line managers' Talent Management competencies

4. SUMMARY OF THE RESEARCH (give a brief outline of the research plan – not more than 200 words)

Data collected by means of the Talent Management competency 360° evaluation questionnaire will include scales of Talent Management competencies, Job Satisfaction, Affective Commitment and Intention to Quit. Various statistical techniques will analyze the questionnaire data and test the Talent Management competency model. ***Item analysis*** will be conducted on the items of each of the scales by means of the SPSS Reliability Procedure (SPSS 14.0, 2005) in order to identify and eliminate items not contributing to an internally consistent description of the latent variables measured by these scales. ***Factor Analysis,*** using Principal Factor analysis with Varimax rotation will be performed on each of the subscales, with the objective of confirming the uni-dimensionality of each sub-scale and to remove the items with insufficient factor loadings and where necessary, to split heterogeneous sub-scales into two or more homogenous subsets of item. Prior to the implementation of ***Structural Equation Modelling (SEM)*** an exercise of item parcelling, as well as tests for univariate and multivariate normality on both the measurement and structural models will be done. SEM using the LISREL will be used to analyze the questionnaire data and to test the model

5. NATURE AND REQUIREMENTS OF THE RESEARCH

5.1 How should the research be characterized (Please tick ALL appropriate boxes)

5.1.1 Personal and social information collected directly from participants/subjects	Yes
5.1.2 Participants/subjects to undergo physical examination	No
5.1.3 Participants/subjects to undergo psychometric testing	No
5.1.4 Identifiable information to be collected about people from available records	No
5.1.5 Anonymous information to be collected from available records	No
5.1.6 Literature, documents or archival material to be collected on individuals/groups	No

5.2 Participant/Subject Information Sheet attached? (for written and verbal consent)

YES	
NO	**x**

5.3 Informed Consent form attached? (for written consent)

YES	
NO	**x**

5.3.1 If informed consent is not necessary, please state why:

Participant and Informed consent forms not attached as consent details were included within the Talent Management 360° evaluation questionnaire. This was done in order to prevent the completion of lengthy forms which might have reduced the number of returns of the questionnaire. See attached.

NB: If a questionnaire, interview schedule or observation schedule/framework for ethnographic study will be used in the research, it must be attached. The application cannot be considered if these documents are not included.

5.4 Will you be using any of the above mentioned measurement instruments in the research?

YES	**x**
NO	

6 PARTICIPANTS/SUBJECTS IN THE STUDY

6.1 If humans are being studied, state where they are selected:

Organisation details withheld

6.2 Please mark the appropriate boxes:

Participants/subjects will:	YES	NO
be asked to volunteer	x	
be selected	x	

6.2.1 State how the participants/subjects will be selected, and/or who will be asked to volunteer:

The organisation's Leadership Development candidates were instructed that it was compulsory to complete this questionnaire as the 360° evaluation results would be used as part of their development programme. Completion of the questionnaire was voluntary for the final year candidates. Candidates could indicate on the questionnaire if they required that their specific data not be included in the research sample.

6.3 Are the participants/subjects subordinate to the person doing the recruiting?

YES	
NO	X

6.3.1 If yes, justify the selection of subordinate subjects:

Not applicable

6.4 Will control participants/subjects be used?

YES	
NO	x

6.4.1 If yes, explain how they will be selected:

Not applicable

6.5 What records, if any, will be used, and how will they be selected?

Not applicable

6.6 What is the age range of the participants/subjects in the study?

20 to 65 years

6.6.1 Was assent for guardians/consent for participants/subjects obtained?

YES	x
NO	

If YES, please attach the appropriate forms.

Consent request included within Talent Management 360° evaluation questionnaire. Attached.

6.6.2 If NO, please state why:

Not applicable

6.7 Will participation or non-participation disadvantage the participants/subjects in any way?

YES	
NO	**x**

6.7.1 If yes, explain in what way:

Not applicable

6.8 Will the research benefit the participants/subjects in any direct way?

YES	**x**
NO	

6.8.1 If yes, please explain in what way:

All participants will receive a 360° evaluation feedback report for developmental purposes.

7. PROCEDURES

7.1 <u>Mark research procedure(s) that will be used</u>:

Literature	**x**
Documentary	
Personal records	
Interviews	
Survey	**x**
Participant observation	
Other (please specify)	

7.2 How will the data be stored?

Hard copy and electronic format

7.3 If an interview form/schedule; questionnaire or observation schedule/framework will be used, is it attached?

YES	**x**
NO	

7.4 Risks of the procedure(s): Participants/subjects will/may suffer:

No risk	Yes
Discomfort	No
Pain	No
Possible complications	No
Persecution	No
Stigmatisation	No
Negative labeling	No
Other (please specify): None	

7.4.1 If you have checked any of the above except "no risk", please provide details:

Not applicable

8. RESEARCH PERIOD

(a) When will the research commence:

July 2006

(b) Over what approximate time period will the research be conducted:

July 2006 to December 2006

9. GENERAL

9.1 Has permission of relevant authority/ies been obtained?

YES	**x**
NO	

9.1.1 If yes, state name/s of authority/ies:

Organisational details withheld

9.2 Confidentiality: How will confidentiality be maintained to ensure that participants/subjects/patients/controls are not identifiable to persons not involved in the research:

Survey questionnaires will be returned directly to the researcher. Only composite data will be reported in the thesis.

9.3 Results: To whom will results be made available, and how will the findings be reported to the research participants?

A 360° evaluation feedback report (see attached) will be returned to each candidate. Verbal feedback sessions will be conducted by the Manager of the Leadership Development programme.

9.4 There will be financial costs to:

participant/subject	No
institution	No
Other (please specify): None	

9.4.1 Explain any box marked YES:

Not applicable

9.5 Research proposal/protocol attached:

YES	
NO	**x**

9.6 Any other information which may be of value to the Committee should be provided here:

Not applicable

Date: **Applicant's signature:**

Who will supervise the project?

Name: Prof. C.C Theron .

Programmeme/Institution/Department: Industrial Psychology

Date: **Signature:**

Director/Head/Research Coordinator of Department/Institute in which study is conducted:

Name:

Date:

Signature:

APPENDIX E:
EMAIL TO CANDIDATES PRIOR TO DISTRIBUTION OF TALENT MANAGEMENT 360°EVALUATION QUESTIONNAIRE

Email to candidates

Within the next week, you will receive details regarding a 360° evaluation process for [details withheld] candidates. This will provide you with a valuable opportunity to be rated by your colleagues and to use this feedback for development purposes.

The theme for this 360° evaluation is Talent Management. [Organisation details withheld] operates within an environment characterized by the fast conversion of technologies and competes in a limited market for the best available talent. Without the best available talent, [organisation details withheld] would not be able to operate.

Line managers play a pivotal role in ensuring that [organisation details withheld] retains and develops our valued employees. This 360° evaluation process will allow you to gain feedback on your various Talent Management competencies from your superiors, peers and direct reports. This information can then be used to build on your leadership skills for future development.

The 360° evaluation will be conducted by an independent consultant and will be a quick and easy process to follow. You will also be provided with a contact email address for any queries.

We look forward to sharing the results of this process with you.

Kind Regards
[Name withheld; HRD department].