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"Exploring the latent structure of IT employees' intention to resign in South Africa".

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A research project submitted to the Gordon Institute of Business Science, University of Pretoria, in partial fulfilment of the requirements for the degree of Master of Business Administration.

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ABSTRACT

One of the major challenges facing South African IT organisations today is the dramatic shortage of IT professionals. Both literature and business sentiment have indicated that employee turnover within the IT sector is on a continually rising trend. The ramifications of these high turnover rates translate into exorbitant direct and indirect costs to organisations. The purpose of this research was to identify the factors pertaining to the underlying structure of the turnover intention of these employees. A deeper understanding of these drivers may possibly enable management to reduce the turnover intention of employees within their organisations.

A quantitative, multi-disciplinary research approach, focussing on the antecedents of turnover intention and the three systemic levels of organisational behaviour (micro, meso and macro) was used to operationalise the main research construct of this study. Data was collected by means of an anonymous self-administered web-based survey. A sample of 188 completed questionnaires was collected using a snowball sampling technique from the population of employees in the IT industry in South Africa. A statistical data reduction method, exploratory factor analysis, was conducted on the dataset to determine the underlying nature of the construct, IT employees' perceived intention to resign from employment.

After an appropriate number of factor analytic rounds, a robust 4-factor model of the data set was established. The results indicated that the factor, *Personal Enrichment from Management Support*, possibly plays the most significant role in understanding, monitoring, and managing IT employees' perceived intention to resign from employment. The study provided support that monetary factors had the most significant influence in an employee's decision to join an organisation; however, non-monetary benefits, such as job satisfaction and skills development, were found to be more effective in retaining employees. The practical implications uncovered from this study will enable management to gain further insight into understanding the underlying factors and drivers of turnover intention and thereby minimise its impact on the organisation.

KEYWORDS

Turnover intention
Latent structure
Organisational Behaviour
Micro-level of analysis
Meso-level of analysis
Macro-level of analysis

DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

_____

Mark le Roux

11 November 2013

Date

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CHAPTER 1

INTRODUCTION TO THE RESEARCH PROBLEM

1.1 Introduction

The aim of this research was to determine the latent structure of employees' perceived turnover intention in the Information Technology (IT) industry. Moreover, the study revealed three constructs of organisational behaviour that clearly described the core behavioural scales of the data set. The research was guided by a non-exhaustive study of the relevant literature.

1.2 Research problem

Despite a plethora of studies that have been undertaken in the field of turnover intention within differing working sectors, a generic model has not yet been developed that can be used to understand the latent nature of the turnover issues that are experienced across businesses. In fact, literature and business sentiment have indicated that turnover within the IT sector is on a continually rising trend (Dubie, 2009; Gaylard, Sutherland & Viedge, 2005; Mohlala, Goldman & Goosen, 2012). The dramatic shortage of these qualified professionals remains one of the major challenges facing IT organisations today and highlights the importance of managing retention in this area (Gaylard et al., 2005; Harris, 2011; Mohlala et al., 2012; Stones, 2012).

The ramifications of these high attrition rates lead to the loss of institutional knowledge (Gaylard et al., 2005) as well as the exorbitant costs of training and developing suitable replacements (Grobler & de Bruyn, 2011; Surmacz, 2004). Nujjoo and Meyer (2012) estimated that the total cost of a discharged employee amounts to a minimum of one year's pay and benefits, as well as a loss of valuable intellectual capital and consequently a firm's competitive advantage.

A further cost involved in losing an employee to the competition is the time taken to source experienced personnel that match ambitions, character traits and personalities with that of the organisation (McDermott, 2010; Scorce, 2008). Time taken to train and develop the replacements to the same level of productivity as the former is also costly.

A general characteristic of IT workers and other staff in technologically advanced industries is their desire for education and further training (Scorce, 2008). Research suggests that on-going training and development being provided for IT staff results in a reduced turnover rate (Coetzee & Gunz, 2012). According to Nujjoo and Meyer (2012), and Samuel and Chipunza (2009) employees that are intrinsically motivated by means of challenging and interesting work, and those allowed the freedom for innovative thinking, are more committed to an organisation and therefore less likely to quit. However, staff turnover studies conclude that employees want to capitalise on their skills and knowledge, and will thus choose to move to different companies to accelerate their learning and perceived career paths. This results in skills shortages within an organisation and proves extremely costly to the organisation.

The aforementioned discussion provides a number of reasons why individuals may choose to leave employment in the IT industry; however, there are also differing techniques that employers can use in an attempt to retain these knowledge workers. The success of this retention through appropriate reward systems would result in enterprises gaining a unique competitive advantage. The retention of these workers will also result in the avoidance of unnecessary costs and expenditures, and will be beneficial to companies given the current challenging economic climate.

1.2.1 The problem of employee turnover

Mobley's (1977) seminal study identified employee turnover as an employee vacating a position of engagement within a company, which involved a complete termination of the employee-employer relationship. Work engagement, as characterised by Schaufeli and Bakker (2003), is a "high level of energy and strong identification within one's work" (p. 5).

Turnover can generally be classified into two categories; voluntary and involuntary turnover (Hom, Mitchell, Lee, & Griffeth, 2012; Wanous, 1979; Yang, Wan, & Fu, 2012). Voluntary turnover involves employees who end the employer-employee

relationship of their own accord in the form of resignation owing to factors such as pay, benefits and the working environment (Wanous, 1979; Yang et al., 2012). Involuntary turnover involves employees that are forced to leave by the employer. Examples are the dismissal of the employee or termination of services after a severance pay out (Yang et al., 2012).

Both the business environment and prevailing conditions at the workplace can have a severe effect on employee performance and consequently on employee retention efforts. Retention may be defined as “a systematic effort by employers to create and foster an environment that encourages current employees to remain employed by having policies and practices in place that address their diverse needs” (Ramanaiah & Lavanya, 2011, p. 53). In addition, business commitment to employee retention is contemporaneously related to employee engagement. Wellins and Concelman (2005) posited that employee engagement be considered “an amalgamation of commitment, loyalty, productivity and ownership” (p. 1).

1.2.2 Framing the problem within organisational behaviour

Organisational Behaviour (OB) is the study of the determinants of behaviour on three levels within organisations which consider the impact that individuals, groups and structure have on the organisations performance and effectiveness (Wagner & Hollenbeck, 2010; Robbins, Judge, Odendaal, & Roodt, 2009). The three levels of organisational behaviour used to examine human resource issues from multiple viewpoints are the micro-level, meso-level and macro-level of analyses. The study of micro-organisational behaviour is concerned mainly with the behaviour of individuals, the meso-organisation is a middle ground which bridges the micro and macro subfields and the macro-organisation focuses on understanding phenomena of human behaviour within the entire organisation (House, Rousseau, & Thomas-Hunt, 1995; Wagner & Hollenbeck, 2010; Robbins et al., 2009; Rousseau, 2011).

Many studies have been conducted on organisational behaviour (Staw, 1991; Rousseau, 2011; Pfeffer, 1991); however, few studies have been developed in terms of identifying the turnover intention of IT employees as a result of the attributes defined at these three systemic levels.

1.3 Research objectives

The primary aim of the research study was to explore the underlying latent structure of the construct, *South African IT employees' perceptions of intention to resign*, and its subsequent impact on employee behaviour using an organisational behaviour framework. This was achieved by an elucidation of the following core concepts sourced from the literature:

- Personal growth and employability;
- Job satisfaction;
- Skills development and training;
- Remuneration and reward;
- Group dynamics and team work;
- Organisational design and flexibility;
- Recognition and motivation;
- Feedback and communication;
- Organisational environment, culture and policies.

The study also attempted to theorise about the impact that various organisational phenomena may have on IT employees' behaviour, performance, and ultimately, turnover. To fulfil the research aims of the study, there was a need to clarify a definition of employee turnover. Although definitions within the present literature proved to be relatively elusive due to the plethora of available turnover research in various industries; employee turnover as defined by Mobley (1977) is the vacating of a position of engagement within a company, generally involving a complete termination of the employee-employer relationship.

1.4 The need for the research

Research suggests that multidimensional Human Resource (HR) practices are needed to understand employees' turnover intentions, specifically for IT professionals (SamGnanakkan, 2010). Much of the conclusions drawn are that compensation and training has a significant direct effect on turn over intention, and that the turnover process is both a cognitive and behavioural phenomenon (SamGnanakkan, 2010). Therefore, an exploration of IT employees' perceptions regarding their intention to leave the work environment is an important step in gaining a deeper understanding of employee behaviour.

Irrespective of the accepted view that different employees are motivated by different retention variables, the literature consistently proposes a number of key areas as being fundamental to employee retention. These are: job satisfaction, financial reward, employability and personal growth, the job itself, the employee, relationship with and support received from management, work life policies and the organisational culture and environment (Gaylard et al., 2005). These factors show that there is a specific need to explore what influence exists between organisational commitment and high technology employee retention (Coetzee & Gunz, 2012; Dockel, Basson, & Coetzee, 2006).

1.5 Conclusion

The aforementioned discussion contains a non-exhaustive listing of some of the issues faced by organisations in retaining IT professionals. The study and understanding of these factors could aid employers in the IT industry in reducing the high attrition rates and its associated direct and indirect costs (Grobler & de Bruyn, 2011; Dockel et al., 2006; Gaylard et al., 2005) resulting from the turnover experienced within their company.

Nonetheless, the literature reveals that there is a need to operationalise the construct, IT employees' perception of intention to leave an organisation from the psychological context of the worker. The main research construct was therefore based on micro, meso and macro level of analyses using theory from an organisational behaviour and industrial psychology background. The results of an exploratory factor analysis were used to gauge the true underlying nature of the construct. The discussion clearly reveals a gap in the present knowledge in terms of quantitatively understanding the phenomena from such a context.

CHAPTER 2

THEORY BASE AND LITERATURE REVIEW

2.1 Introduction

The previous chapter discussed the need to determine IT employees' perception of intention to leave an organisation based on the understanding of the impact of factors from a psychological and organisational behaviour perspective. In this chapter, existing literature and previous studies will be used to guide the research aims of this study. The literature reviewed in this section is therefore based on both the framework of organisational behaviour, complimented by discussion of the antecedents of turnover intention and the development of the constructs of the factors pertinent to turnover intention of employees within the IT industry.

2.2 Organisational behaviour

Research in organisational behaviour dates back to the late 1940's. Over the years it has developed into three distinct subfields; micro-organisational behaviour, meso-organisational behaviour and macro-organisational behaviour. According to Martins and Meyer (2012), there are many factors which influence an organisation and management need to be responsive to these aspects in order to ensure the long-term effectiveness of the organisation. It is equally important for the organisation to respond to the needs of its customers, deal with legal and political constraints, and respond to economic and technological changes to ensure organisational effectiveness (Robbins et al., 2009).

Following that organisational behaviour is primarily positioned in the employment context, the philosophy deals with behavioural patterns related to work, such as absenteeism, employment turnover, productivity, performance and management (Krackhardt, Mckenna, Porter, & Steers, 1981; Martins & Meyer, 2012). The present study therefore focused primarily on employment turnover; however the other aspects of organisational behaviour were not discounted in determining the turnover intention of employees. The subfields of organisational behaviour are summarised in Table 1.

Table 1: Summary of the subfields of organisational behaviour

Subfield	Focus	Origins
Micro level of analysis	Individual	Experimental, clinical and industrial psychology
Meso level of analysis	Group	Communication, social psychology, and interactionist sociology, plus the origins of the micro and macro subfields
Macro level of analysis	Organisation	Sociology, political science, anthropology, and economics

Source: Adapted from Wagner and Hollenbeck (2010)

2.2.1 The micro-level of analysis (individual)

Micro-organisational theory and research concerns the behaviour and attributes of individuals in organisations (House et al., 1995; Wagner & Hollenbeck, 2010). Micro-organisational theory was one of the first elements identified in organisational behavioural studies and consisted of three subfields of psychology (Table 1), namely, experimental psychology, clinical psychology and industrial psychology (House et al., 1995; Rothmann & Cilliers, 2007; Wagner & Hollenbeck, 2010).

Experimental Psychology is concerned with the study of human behaviour related to learning, motivation, perception and stress (Houkes, Janssen, de Jonge, & Bakker, 2003; Rothmann & Cilliers, 2007; Wagner & Hollenbeck, 2010). Clinical psychology studies the nuances of personality and human development (Wagner & Hollenbeck, 2010), and Industrial psychology generally incorporates theories of employee selection, workplace attitudes, and performance assessment (House et al., 1995; Robbins et al., 2009; Wagner & Hollenbeck, 2010).

In relation to the aforementioned core organisational behaviour and industrial psychology concepts, the purpose of the study of micro-organisational behaviour within the present research context was to identify and explain the various components that could influence an employee's decision or perception of intention to leave an organisation. House et al. (1995) furthermore, have argued that psychological theories must be linked to organisational components in order to explain behavioural patterns that take place in the workplace. With this in mind, the present research context is therefore based on the exploration of IT employees' perception to leave employment from a systemic paradigm. An understanding of the three subfields of psychology (experimental, clinical and industrial) at an individual level was used to guide the developmental framework of the first component (micro-level) of the research survey.

2.2.2 The macro-level of analysis (organisation)

Macro-organisational theory and research focuses on the impersonal aspects of the organisation, such as the structure and culture of the organisation (House et al., 1995). Macro-organisational behaviour can be traced back to four disciplines (Table 1); Sociology, Political Science, Anthropology and Economics (Klein, Tosi, & Cannella, 1999; Wagner & Hollenbeck, 2010). These disciplines largely deal with the studies of people in relation to their social environment and culture. A non-exhaustive list of items relating to these disciplines include social status, institutional relations, power, conflict, bargaining, cultural influence and competition (House et al., 1995; Robbins et al., 2009; Wagner & Hollenbeck, 2010).

The understanding and explanation of the organisation at a macro level was also used to guide the exploration of turnover intention of IT employees from the broader systemic viewpoint. Furthermore, this component of analysis clearly addresses concerns about the organisational culture, environment and structure which are influential in decision making of whether to stay with, or leave employment at an organisation (Olckers & Du Plessis, 2012).

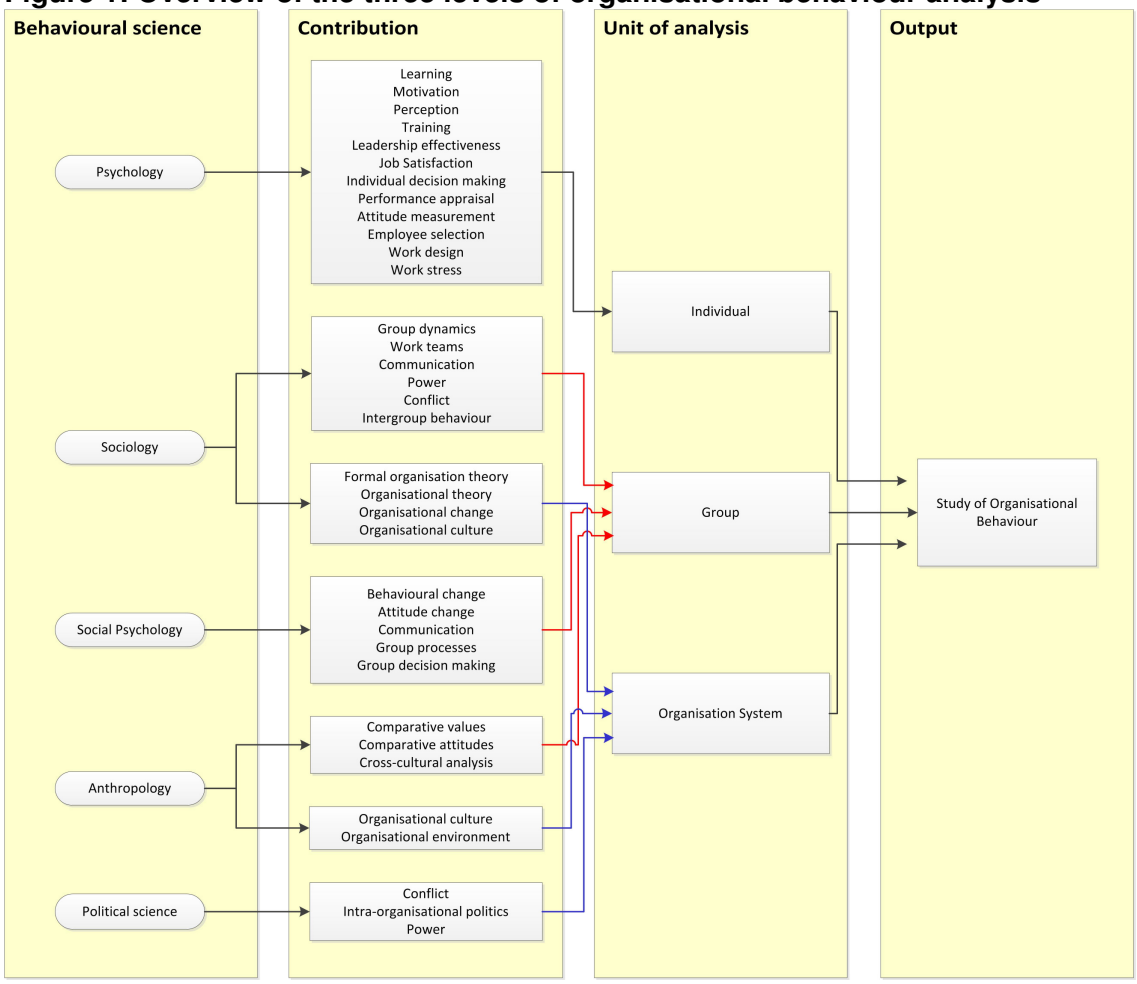
2.2.3 The meso-level of analysis (group)

The meso paradigm described by House et al. (1995) integrates the micro and macro organisational behavioural subfields. As a result, meso theory research involves the simultaneous study of individual and organisational behavioural processes (Olckers & Du Plessis, 2012; Wagner & Hollenbeck, 2010). Because it has been suggested that there is some difficulty in treating separately the micro and macro behavioural characteristics (House et al., 1995; Staw, 1991), analysis of the group dimension of IT employees' intention to leave employment was considered. Furthermore, quantitative research in similar areas has found that macro theories alone do not provide sufficient explanatory theories about human process (Coetzee & Gunz, 2012). Therefore, micro variables were integrated into macro theories to fully account for organisational effectiveness. This then revealed important information on subjects' perceptions which were further used to explore the construct.

Following the integration of the micro and macro theory, the main focus of meso theory was to gain a deeper understanding of the behaviours of people working together in teams and groups with subsequent turnover intention (Bertelli, 2007; Houkes, Janssen, de Jonge, & Bakker, 2003; Wagner & Hollenbeck, 2010). For instance, a non-exhaustive listing of the components identified under meso theory generally consists of group dynamics, work teams, communication, conflict, cohesiveness and decision making (House et al., 1995; Robbins et al., 2009; Wagner & Hollenbeck, 2010).

Figure 1 provides a synopsis of disciplines that contribute to the organisational behavioural field of study.

Figure 1: Overview of the three levels of organisational behaviour analysis



Source: Robbins et al. (2009).

2.3 Antecedents of turnover intention

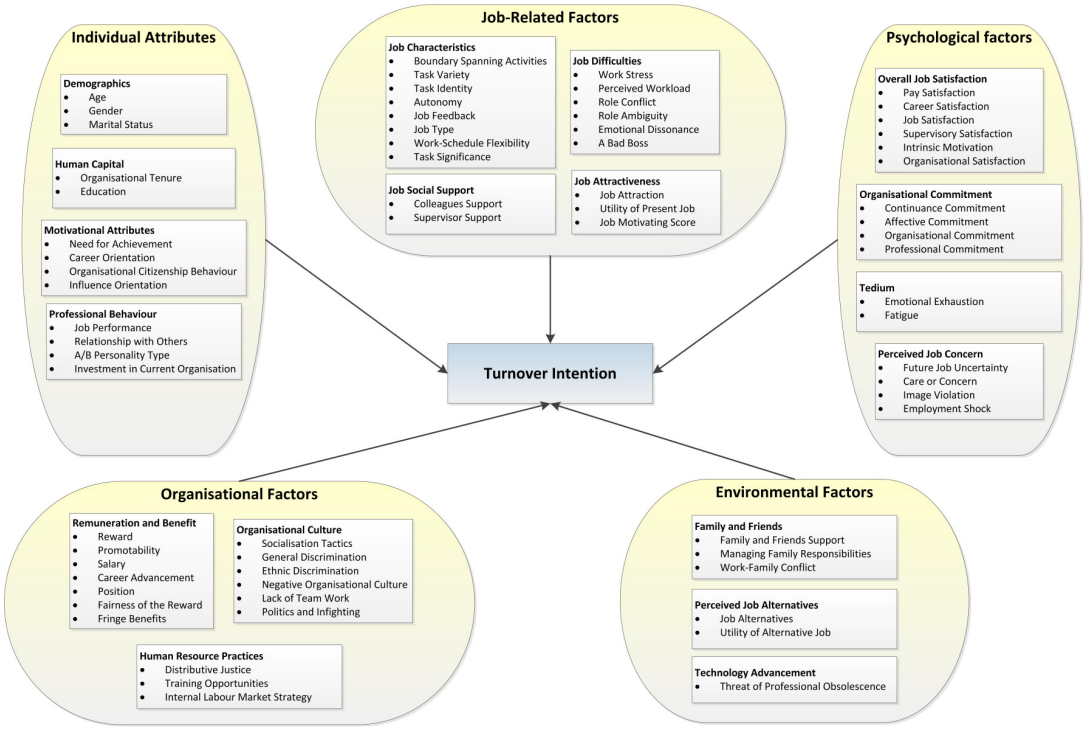
Despite a plethora of studies that have been undertaken in the field of turnover intention, there is seldom a precise definition of the concept identified in literature (Bertelli, 2007; Bothma & Roodt, 2013; du Plooy & Roodt, 2010; Tett & Meyer, 1993). Nonetheless, Lacity, Iyer, and Rudramuniyaiah (2008) defined turnover intention as the "extent to which an employee plans to leave the organisation" (p.228). However, Tett and Meyer (1993) defined it more appropriately as a conscious and deliberate wilfulness to leave the organisation.

Researchers have attempted to understand the determinants of people's intention to resign by investigating the antecedents of employee's turnover intention (Ongori, 2007). Although there has been little consistency in the findings due to the diversity of employees in the workplace, Ghapanchi and Aurum (2011) suggest that analysis of IT employees' intention to resign from the organisation can be modelled by an arrangement of specific determinants.

A classification of 70 conceptually distinct IT turnover drivers by Ghapanchi and Aurum (2011) were embedded within five categories, consisting of individual, organisational, job related, psychological and environmental categories (Figure 2). In order to achieve the research objectives it was accepted that an exploration of IT employees' perceived intention to vacate their employment may be analysed at three distinct levels (individual, group, organisation), as discussed earlier.

In the present study it is shown that although Ghapanchi and Aurum (2011) clearly indicated the existence of 70 turnover drivers (Figure 2), the evaluation and exploration of the main construct was clearer when positioned within the context of the main organisational behaviour theories (House et al., 1995; Robbins et al., 2009; Wagner & Hollenbeck, 2010).

Figure 2: Taxonomy for antecedents of IT turnover intention



Source: Adapted from Ghapanchi and Aurum (2011).

Owing to the complexity of the understanding of turnover intention, scholars have attempted to identify the most important variables for retaining IT employees in order to mitigate the consequences faced by companies caused by employee turnover (Bothma & Roodt, 2012; Dockel et al., 2006; Lacity et al., 2008). Gaylard et al. (2005) posit that three latent factors were significantly responsible for the retention of IT workers. These were subsequently labelled: equity and enablement for high performance, a liberated and empowered culture, and an effective and interactive communication channel between management and employees.

The more recent similar studies by Ghapanchi and Aurum (2011) tend to support such a three-factor latent structure. These and other similar studies within the literature demonstrate that it is plausible to develop a model of IT employees' intention to resign from an organisation at three levels of analysis, such as a micro, meso, and macro layer.

2.4 Retention

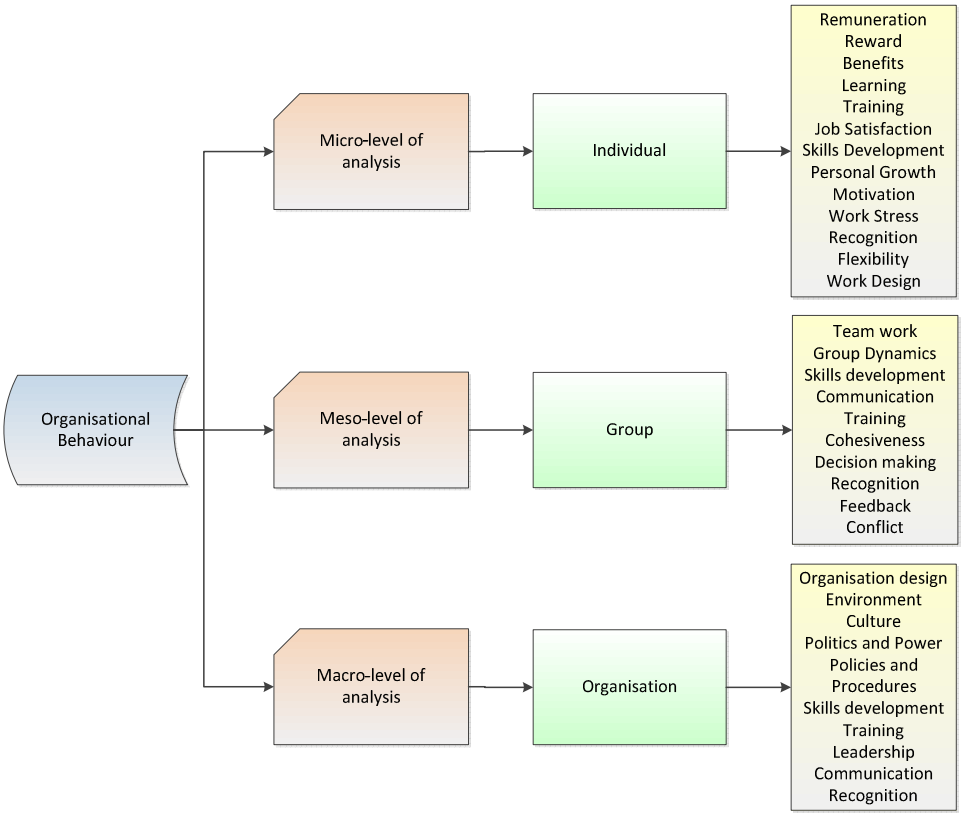
Retention factors are those that facilitate an employee's decisions to leave or remain within an organisation depending on their priorities (van Dyk & Coetzee, 2012). Studies suggest that the critical areas fundamental to retention are clearly integrated at three levels of industrial psychology and organisational behavioural phenomena (Dockel et al., 2006; Lockwood & Ansari, 1999; Gaylard et al., 2005; Ongori, 2007; van Dyk & Coetzee, 2012).

According to the study conducted by Lockwood and Ansari (1999), strategies such as raising salaries, offering stay bonuses, career advancements, promotions, training, personal recognition and time off were found to be successful in retaining employees that wanted to resign. Additionally, Luftman and Rajkumar (2007) felt it was important to focus on key management aspects to increase employee productivity and in turn reduce turnover. Such aspects included maintaining open and honest communication channels, providing good worker supervision, maintaining trust among co-workers, enabling a challenging work experience, providing opportunities for advancement and encouraging a work-life balance. It is fundamental to ensure that employees maintain this work-life balance as scales heavily weighted towards work lead the employee to job dissatisfaction, exhaustion and resentment towards the organisation (Trauth, Quesenberry, & Huang, 2009).

Similarly, Martins and Meyer (2012) explored the factors that influenced knowledge retention and found nine key components of which knowledge behaviour, strategy, implementation and leadership proved to be the most important. It is thus evident that these components are complimentarily construed from the OB model (Figure 1). Exploring the interaction of these components was used to then guide the present study in operationalising the main research construct in devising the survey instrument.

Considering the framework developed by Ghapanchi and Aurum (2011), which largely incorporates the aspects and factors of the organisational behaviour model, and the framework developed by Wagner and Hollenbeck (2010), the proposed study attempts to synthesise the main concepts in order to establish a hypothesised model of South African IT workers' turnover intention. After a substantive review of the relevant literature, the items deemed most important in the operationalisation of the main research construct were selected in order to arrive at the desired framework (Figure 3).

Figure 3: IT employees' perceived intention to leave the workplace



Source: Author defined: Adapted from Ghapanchi & Aurum (2011); Wagner & Hollenbeck (2010); Gaylard et al. (2005).

2.5 Costs of turnover

Employee turnover has significant cost consequences for any organisation (du Plooy & Roodt, 2010; Gaylard et al., 2005; Schaufeli & Bakker, 2003). The literature clearly identifies both direct and indirect costs incurred by an organisation as a result of the exited employee. The direct costs consist of the actual money spent, such as the cost of hiring and training of a suitable replacement, whereas the indirect costs comprise of intangible costs such as the loss of institutional knowledge, lower office morale and decreased productivity experienced by the organisation (Grobler & de Bruyn, 2011; Dockel et al., 2006; Gaylard et al., 2005; Martins & Meyer, 2012; Samuel & Chipunza, 2009). In fact, it is estimated that the total cost of a discharged employee amounts to a minimum of one year's pay and benefits. Evidently, employee turnover disrupts organisational functioning and service delivery, affecting a company's competitive advantage (Bothma & Roodt, 2013).

The exorbitant costs incurred and the unnecessary time spent in seeking and finding suitable replacements, shows that it would be largely beneficial for employers to understand the underlying factors of turnover intention in order to mitigate future employee turnover. A gap in the available literature based on the topic of interest was subsequently identified.

2.6 Personal growth and employability

Due to the business demands of shareholders and the challenging economic climate, employers have continually concentrated on cost cutting, outsourcing and downsizing initiatives to preserve their profit of their companies (Gaylard et al., 2005). Such actions have resulted in the significant erosion of employee loyalty and created the need for career self-preservation for the employees (Sutherland & Jordaan, 2004). Mohlala et al. (2012) define these individuals as 'free agents' as they have become consultants or self-employed in order to gain more control over their future and not be the result of these cost cutting effects. This mobility results in a subsequent increase in remuneration in the short to medium term for these employees, thereby acting as a further incentive for them to leave an organisation (Moore & Bussin, 2012; Samuel & Chipunza, 2009).

In fact, due to this career self-preservation, Sutherland and Jordaan (2004), and more recently Coetzee and Gunz (2012) discovered that one of the core characteristics of knowledge workers is their high level of mobility putting organisations at risk in both financial and non-financial terms. The further understanding of the level of self-preservation inherent within these IT workers will enable enterprises to potentially reduce the extent of these employees' mobility, ultimately reducing employee turnover.

2.7 Employee turnover

There are possibly several reasons why individuals decide to resign from organisations. A fundamental listing of these issues includes aspects related to job-stress, boredom, lack of training, personality clashes, lack of commitment in the organisation, job dissatisfaction and exhaustion (Gaylard et al., 2005; Ongori, 2007, Scorce, 2008; van der Merwe, Basson, & Coetzee, 2009).

2.7.1 Training and development

Westlund and Hannon (2008) posit that training and the opportunity to learn new skills are highly valued by employees; however, Mohlala et al. (2012) propose a philosophical dilemma as to whether employee skills shortages experienced in industry are a genuine problem, or the result of a lack of employee training and development, because organisations are not willing to invest the necessary time and money into training employees.

One possible reason for such employer behaviour is the rationale that highly trained employees are more employable and thus more willing to leave their position when presented with alternative, favourable opportunities. This presents a conundrum to the employer whether or not to train and up skill an employee. Some firms exploit this problem by exposing the employee to training but simultaneously creating a tie in or work back period in order to realise a return on the time and value of training spent on the employee.

2.7.2 Remuneration and reward

There have been numerous studies with regards to the various remuneration and benefits that can be offered to employees as part of a retention mechanism and in order to maintain their interest in a company (Moore & Bussin, 2012; Nujjoo & Meyer, 2012; Sutherland & Jordaan, 2004; Weibel, Rost, & Osterloh, 2009; Yang, et al., 2012). These alone, however, are not sufficient to retain employees in the IT sector.

Rewards can be defined as legal obligations in the form of monetary and non-monetary mechanisms to compensate staff in the employment relationship (Nujjoo & Meyer, 2012; Sutherland & Jordaan, 2004). Organisations often focus on rewards management as their main strategy to attract, retain and incentivise staff, in turn creating a motivated and committed workforce (Yang, et al., 2012).

Monetary rewards are classified as extrinsic rewards by Porter and Lawler (1968), and generally refer to tangible objects, such as pay, bonuses, promotions, awards, fringe benefits, and other formal recognitions as a result of performing the job (Nujjoo & Meyer, 2012). Non-monetary reward mechanisms, on the other hand, are non-tangible in nature, and thus include praise or various other forms of personal recognitions (Nujjoo & Meyer, 2012). These rewards are described as intrinsic

rewards, and incorporate measures such as the satisfaction that a person derives from performing a job (Porter & Lawler, 1968).

Weibel et al. (2009) found empirical evidence to conclude that individuals perform best when the incentive system links rewards as closely as possible to performance. However, it is suggested that employees are unlikely to remain in the employment relationship when incentivised by monetary benefits alone (Nujjoo & Meyer, 2012). For instance, Dewhurst, Guthridge, and Mohr (2009) and Sutherland and Jordaan (2004) determined that monetary rewards in most circumstances are no longer the strongest motivating force behind retaining top talent. In fact, a study conducted by Lockwood and Ansari (1999) identified that money was the single most important factor in a decision to join an organisation but an attractive base salary alone was not enough to retain the employee.

It appears from these studies that nonfinancial motivators are more effective in building long-term employee engagement rather than financial motivators. In fact, Pouliakas (2010) contends that wrong monetary incentives may incite dysfunctional behavioural responses by employees and possibly result in a detrimental effect on employee morale and job security.

According to Moore and Bussin (2012), Lockwood and Ansari (1999) and van der Merwe, et al. (2009), there are conflicting views as to whether employees from various generations and socio demographic groups actually desire different rewards and benefits in terms of their preferences of incentives and retention mechanisms. This raises a question in the literature as to which other types of reward mechanisms could be effective in reducing the risk and frequency of staff turnover of employees classified in different generational categories.

2.7.3 Job satisfaction

Job satisfaction is defined in terms of an affective or emotional reaction, and the attitudes that employees have towards their jobs (Castro & Martins, 2010; Cranny, Smith, & Stone, 1992; Weiss, 2002). Schneider and Snyder (1975) more aptly defined job satisfaction as a personal evaluation of the current conditions of the job or the outcomes that arise as a result of having a job (Castro & Martins, 2010). Tietjen and Myers (1998) as cited in Westlund and Hannon (2008) posit that instilling satisfaction within workers is a crucial task of management as this creates

confidence, loyalty, and improves quality in the output of the employed. Hom and Griffeth (1991), and Hom and Kinicki (2001) conclude that job dissatisfaction eventually progresses into turnover.

According to Bothma and Roodt (2012), the decision to leave an organisation is influenced by many personal and contextual factors such as employability, job demands and labour market conditions. Furthermore, Bester (2012) found that fewer resources used to meet job demands, stimulates exhaustion, and in turn, causes resentment and ultimately employee turnover (Bothma & Roodt, 2012; Schaufeli & Bakker, 2004). This poses a further question in the literature as to the level of job satisfaction that is to be maintained in order to reduce the turnover intention of employees within the organisation.

2.7.4 Organisational design and flexibility

Organisational climate has significant implications for understanding human behaviour in organisations (Castro & Martins, 2010), and is defined as the shared perceptions, feelings and attitudes that employees have about the fundamental elements of the organisation (Castro & Martins, 2010). Schein (2004) as cited in Trauth et al. (2009) defines organisational culture as a "pattern of shared basic assumptions that is considered valid and used as a mechanism to perceive, think and feel about organisational problems" (p. 479).

Studies by Castro and Martins (2010), postulate that there is a positive relationship between organisational climate and job satisfaction. Generally, if employees are settled and satisfied within an organisations culture and climate, they are less likely to leave an organisation. A result of this commitment is positive attitudes towards jobs and reduced intentions to leave employment (van Dyk & Coetzee, 2012). Furthermore, organisational instability has been shown to result in high turnover and high levels of inefficiency (Ongori, 2007).

It is evident that the organisational climate and culture plays a significant role in the decision of an employee to stay with or leave an organisation. The further satisfaction generated from a conducive working environment results in increased productivity of the individuals in the organisation and in turn a willingness to remain within a company. This poses a further question in the literature as to the extent to which organisational design and flexibility negates turnover intention of employees.

2.8 Demographics

2.8.1 Generations

The generational school of thought posits that human values and behavioural patterns are imprinted for life from major historical events (Codrington & Grant-Marshall, 2004; Giancola, 2006; Giancola, 2008; Moore & Bussin, 2012). Due to the influence of these defining historical moments, unique behavioural beliefs and attitudes are developed which resemble the individuals of that generation (Giancola, 2006).

Although many articles have been written on generational differences and categorisations, there is seldom any agreement on how a generation should be defined (Giancola, 2006; Giancola 2008). Some experts define generations according to shared formative experiences, where other schools of thought downplay these categorisations, and believe that factors such as stage of life, race, ethnicity and social class are more important in determining human behaviour patterns (Beekman, 2011; Codrington & Grant-Marshall, 2004; Giancola 2008; Moore & Bussin, 2012). Due to this controversy, it's difficult to pinpoint a generational category. This is depicted in Table 2, where it is evident that although the dates are similar, different time spans marked different generational periods for the four illustrated countries.

Table 2: Generation timeline in different countries

Generation	USA	Europe/UK	Japan	South Africa
GI's (Hero Generation)	1900 - 1923	1900 - 1918	1900 - 1925	1900 - 1920
Veterans	1924 – 1942	1919 – 1945	1926 – 1945	1921 – 1940
Baby Boomers	1943 – 1962	1946 – 1965	1946 – 1965	1941 – 1960
Generation X	1963 – 1983	1966 – 1984	1966 – 1985	1961 – 1980
Generation Y	1984 –	1985 –	1986 –	1981 – 2000

Source: Adapted from Codrington & Grant-Marshall (2004); Moore & Bussin (2012).

Although it is evident that an overlap occurs between the end of a generation and the start of a new generation, categorisations of generations (Generation X, Generation Y, Baby Boomers, Veterans and GI's), largely result in the defining of different personality characteristics, attitudes, perspectives, backgrounds, motivations and leadership roles pertinent to the individuals classified within these periods.

Table 3 illustrates these differences between the various generations, as well as the main personality themes of the different generational groups. For the purposes of this study, the generation, GI's (Hero Generation) was excluded as this generation no longer participates in the labour force.

Table 3: Generation classification

	Veterans (1925– 1942)	Baby Boomers (1943 - 1962)	Generation X (1963 -1982	Generation Y (1983 – 2000)
Defining Values and Characteristics	Reserved, conservative, hardworking, clean-living, gentlemanly, traditionalists, rules and order	Personal gratification, wellness, success, loyal, bossy, stylish, inquisitive, competitive, talkative	Balanced, self-reliance, pragmatism, individualistic, arrogant, risk-taking, question authority	Confident, independent, loyal, humour, tolerant, caring, honest, balanced, optimistic, clean-cut, technologically savvy, impatient
Attitude	Pay your due, work hard	If you have it, flash it	Whatever…enigmatic	Let's make the world a better place
Leadership	Formal, hierarchical, loyal, hardworking, low key, detail-orientated	Visionary, idealistic, workaholics, energetic, bossy, loud, results-driven, consensus	Caution, creative, realistic, low key, innovative, flexible, independent, adaptable, competence	Civil minded, visionary, confident, optimistic, moralistic, principled, values driven
Defining Events	Discover penicillin, Great Depression, World War ll, Pearl Harbour, Hiroshima,	Mau Mau revolt, Russia launched Sputnik, contraceptive pill, Nelson Mandela sentenced to life, cold war, assassinations, feminist movement, Soweto riots	Launched microchip, Watergate, right to abortion, test-tube baby, Margaret Thatcher – first female Prime Minister, Working moms, *Challenger,* latchkey kids, Berlin wall comes down, divorced parents, AIDS	Internet, virtual communities, 24/7 lifestyle, baggage free, Mandela released, Princess Diana dies, Dolly the clone sheep, Viagra, SMS, 9/11, Iraq war, e-mail spam increases
Outlook	Victorian	Optimistic	Sceptical	Opportunity
Work Ethic	Work hard because it is my duty, lifetime career. Work and life are separate entities	Driven, self-fulfilling, makes me feel important, job security and career. See job as expression of self-interests and path to fulfilment	Balance between personal and professional life, fund lifestyle, career rather than security. View work as temporary and are the first generation to live in an era without lifelong employment	Enjoy change, entrepreneurial, will help to change the world, parallel career. good at multitasking, willing to work wherever and whenever necessary
Success is a result of	Hard work	Political savvy, networking skills	Holding two jobs	High energy, fast thinking, quick learning
Money is for	Security, save for a rainy day, savers - rarely spend money	Enjoyment, owe the bank money	Survival, means to an end	Immediate gratification and to save the world
Education is	Lucky to have one – we'll do our very best	A birth right	I'll listen, but I can teach myself	There's more to school than memorising
Feedback	No news is good news	Regular feedback	Immediate feedback	Crave immediate feedback

Source: Adapted from Beekman (2011); Codrington & Grant-Marshall (2004); Moore & Bussin (2012); Giancola (2008).

It is generally assumed that different age groups respond differently to stimuli, based on generational or age differences (du Plooy & Roodt, 2013). Moore and Bussin (2012), conducted a study to obtain a better understanding of the reward preferences of different generations and concluded that generations do not display different reward preferences, but rather, different life cycle preferences. These findings support the research conducted by Giancola (2008), who also found that different generations do not prefer different rewards.

Although the previous findings suggest that different generations do not necessarily prefer different rewards, literature indicates that there is a significant relationship between different age groups and turnover intention. Du Plooy and Roodt (2013) conducted a study to explore the possible moderation effects of biographical and demographical variables on turnover intention, and found that age related negatively and significantly to an employee's intention to vacate employment. These findings were consistent with and supported previous findings of Cotton and Tuttle (1986).

It follows that contradicting research results exist for the relationship between demographical variables and turnover intention. A present gap in the literature therefore exists to determine the relationship between demographical variables and behaviour phenomena associated with leaving employment.

2.8.2 Gender

Much of the research on gender and IT assumes that all organisational factors affect females in the same ways (Trauth et al., 2009). Despite the fact that males and females share similar psychological structures and developmental processes, their spheres of work differ (Kroger, 1997; du Plooy & Roodt, 2013). It is further theorised that males and females differ in how they respond to stimuli which may lead to different withdrawal behaviour patterns (du Plooy & Roodt, 2013).

In addition, Trauth et al. (2009) show that three organisational factors affect female career development patterns, these three factors are work-life balance, organisational climate, and mentoring. Trauth et al. (2009) further assume that females are not all the same, and that that within-gender variation is expected to exist. Consequently, a gap in the knowledge base to determine whether different genders are motivated by different retention variables exists, thus providing an opportunity to develop a deeper understanding of gender relations and turnover intention among males and females in the IT industry.

2.9 Conclusion

The purpose of this chapter was to review the literature relating to the constructs of the factors pertinent to turnover intention of employees in the IT industry. The organisational behavioural aspects, antecedents of turnover intention, costs of turnover, employee turnover and demographics were discussed in this regard. Three subfields of psychology (experimental, clinical, and industrial) were used to guide the framework in order to conduct exploratory factor analysis to ascertain the latent structure of turnover intention of employees in the IT industry.

The IT worker is an individual who requires continuous up skilling and training to keep pace with a fast changing technological environment. Companies have recognised that the up skilling of these employees is an imperative retention mechanism (Olckers & Du Plessis, 2012), however, is at odds with the current thinking of the 'free agent' expression as these individuals are focused on career self-preservation. Consequently, businesses now contend with a serious global challenge, where on the one hand they recognise their increased dependence on the knowledge and skills of the right people, yet on the other hand, they can no longer rely on employee loyalty.

Furthermore, it appears that presenting employees with choices regarding their remuneration packages in the form of rewards promotes performance, job satisfaction and retention of the best people with critical skills thereby positively influencing the productivity and the organisational commitment (Moore & Bussin, 2012). From these conclusions, it follows that the flexible design used in the total reward models, explicitly structured to an individual's preferences and adaptive to organisational changes, result in critical levers to motivate, attract and retain talented employees (Van Zyl, 2010).

In addition, flexibility in remuneration creates a greater level of employee cohesion, resulting in an improved level of labour productivity (Nienaber, Bussin & Henn, 2009; Van Zyl, 2010). However, the available literature also suggests that non-financial motivators are more effective in building long-term employee engagement, and that incorrect monetary incentives could incite dysfunctional behaviour. This is apparent for different generational categorisations raising a question in the literature as to which other types of reward mechanisms could be effective in reducing the risk and frequency of staff turnover of the different employees.

The design of the main research construct, has only considered the most pertinent factors relative to IT employees intention to resign as identified by previous research, mainly from international organisations. The non-exhaustive nature of the literature review may result in not completely identifying and including all known factors of intention to resign, which could yield varying results. Nonetheless, after a thorough review of the knowledge-base, it was determined that the literature is relevant for the application of a study in the South African context. An understanding of the factors contributing to turnover intention could aid managers to curb employee turnover and consequently the financial and non-financial costs associated with the phenomenon.

In the next chapter, the research propositions and hypotheses were identified in order to explore the latent structure of turnover intention of employees in the IT industry and provide the reader with possible suggestions to retain these employees.

CHAPTER 3

RESEARCH PROPOSITIONS AND HYPOTHESES

3.1 Introduction

The previous chapter examined the literature with regards to the factors, constructs and underlying structure of turnover intention. This was developed from an organisational behaviour framework. The purpose of this chapter is to identify the research propositions and hypotheses in order to explore the present gaps found in the literature.

3.2 Research propositions

The primary aim of the study was to explore the underlying structure of South African IT employees' intention to resign from employment and its subsequent impact on employee behaviour.

The following propositions and hypotheses were therefore formulated to support the exploration of the research construct:

Proposition 1:

South African IT employees perceived intention to resign can be described by a latent factorial structure.

Proposition 2:

An employees' perceived intention to resign from employment is dependent on specific differences in demographics.

3.3 Research hypotheses

Further to the aforementioned research propositions, the following general hypotheses were then formulated to guide the secondary objectives of the study:

Hypothesis 1:

There is no difference in employees' perceived intention to resign from employment based on the grouping variable, 'generation'.

Hypothesis 2:

There are no significant differences between males' and females' intention to resign from employment.

3.4 Conclusion

The research hypotheses and propositions were developed to support the exploration of the research construct. The next chapter will provide an in-depth explanation of the research methodology used to conduct the study.

CHAPTER 4

RESEARCH METHODOLOGY AND DESIGN

4.1 Introduction

The previous chapters covered a detailed review of the literature, and the research propositions and hypotheses identified for this study. The purpose of this chapter is to provide an in-depth explanation of the research methodology, the design of the data collection instrument, the data collection process and the data analysis approach.

4.2 Research approach

A descriptive, quantitative, exploratory research approach was utilised to gather the data and interpret the results pertinent to this study. The latent factors of the research construct were then subsequently explored so as to gain a deeper understanding of the phenomena associated with retention of employees within the IT industry.

According to Saunders and Lewis (2012), and Zikmund, Babin, Carr and Griggin (2009) descriptive research is used to describe the characteristics of people, objects, groups, events, organisations, situations or environments, and involves the collection of measurable data of quantitative responses (Saunders & Lewis, 2012). Zikmund et al. (2009) aptly postulate that descriptive research tries to "paint a picture" of a given situation by addressing "*who, what, when, where,* and *how* questions" (p. 55).

Exploratory research can be quantitative or qualitative in design (Saunders & Lewis, 2012), and takes descriptive research a step further by "looking for an explanation behind a particular occurrence through the discovery of causal relationships between key variables" (p. 113). Exploratory research can be used to help identify a situation or problem, in order to explain the relationships between variables to form hypotheses that can be tested in subsequent research (Saunders & Lewis, 2012; Weiers, 2011; Zikmund et al., 2009).

The research tool used to gather the data for this study was a structured questionnaire which segmented the various demographic parts of the sample in order to enable an analysis of possible significant differences. A pilot study was conducted on a purposive sample of employees in the IT industry to refine the item pool of the questionnaire in order to achieve the final research goals.

4.3 Unit of analysis

According to Zikmund et al. (2009), the unit of analysis for a study indicates "what or who should provide the data and at what level of aggregation" (p. 119). This research study used a tripartite analysis of employees in the IT industry in South Africa, to determine the behavioural aspects of turnover intention at the individual (micro-level), group (meso-level) and the organisational (macro-level) structure.

4.4 Population, sampling method and size

The population of a study is the set of all possible elements that could theoretically be observed or measured (Weiers, 2011). This term is synonymous with the term "universe" (Weiers, 2011; Zikmund et al., 2009), and could be extended to entities such as people, groups, items and organisations (Oakshott, 2006). In order to make any generalisations about a population, a representative sample which is a small subset of the population (Fowler, 2009) needed to be studied.

The universe selected for this research consisted of IT personnel employed by organisations within the boundaries of South Africa. For the purpose of this study, IT employees were defined in accordance with Gaylard et al. (2005) as "those workers engaged in the creation or maintenance of any or all of the following: IT strategy; hardware systems; software systems; infrastructure; processes; or related business processes, employed either by IT companies or by IT departments of non-IT companies" (p. 87).

A non-probability sampling technique was used for the sample selection as a complete list of the population was un-obtainable (Saunders & Lewis, 2012). Because of this, a random selection could not take place and the chance of each member being selected was unknown (Saunders and Lewis, 2012; Weiers, 2011; Zikmund et al., 2009). According to Weiers (2011), non-probability sampling is "primarily used in

exploratory research studies where there is no intention of making statistical inferences from the sample to the population" (p. 120).

A variation of a snowball sampling technique (respondent driven sampling), was used to collect the data for the study. Snowball sampling is used where subsequent members are identified by previous members (Saunders & Lewis, 2012). Zikmund et al. (2009) identified reduced costs as being advantageous to snowball sampling methods. The disadvantage, however, being the possibility of bias entering into the study due to the similar nature of characteristics of previous respondents (Zikmund et al., 2009).

Due to the non-probability snowball sampling technique used to collect the data, it was very difficult to determine the response rate. Zikmund et al. (2009) defines the response rate as the number of questionnaires completed divided by the total number of eligible people requested to participate in the survey (Figure 4).

Figure 4: Response rate

$$\text{Response Rate} = \left[\frac{\text{Surveys Completed}}{\text{Number Sampled - Ineligible Elements}} \right] \times 100$$

Source: Adapted from Zikmund et al. (2009)

The estimation of the response rate for this study based on the calculation as per Figure 4, resulted in a rate of approximately 30%. Literature indicates that response rates based on online surveys are almost always lower that those based on paper surveys; furthermore, a satisfactory range for online surveys can range from 20% upwards (Nulty, 2008).

4.5 Data collection instrument

A survey research involves the structured collection of data from a "sizable population" (Saunders & Lewis, 2012, p. 115). According to Babbie (2010), surveys may be used for descriptive, explanatory and exploratory purposes. Babbie (2010) further posits that survey research is probably the "best method available to the social researcher" who is interested in collecting original data for a population that is too large to observe directly (p. 254)".

An anonymous self-administered questionnaire, measured on 7-point Likert-type items were used to collect data from respondents. The scale ranged from "completely disagree" to "completely agree". Because a Likert-type item consists of a scale with response levels arranged horizontally, anchored with consecutive integers, variability of underlying phenomena were considered ordinal in nature (Uebersax, 2013). The reason for selecting a 7-point Likert scale was to provide respondent neutrality, and furthermore permitted the testing of the hypotheses because statements reflected increasing levels of positive perception of the research construct.

A synopsis of the various statistical measurement scales, adapted from Zikmund et al. (2009) are listed below:

- *Nominal* – represent the most elementary level of measurement in which values are assigned to an object for identification or classification purposes only.
- *Ordinal* – allows things to be arranged in order based on how much of some concept they possess.
- *Interval* – have both nominal and ordinal properties, also capture differences in quantities of a concept from one observation to the next.
- *Ratio* – represent the highest form of measurement in that they have all the properties of interval scales with the additional attribute of representing absolute quantities.

4.6 Questionnaire design

The research questionnaire used in this study was adapted from the studies of (Gaylard et al., 2005; Lee & Maurer, 1999; Morrell, Loan-Clarke, Arnold, & Wilkinson, 2008; Nienaber et al., 2009; Swanepoel, 2008).

The questionnaire was designed with five sections and contained 60 statements (Appendix A). The first two sections addressed the demographics and work related factors of the respondents. The following three sections addressed the organisational behavioural constructs:

- Micro-level of analysis (Individual),
- Meso-level of analysis (group),
- Macro-level of analysis (organisation).

These three categories were then unpacked into the respective components of each section as discussed in the literature review (Figure 3).

The questions were designed in such a way so as to cover patterns of the turnover intentions of the respondents in terms of remuneration, reward, training, job satisfaction, skills development, personal growth, motivation and recognition. Similarly, specific areas addressed relating to the group level encompassed team work, group dynamics, skills development, communication, training, cohesiveness, decision making feedback and conflict. The items relating to the organisational level incorporated questions on organisations design and environment, culture, politics and power, policies and procedures, communication and leadership. The questionnaire also contained a series of open-ended questions which focussed on remuneration, motivation, retention and the respondent's current level of job satisfaction within his/her organisation.

4.6.1 Pilot design

In the initial planning phases of the questionnaire, two separate pilot questionnaires were designed and tested. These questionnaires were identical except for the fact that a selection of questions in the first questionnaire had been phrased in the negative form so as to avoid potential acquiescence bias. All the questions in the second questionnaire were stated in the affirmative form. According to DeVellis (2003) acquiescence bias is referred to a respondent's "tendency to agree with items, irrespective of their content" (p. 69).

Table 4 shows the negatively worded statements used in the first pilot questionnaire, and the correspondingly positively worded statements used in the second pilot questionnaire.

Table 4: Positively vs. negatively worded statements

Pilot Phase - Negatively Worded Statements (First Questionnaire)	
Q8	It is **not** important for me to be financially rewarded in accordance with my performance
Q9	It is **not** important for me to receive contributions towards a pension or provident scheme
Q12	It is **not** important for me to have the opportunity to take study leave
Q13	It is **not** important for me to receive bursaries/funding for education advancement
Q17	I **seldom** receive constructive feedback on my performance
Q20	I am **not** able to use newly acquired skills in challenging ways
Q22	I **do not** have a clear understanding of what is expected of me
Q39	Teams are **not** recognised for work well done
Q44	Roles are **not** clearly defined for team members
Q48	It's **not** important for me to have a clearly articulated corporate vision.
Q51	I **do not** have the opportunity to change careers within the same organisation
Q54	I **dislike** working in an ever-changing environment
Q56	I **do not** have the opportunity to develop new skills and knowledge

Pilot Phase - Positively Worded Statements (Second Questionnaire)	
Q8	It is important for me to be financially rewarded in accordance with my performance
Q9	It is important for me to receive contributions towards a pension or provident scheme
Q12	It is important for me to have the opportunity to take study leave
Q13	It is important for me to receive bursaries/funding for education advancement
Q17	I receive constructive feedback on my performance
Q20	I am able to use newly acquired skills in challenging ways
Q22	I have a clear understanding of what is expected of me
Q39	Teams are recognised for work well done
Q44	Roles are clearly defined for team members
Q48	It is important for me to have a clearly articulated corporate vision
Q51	I have the opportunity to change careers within the same organisation
Q54	I enjoy working in an ever-changing environment
Q56	I have the opportunity to develop new skills

Each of the pilot questionnaires were administered to four different respondents. The feedback from the respondents clearly suggested that irritations, confusions and time delays were experienced by means of the negatively worded questions. These findings were consistent with DeVellis (2003) that "reversals in item polarity may be confusing to respondents, especially when they are completing a long questionnaire" (p. 69). Furthermore, Barnette (2000) states that negatively worded statements do not reduce acquiescence bias, but instead reduce the reliability of the study.

Feedback from two of the pilot testers of the negatively worded statements were as follows:

"I did not like the negative questionnaire, it did not flow and I found it frustrating. I had to stop and think about the question, and reverse the logic of the question to answer it. I just wanted to get it done".

"I found the negative statements challenging and frustrating, I had to change my thought process to answer them, I had to stop and think about the negative statements and don't know if I interpreted them correctly".

Two further disadvantages encountered in using bi-directional statements result from the reverse coding of the statistical data (Naidoo, Vermeulen, & Schaap, 2012) and that "negatively worded statements are not considered the exact opposite of positively worded statements" (Barnette, 2000). The negatively worded statements were subsequently removed and the questionnaires were updated accordingly following the feedback received from the pilot testers. The respondents that participated in the pilot survey process were excluded from the actual survey in order to mitigate the risk of bias responses.

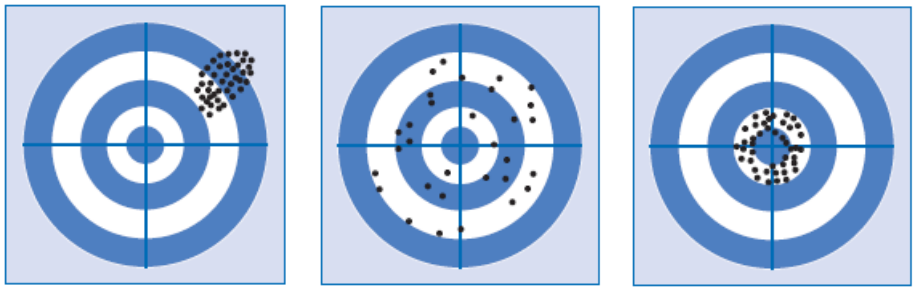
Furthermore, the effectiveness, validity and relevance of each of the pilot questionnaires were also tested during the pilot phase and feedback was provided by means of a question and answer session to determine clarity of questions asked, understanding of questionnaire, and time taken to answer the questions.

4.6.2 Validity and reliability

According to Pallant (2011) both reliability and validity can influence the quality of data when choosing appropriate scales; furthermore, Pallant (2011) strongly recommends that pilot tests are conducted with the intended sample in order to mitigate the effects of unreliable data. The reliability of a study is determined by "applying a particular technique repeatedly to the same object", which yields the same result each time (Babbie, 2010, p. 150). The most commonly used statistic to test the reliability of data is Cronbach's coefficient alpha (Pallant, 2011). The validity of a study is the extent to which an "empirical measure adequately reflects the real meaning of the concept it is intended to measure" (Babbie, 2010, p. 153).

Validity and reliability are important in survey design to establish the extent to which the survey results are reasonable and indicative of the research expectations. Babbie (2010) eloquently describes an analogy to validity and reliability as "a good measurement technique should be both valid (measuring what it is intended to measure) and reliable (yielding a given measurement dependably)" (p. 155). Figure 5 presents a graphical depiction of the analogy of reliability and validity.

Figure 5: Reliability and validity



Reliable but not valid | Valid but not reliable | Valid and Reliable

Source: Adapted from Babbie (2010).

The four basic approaches to establishing validity according to Zikmund et al., (2009) and Babbie (2010) are:

- *Face Validity* – A scale's content logically appears to reflect the concept being measured.
- *Content Validity* – The degree that a measure covers the range of meanings within a concept.
- *Criterion Validity* – The ability of a measure to correlate with other standard measures of similar constructs or established criteria.
- *Construct Validity* – The degree to which a measure reliably measures and truthfully represents the theoretical construct that it was intended to measure.

As mentioned above, the Cronbach's Coefficient Alpha is a widely and most commonly used measure of reliability. An acceptable Cronbach Alpha coefficient should ideally be above 0.7 (DeVellis, 2003; Pallant, 2011), however according to DeVellis (2003) it is preferred to be greater than 0.8. The Cronbach Alpha values calculated in the exploratory factor analysis of this study ranged from 0.897 to 0.906 indicating that the data was extremely reliable.

4.7 Data collection process

Cooper and Schindler (2003) as cited in Naidoo et al. (2012) define data as "the facts presented to the researcher from the study's environment" (p. 158). There are various methods available in which to collect data in order to conduct research. A non-exhaustive listing includes questionnaires, mail surveys, personal interviews, telephone interviews and internet-based surveys.

A questionnaire was used to collect the data for this study. The questionnaire was compiled into a web-based platform hosted by the University of Pretoria (UP) (Appendix A). This consisted of an online, electronic interface where participants were able to retrieve the questionnaire after clicking on a hyperlink that would enable participation in the survey. Permission was granted by the Research Ethics committee of UP to proceed with the study before distribution of the survey took place.

The link to the questionnaire was distributed by means of email to employees of IT companies in South Africa. The researcher had access to some IT organisations from established business relationships, and internet based web searches were conducted to identify other employees in IT companies in South Africa, which met the criteria of the definition of IT employees used for the purpose of this study. The collection of data was dependent on the snowballing effect of the population to reach a target sample of approximately 150 to 200 responses in order to conduct the research.

The introduction to the questionnaire contained components of the informed consent letter to ensure the anonymity and voluntary participation of respondents (Appendix B). A cover page was also sent out with the emails briefly describing the purpose of the survey and the expected time that would be needed to complete the survey. Respondents were advised again by the same means that their participation was completely voluntary and they could withdraw at any time from the study without any prejudice or consequence. Anonymity was confirmed as the survey did not permit respondents to enter information such as their names or their company's names. Data resulting from the questionnaire was collected over a period of 5 weeks, on a rotational basis where surveys were sent out in one week with a follow up email being sent out during the following week.

Due to the anonymous nature of the survey, the follow up email thanked respondents for their participation, and gently reminded and encouraged those participants that had not yet participated to take the opportunity to respond before the closing date of the survey. A notification was also sent out to the participants of the study advising that they would be able to contact the researcher directly if they wished to learn the outcome of the results, and that the results would only be available once the study was concluded. A number of respondents have subsequently expressed their interest in the outcome of the results.

4.8 Data analysis approach

The raw data that had been collected from the survey needed to be manipulated and translated into a meaningful form in order to conduct the analyses and to test the research propositions and hypotheses (Fowler, 2009; Pallant, 2011).

The UP web-based survey tool enabled responses from the questionnaire to be extracted into *Microsoft Excel* for further coding and analysis of the data. A total of 230 responses were received from participants, with 188 questionnaires containing fully completed responses and 42 being partially complete. Although the partially complete responses could be aggregated and used in the study (Van Epps, 2012), it was decided to discard these responses and perform the analysis on the 188 completed responses, as this sample was representative of the population and sufficient for the purposes of the study.

The responses that were received for all of the statements were coded into numerical data to enable ease of analysis (Appendix C). This coding was performed on all the Likert-type designed items with 1 representing “Completely Disagree” and 7 representing “Completely Agree”. As there were no negatively worded statements in the final survey, there was no need to reverse the coding of the statements (Naidoo et al,. 2012; Babbie, 2010). All the items relating to the demographic responses were also coded for ease of reference and analysis (Appendix C).

Descriptive statistics and inferential statistics were then used to analyse the data. Descriptive statistics are used to summarise responses and describe data collected from respondents in a few simple statistics (Zikmund et al., 2009; Weiers, 2011). Inferential statistics, on the other hand, are used for making inferences

(generalisations, estimates, judgements) from findings and data characteristics based on sample observations of a larger population (Babbie, 2010; Weiers, 2011).

Factor Analysis is a data reduction technique that condenses a large set of related variables and reduces items down to a smaller, more manageable number of components or factors (Pallant, 2011). This is achieved by summarising the underlying patterns of correlation and looking for "clumps" or groups of closely related items (Pallant, 2011). This reduction technique is performed when the researcher is "uncertain about how many factors may exist among a set of variables" (Zikmund et al., 2009 p. 593), and is commonly used in the fields of psychology and education (Williams, Brown, & Onsman, 2010).

The two main approaches to factor analysis are exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). EFA is often used in the preliminary stages of research to "gather information about (explore) the interrelationships among a set of variables" (Pallant, 2011, p. 181). Whereas CFA, consists of a more complex and sophisticated set of techniques used later in the research process to "test (confirm) specific hypotheses or theories concerning the structure underlying a set of variables" (Pallant, 2011, p. 181).

Exploratory factor analysis (EFA) was utilised to conduct the statistical analyses for this research in order to explore the underlying structure of the set of variables (Pallant, 2011) and to reduce the data set to a meaningful size whilst retaining as much of the original data as possible (Bezuidenhout & Basson, 2011).

The objectives of using the Exploratory Factor analysis technique as determined from a study conducted by Williams et al., (2010) are listed below:

1. Reduce the number of variables
2. Examine the structure or relationships between variables
3. Detection and assessment of unidimensionality of a theoretical construct
4. Evaluate the construct validity of a scale, test, or instrument
5. Development of parsimonious (simple) analysis and interpretation
6. Address multicollinearity (two or more variables that are correlated)
7. Used to develop theoretical constructs
8. Used to prove/disprove proposed theories

4.9 Limitations

4.9.1 Geographical limitation

The universe has been identified as IT employees working within the South African IT sector. The research sample was limited to the nine provinces within South Africa. Due to the relatively small sample size, there is a very strong possibility that the study was completed by respondents largely in the provinces of Gauteng, Kwa-Zulu Natal and the Cape region. This geographic limitation could impact the study in terms of identifying the perception of turnover intention pertinent to IT employees within these regions as the study collectively addresses these provinces instead of focussing on them individually.

4.9.2 Research methodology

The measurement instrument used for the study consisted of a self-administered questionnaire devised from three main constructs as identified in the literature review. These sections contained information and questions relevant to the demographics, and organisational behavioural attributes pertaining to individuals, groups and the organisation. Although open-ended questions were incorporated into the research instrument, by selecting this instrument, the researcher has forgone the opportunity of qualitative analysis by means of interviewing respondents and consequently sacrificed depth of the study.

4.9.3 Response bias

Although an in-depth research into questionnaire design in terms of bi-directional statements was conducted, the questionnaire could be subject to deliberate falsification and unconscious misrepresentation response errors (Saunders & Lewis, 2012). This could result from respondents randomly selecting response items or completing the questionnaire by means of filling in one continuous answer due to perceived time constraints or questionnaire answering fatigue.

4.9.4 Non-exhaustive study

Due to the extensive nature of the antecedents of turnover and the constructs that have been developed from an organisational behaviour perspective, a non-exhaustive listing of the items most pertinent to the turnover intention of employees in the IT industry were considered. A result of this is that not all factors have been addressed and there may be further factors that were not used in this study to determine turnover intention. A further exploration of these factors may be necessary.

4.10 Conclusion

The research methodology design and data collection process was explained in detail in this chapter. The questionnaire was designed in such a way so as to address the demographics and work related factors of the respondents as well as the three organisational behavioural constructs. Pilot testing was conducted on individuals that were representative of the sample in order to mitigate the effects of unreliable data for the study. A non-probability snowball sampling technique was utilised to collect the data for this research in order to conduct the statistical analyses.

The following chapter will present the results of the study in the form of both descriptive and inferential statistics.

CHAPTER 5

RESEARCH RESULTS

5.1 Introduction

The previous chapter provided an in-depth explanation of the research methodology, and the data collection process. This chapter presents an exploratory analysis of the research results that were obtained from the sample frame. The results have been presented with the use of descriptive, comparative and inferential statistical methods. Exploratory factor analysis was the statistical methodology used to reduce the large data set to a more interpretable level. The statistical computations were achieved with the use of IBM SPSS (Statistical Product and Service Solutions) software v21.0.

Because the research instrument contained both open-ended and closed-ended questions in a structured pattern, results elicited were of a detailed nature, which facilitated clearer interpretation. Although a total of 230 respondents participated in the questionnaire, 188 surveys contained fully completed responses and 42 were partially complete. It was decided to discard the partially complete responses and proceed with the 188 fully answered responses for purposes of the analyses.

5.2 Descriptive statistics: Demographic profiles

The first section of the questionnaire requested respondents to provide details with regards to their demographics in order to categorise the spread of respondents. These included Gender, Language, Qualification, Age, Income and Job Level. These demographic details are analysed in the following section.

5.2.1 Gender profile of the sample

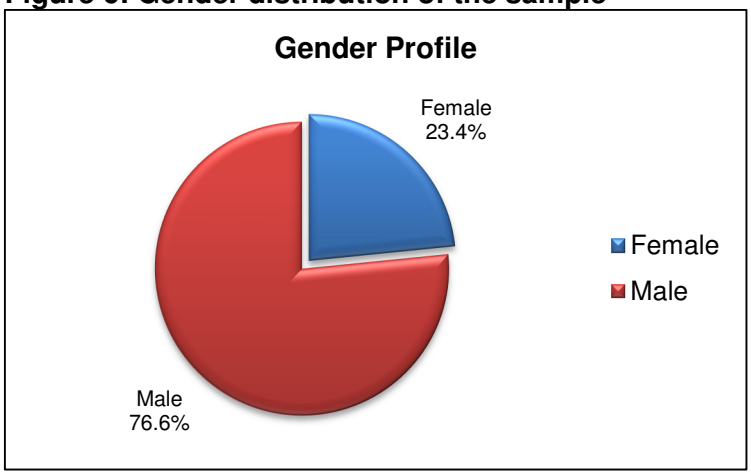
Out of the sample of 188 respondents, **23.4%** of the participants consisted of females and **76.6%** were males, as presented in Table 5. The significantly higher response rate of males is probably a result of the fact that the South African IT industry is

largely male dominated (Harris, 2011; Moore & Bussin, 2012; Stones, 2012). Figure 6 depicts the gender distribution of the sample graphically.

Table 5: Gender distribution of the sample

Gender	Frequency	Percentage
Female	44	23.4%
Male	144	76.6%
Total	**188**	**100.0%**

Figure 6: Gender distribution of the sample



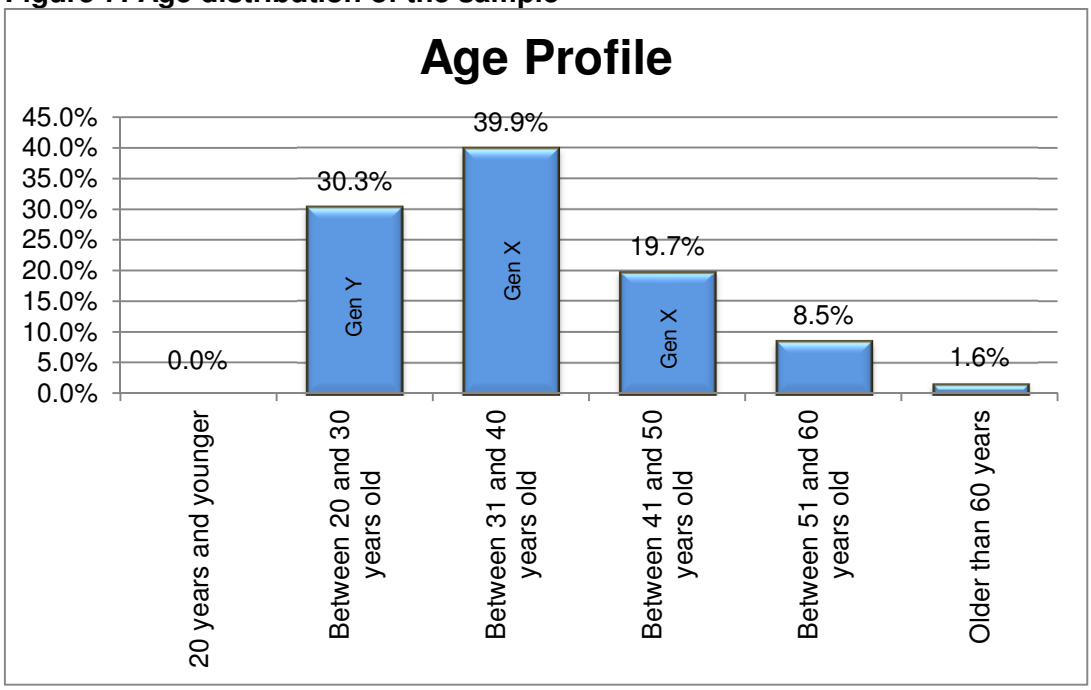
5.2.2 Age profile of the sample

The age distribution consisted of six categories as presented in Table 6. There were no respondents younger than 20 years of age and only three respondents older than 60 years of age. The majority of the respondents, **89.9%** indicated that they were between the ages of 20 and 50 years of age. Of this, **30.3%** of the respondents were between the ages of 20 and 30 years, **39.9%** were between the ages of 31 and 40 years and **19.7%** were between the ages of 41 and 50 years. The remaining **8.5%** of respondents were between the ages of 51 and 60 years. The distribution of the age groups implies that the employees in the IT industry are largely between the ages of 20 and 50 years of age falling into Generation X and Generation Y classifications. Figure 7 depicts the age distribution of the sample graphically.

Table 6: Age distribution of the sample

Age	n	Percentage
20 years and younger	0	0.0%
Between 20 and 30 years old	57	30.3%
Between 31 and 40 years old	75	39.9%
Between 41 and 50 years old	37	19.7%
Between 51 and 60 years old	16	8.5%
Older than 60 years	3	1.6%
Total	**188**	**100.0%**

Figure 7: Age distribution of the sample



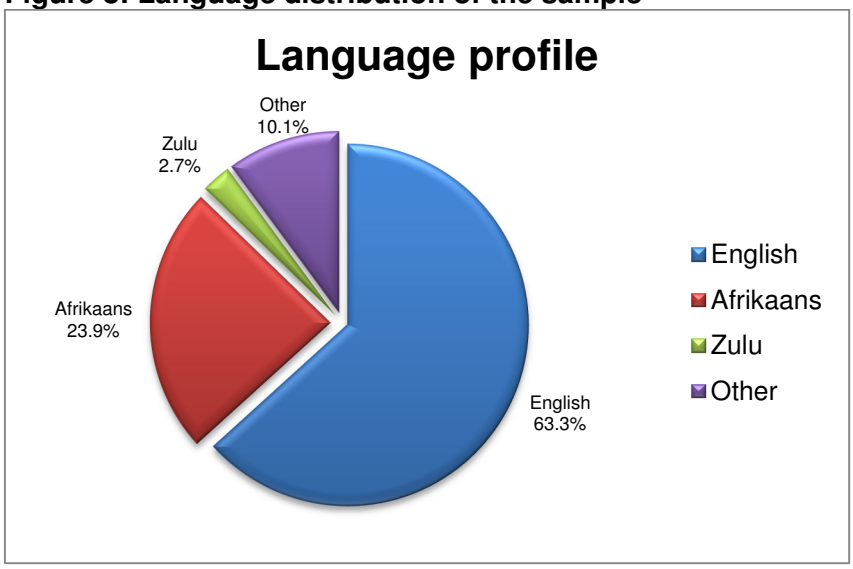
5.2.3 Language profile of the sample

The language distribution of the sample consisted of four categories, namely English, Afrikaans, Zulu and Other, as presented in Table 7. The majority of the respondents, **63.3%** mentioned that English was their primary home language, **23.9%** said that Afrikaans was their primary home language, **2.7%** stated that Zulu was their primary home language and the remaining **10.1%** identified "Other" as their home language. The grouping of the "Other" category is likely to consist of the 8 other official languages spoken in South Africa as well as foreign languages as there are a number expatriates working in South Africa. Figure 8 depicts the language distribution of the sample graphically

Table 7: Language distribution of the sample

Language	n	Percentage
English	119	63.30%
Afrikaans	45	23.90%
Zulu	5	2.70%
Other	19	10.10%
Total	**188**	**100.00%**

Figure 8: Language distribution of the sample



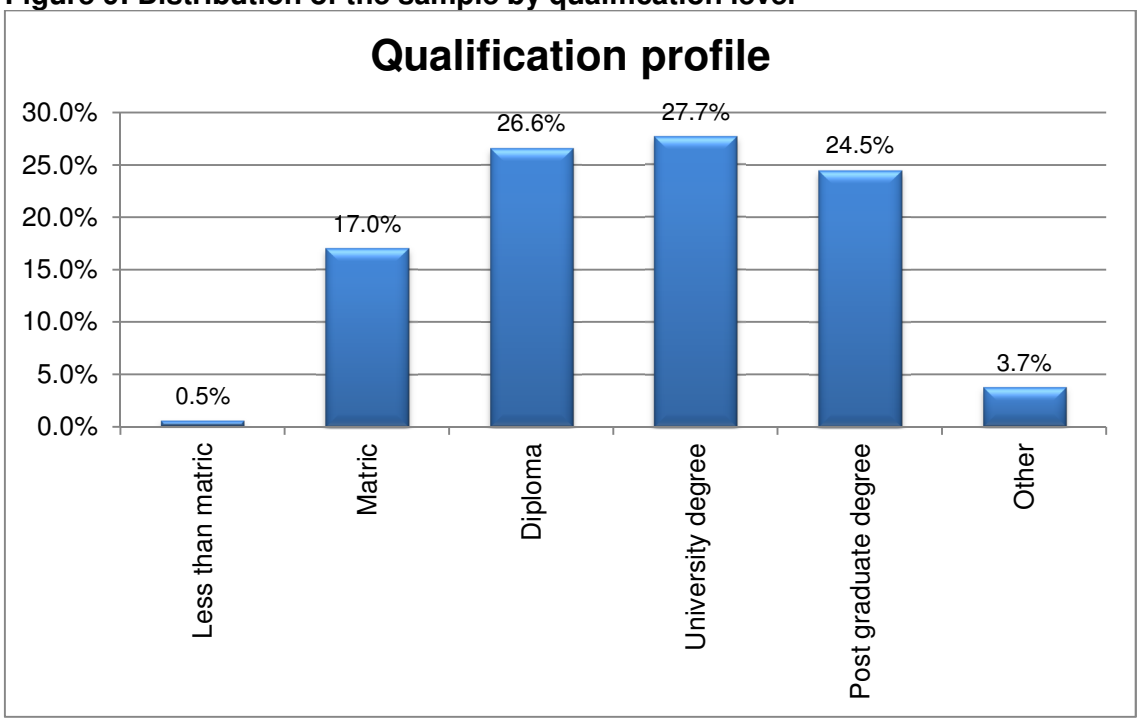
5.2.4 Qualification profile of sample

Table 8 presents the distribution of the sample in terms of the qualification level of the respondents. Out of the sample of 188 respondents, **78.7%** had some form of tertiary qualification, and only one respondent did not have a minimum of a matriculation certification. Of the respondents that had a tertiary qualification, **26.6%** had diplomas, **27.7%** were qualified at a third year level with a University Degree, and **24.5%** were qualified at a postgraduate level. Figure 9 depicts the level of qualification distribution of the sample graphically.

Table 8: Distribution of the sample by qualification level

Qualification	n	Percentage
Less than matric	1	0.5%
Matric	32	17.0%
Diploma	50	26.6%
University degree	52	27.7%
Post graduate degree	46	24.5%
Other	7	3.7%
Total	**188**	**100.0%**

Figure 9: Distribution of the sample by qualification level



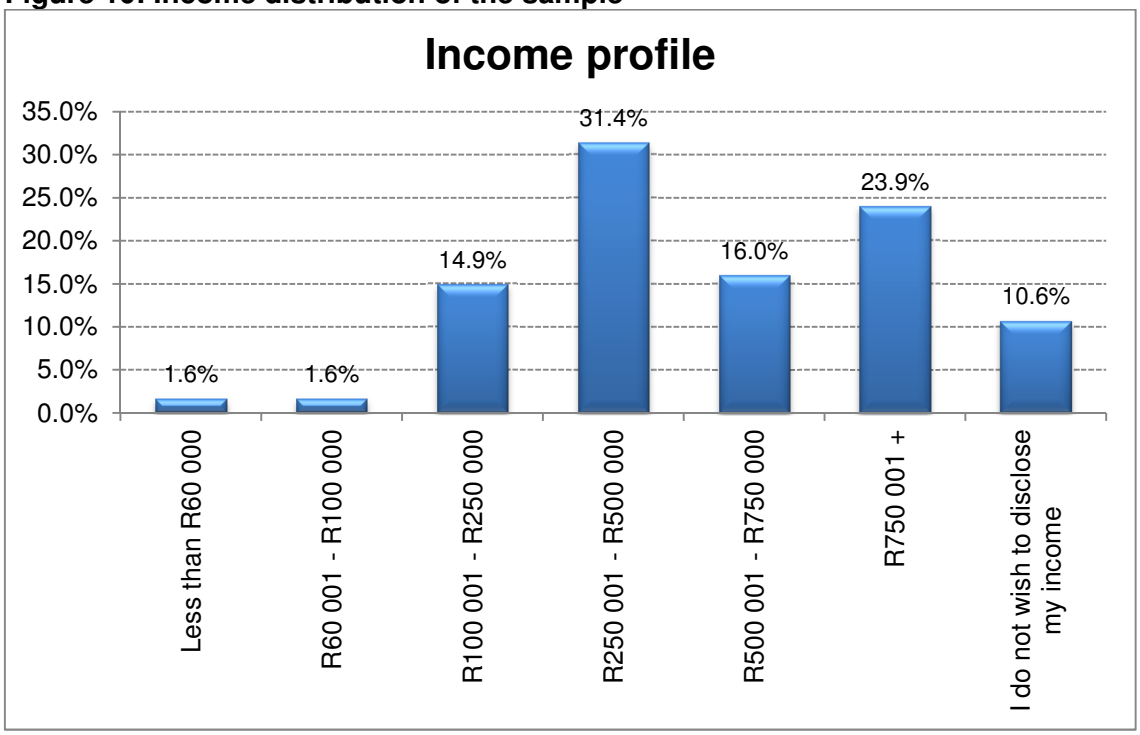
5.2.5 Income profile of sample

The Income distribution of the sample contained seven categories as depicted in Table 9. Due to the sensitive nature of salary related information, **10.6%** of the respondents chose not to disclose their annual income. **31.4%** of the respondents stated that they earned between R 250 001 and R 500 000 per annum. This was closely followed by **23.9%** saying that they earned over R 750 000 per annum. It appears that there is a relatively skewed distribution of income of employees in the IT industry based on lower income and higher income earners. Figure 10 presents a graphical illustration of the income distribution of the sample.

Table 9: Income distribution of the sample

Income	n	Percentage
Less than R60 000	3	1.6%
R60 001 - R100 000	3	1.6%
R100 001 - R250 000	28	14.9%
R250 001 - R500 000	59	31.4%
R500 001 - R750 000	30	16.0%
R750 001 +	45	23.9%
I do not wish to disclose my income	20	10.6%
Total	**188**	**100.0%**

Figure 10: Income distribution of the sample



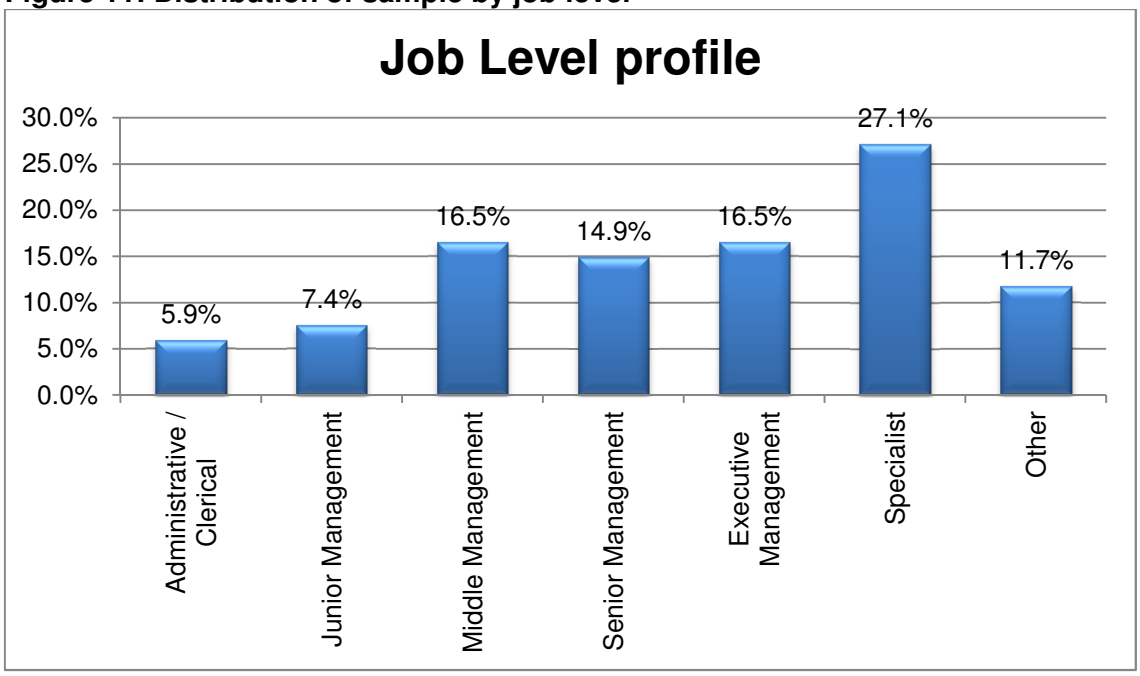
5.2.6 Job level profile of sample

Table 10 presents the distribution of the sample in terms of their current job levels. **58.5%** of respondents were in the upper echelon within the company seniority structure; of which **27.1%** were classified as specialists in their current role, affirming the knowledge worker notion of IT employees while **29.8%** of respondents were in the middle to lower job level rankings. The positions among Middle Management and Executive management were evenly spread with **16.5%** of the respondents equally occupying Middle and Executive management positions. Figure 11 depicts the job level distribution of the sample graphically.

Table 10: Distribution of sample by job level

Job level	n	Percentage
Administrative / Clerical	11	5.90%
Junior Management	14	7.40%
Middle Management	31	16.50%
Senior Management	28	14.90%
Executive Management	31	16.50%
Specialist	51	27.10%
Other	22	11.70%
Total	**188**	**100.00%**

Figure 11: Distribution of sample by job level



5.3 Inferential statistics

5.3.1 Suitability of data for factor analysis

As discussed in the research methodology section (Chapter 4), exploratory factor analysis was used to prepare the statistical analyses for this study. Prior to performing exploratory factor analysis, it was necessary to determine and assess whether the data set was suitable to be explored with factor analysis. The Kaiser-Meyer-Olkin (KMO) rule (Kaiser, 1970) and Bartlett's test of Sphericity (Bartlett, 1954) is used to determine the suitability of the data to conduct exploratory factor analysis. The calculated KMO value for this study was 0.83 (Table 11). This value exceeded the recommended value of 0.6 (Kaiser, 1970), and Bartlett's test of Sphericity (Bartlett, 1954) was statistically significant at the 5% level of significance ($p<0.05$), indicating that there is some relationship between the variables and that exploratory factor analysis could be conducted to determine the results of this study.

Table 11: Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.830
Bartlett's Test of Sphericity	Approx. Chi-Square	4711.836
	Degrees of Freedom	1225
	Significance	0.000

5.3.2 Factor retention

The next step of this process was to determine the number of factors to be extracted based on the data collected from the respondents for each item in the questionnaire. Kaiser (1974) indicated that factors with eigenvalues greater than one should be retained. The exploratory factor analysis, using the Principal Axis Factoring extraction method, revealed the presence of 14 components in the data space, with eigenvalues which exceeded unity (greater than 1). These 14 components collectively explained **56.76%** of the variance in the data set (Table 12).

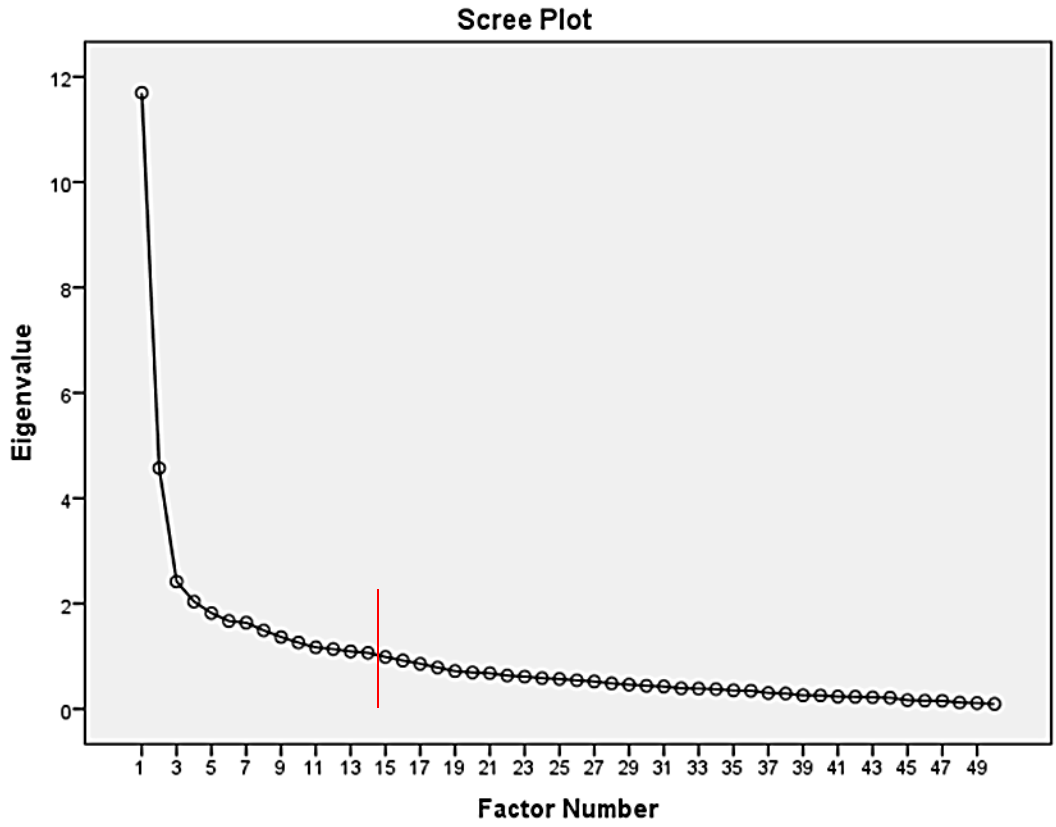
Table 12: Exploratory factor analysis: Total variance explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	11.697	23.393	23.393	11.311	22.622	22.622	9.703
2	4.572	9.143	32.536	4.170	8.339	30.962	8.329
3	2.417	4.835	37.371	1.974	3.949	34.911	5.314
4	2.038	4.076	41.447	1.641	3.282	38.193	2.385
5	1.820	3.640	45.088	1.405	2.810	41.003	2.538
6	1.669	3.338	48.425	1.265	2.530	43.532	3.737
7	1.637	3.274	51.699	1.216	2.432	45.964	2.885
8	1.492	2.983	54.682	1.026	2.052	48.016	3.538
9	1.364	2.729	57.411	0.961	1.921	49.937	5.293
10	1.261	2.521	59.932	0.792	1.584	51.521	2.145
11	1.168	2.337	62.269	0.722	1.444	52.965	3.520
12	1.136	2.273	64.542	0.667	1.334	54.299	1.520
13	1.091	2.181	66.723	0.661	1.322	55.621	1.607
14	1.064	2.129	68.852	0.572	1.145	56.766	2.029
15	0.986	1.973	70.825				
16	0.919	1.839	72.663				
17	0.856	1.712	74.376				
18	0.786	1.573	75.948				
19	0.718	1.437	77.385				
20	0.692	1.383	78.768				

Extraction Method: Principal Axis Factoring.

Subsequent to the factor extraction method explained above, a further inspection of the scree plot (Cattell, 1966), is used to reveal the last significant drop or change in direction (elbow) to also determine the number of factors to be extracted. An inspection of the scree plot (Figure 12) revealed some difficulty in assessing the exact point of inflection.

Figure 12: Scree Plot



Although Kaiser's criterion and Cattell's scree test are some of the most commonly used methods to decide on the number of factors to retain, each method poses its own limitations. A 14 factor latent structure is not a logical structure for this dataset. Because of this issue, it was decided to use a more sophisticated method to determine the number of factors to extract. Horn (1965) proposed the use of Parallel Analysis which is a method based on the generating of random variables to determine the number of factors to retain.

A Monte-Carlo Simulation (O'Connor, 2000) was conducted to generate the set of random variables. The results of this showed four significant factors with eigenvalues exceeding the corresponding criterion values for a randomly generated data matrix of the same size (Table 13). The general rule regarding Parallel Analysis is that values larger than the criterion value are to be retained, whilst those less than the criterion value are rejected (Horn, 1965; Ledesma & Valero-Mora, 2007; O'Connor, 2000). This is illustrated in Table13 where a snapshot of the first 10 eigenvalues of the Parallel Analysis are displayed, indicating that four components or factors were significant enough for retention.

Table 13: Parallel analysis

Run MATRIX procedure:

PARALLEL ANALYSIS:

Principal Components & Raw Data Permutation

Specifications for this Run:

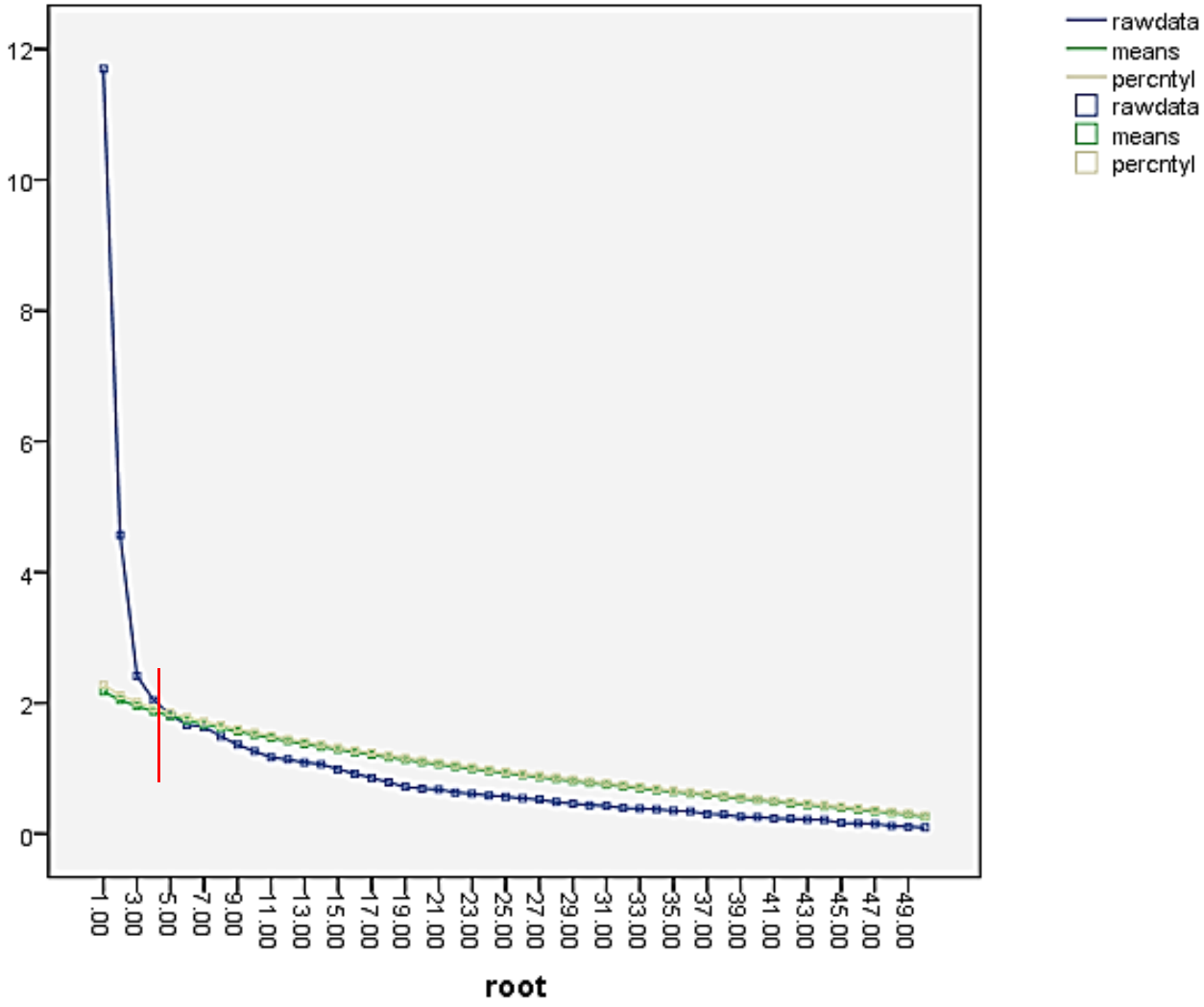
Ncases	188
Nvars	50
Ndatsets	1000
Percent	90

Raw Data Eigenvalues, & Mean & Percentile Random Data Eigenvalues

Root	Raw Data	Means	Percentile	Decision
1.00000	**11.69652**	**2.174865**	**2.274628**	**Accept**
2.00000	**4.571648**	**2.046754**	**2.121797**	**Accept**
3.00000	**2.417487**	**1.952578**	**2.012686**	**Accept**
4.00000	**2.03792**	**1.871002**	**1.923328**	**Accept**
5.00000	1.820235	1.801929	1.851695	Reject
6.00000	1.668935	1.736240	1.783455	Reject
7.00000	1.636785	1.676077	1.719156	Reject
8.00000	1.491549	1.619217	1.658830	Reject
9.00000	1.364440	1.565757	1.603537	Reject
10.00000	1.260587	1.514700	1.549578	Reject

After the Monte Carlo simulation was conducted, a further inspection of the Monte-Carlo simulated parallel analysis scree plot (Figure 13) revealed a clear indication that a maximum of four factors could be extracted from the data set.

Figure 13: Scree Plot (Post Monte-Carlo Simulation)



5.3.3 Factor rotation

Once the four factor items were confirmed, in order to aid with the interpretation of the factors, the 50 items of the questionnaire were subjected to an oblique factor rotation method. There are two main approaches to rotation, resulting in orthogonal (uncorrelated) or oblique (correlated) factor solutions (Pallant, 2011), however, both approaches yield similar solutions particularly when the patterns of correlations among the items are clear (Tabachnick & Fidell, 2007). However, oblique rotation is often seen as producing more accurate results for research involving human behaviours (Williams et al., 2010).

The four factors were specified through an iterative process of Principal Axis Factoring with Promax oblique rotation to extract the variables. After inspection of each factoring process, items that had factor loadings less than 0.3, and those that were cross-loaded, or contained no loading were deleted from the item pool. This is illustrated in Table 14, depicting the five rounds of iteration, the number of items that were loaded, the number of items that were deleted after each round, and the Cronbach Alpha of the items in the item pool.

Table 14: Exploratory factor analysis: Principal axis factoring

Iterative Round	No. of items in item pool	Cronbach Alpha (Reliability)	No. of items deleted	Details of Items deleted from the item pool
Round 1	50	0.901	8	Q33, Q35, Q37, Q41, Q42, Q47, Q48, Q52.
Round 2	42	0.906	2	Q23, Q39.
Round 3	40	0.901	1	Q38.
Round 4	39	0.897	1	Q13.
Round 5	38	0.898	0	

Iterative round	Item No.	Item statement
Round 1	Q33	I would move to another job for more money
	Q35	I feel I am over qualified in terms of skills and experience for the work I do
	Q37	I have opportunities to develop new skills from exposure to team work
	Q41	I prefer to work alone than in teams
	Q42	I have a good support structure that I can rely on in solving work problems
	Q47	I enjoy working in an environment which encourages use of initiative
	Q48	It is important for me to have a clearly articulated corporate vision
	Q52	I like to interact socially with other employees at work
Round 2	Q23	It's important for me to have a close colleague at work
	Q39	Teams are recognised for work well done
Round 3	Q38	I get constructive feedback on team performance from team members
Round 4	Q13	It is important for me to receive bursaries/funding for education advancement

Since the value of the Cronbach Alpha was above 0.7 in all iterations, it can be concluded that the internal consistency of the instrument can be deemed to be reliable with what it was intended to measure (Pallant, 2011).

The final pattern Matrix that was achieved in the fifth round of rotation as a result from the iterative process of Principal Axis Factoring is depicted in Table 15, indicating the clustering of the four factors.

Table 15: Pattern matrix

	Factor			
	1	2	3	4
Q28 - I find my job enriching	0.900			
Q24 - I enjoy my job	0.845			
Q21 - My career path with my organisation is aligned with my personal goals	0.805			
Q56 - I have the opportunity to develop new skills	0.748			
Q34 - I am inspired by the company to deliver my best performance	0.742			
Q55 - I have fair training opportunities where I work	0.702			
Q57 - Our management practices allow flexibility in work	0.671			
Q18 - I receive adequate training	0.656			
Q53 - I work for a company that acknowledges its high performers	0.620			
Q22 - I have a clear understanding of what is expected of me	0.587			
Q17 - I receive constructive feedback on my performance	0.558			
Q26 - I have a constructive working relationship with the manager I report to	0.546			
Q58 - Employees are treated in a consistent manner	0.519			
Q51 - I have the opportunity to change careers within the same organisation	0.471			
Q32 - I have total control over my work methods without my managers interference	0.453			
Q20 - I am able to use newly acquired skills in challenging ways	0.453			
Q27 - I am able to take leave whenever it suits me	0.426			
Q29 - I work in an environment which allows a high level of autonomy to get the work done	0.390			
Q54 - I enjoy working in an ever-changing environment	0.385			
Q31 - I put in a great deal of effort beyond what is normally expected	0.363			
Q25 - I have a good balance between my work and home life	0.322			
Q44 - Roles are clearly defined for team members		0.761		
Q43 - The assigning of tasks to group members is easy		0.706		
Q45 - There are clear decision making patterns among teams		0.677		
Q40 - I enjoy problem solving in teams		0.459		
Q36 - I have a good working relationship with my colleagues		0.419		
Q08 - It is important for me to be financially rewarded in accordance with my performance			0.621	
Q14 - It is important for me to be able to structure my remuneration package according to my own needs			0.621	
Q11 - It is important for me to have the ability to work flexible hours			0.496	
Q07 - It is important for me to have a competitive market-related remuneration package			0.482	
Q16 - I value having the work that I produce praised and rewarded			0.446	
Q19 - I would move to another job for skills development			0.375	
Q12 - It is important for me to have the opportunity to take study leave			0.374	
Q50 - I would like to have opportunities to obtain global exposure			0.303	
Q10 - It is important for me to receive contributions towards medical aid				0.826
Q09 - It is important for me to receive contributions towards a pension or provident scheme				0.770
Q30 - Job security is important to me				0.477
Q49 - Loyalty towards an organisation is important for me				0.328

The final rotation accounted for **39.63%** of the total variation of the four factors as displayed in Table 16. Furthermore, Factor 1 is shown to explain **24.34%** of the total variance; Factor 2, **8.16%;** Factor 3, **3.64%** and Factor 4, **3.48%**.

Table 16: Total variance explained (5 rounds of rotation)

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	9.775	25.725	25.725	9.249	24.34	24.340	8.979
2	3.693	9.719	35.444	3.101	8.160	32.499	5.331
3	1.919	5.049	40.493	1.385	3.646	36.145	2.534
4	1.904	5.012	45.505	1.323	3.481	39.626	2.552

The factor correlation matrix resulting from the Principal Axis Factoring is displayed in Table 17.

Table 17: Factor correlation matrix

Factor	1	2	3	4
1	1.000	0.568	0.000	0.074
2	0.568	1.000	-0.033	0.043
3	0.000	-0.033	1.000	0.331
4	0.074	0.043	0.331	1.000

5.3.4 Factor classification

As seen in Table 18 below, the interpretation of the refined factor analysis produced the clustering of the factors in order to understand the latent structure of South African IT employees' intention to resign. The factors were then named according to the items that were clustered from the factor analysis. Factor 1, (Personal Enrichment from Management Support), contained items relating to management support of the individual (micro-level of analysis) such as feedback, training, job satisfaction and motivation. Factor 2, (Participatory Dynamics), contained items that related to working in teams and groups (meso-level of analysis). Factor 3, (Short-term individualised incentivisation), largely incorporated items pertaining to non-monetary benefits such as flexible working hours, study leave and global exposure. This factor also clustered items relating to initial short-term incentives which attract employees to a job such as the ability to structure one's own package. The last factor, factor 4 (Long-term individualised incentivisation), considered items and benefits such as pension / provident benefits, medical aid and job security.

Table 18: Naming of the Factors

FACTOR 1 (Personal Enrichment from Management Support):	
Q17	I receive constructive feedback on my performance
Q18	I receive adequate training
Q20	I am able to use newly acquired skills in challenging ways
Q21	My career path with my organisation is aligned with my personal goals
Q22	I have a clear understanding of what is expected of me
Q24	I enjoy my job
Q25	I have a good balance between my work and home life
Q26	I have a constructive working relationship with the manager I report to
Q27	I am able to take leave whenever it suits me
Q28	I find my job enriching
Q29	I work in an environment which allows a high level of autonomy to get the work done
Q31	I put in a great deal of effort beyond what is normally expected
Q32	I have total control over my work methods without my managers interference
Q34	I am inspired by the company to deliver my best performance
Q51	I have the opportunity to change careers within the same organisation
Q53	I work for a company that acknowledges its high performers
Q54	I enjoy working in an ever-changing environment
Q55	I have fair training opportunities where I work
Q56	I have the opportunity to develop new skills
Q57	Our management practices allow flexibility in work
Q58	Employees are treated in a consistent manner

FACTOR 2 (Participatory Dynamics):	
Q36	I have a good working relationship with my colleagues
Q40	I enjoy problem solving in teams
Q43	The assigning of tasks to group members is easy
Q44	Roles are clearly defined for team members
Q45	There are clear decision making patterns among teams

FACTOR 3 (Short-Term Individualised Incentivisation):	
Q07	It is important for me to have a competitive market-related remuneration package
Q08	It is important for me to be financially rewarded in accordance with my performance
Q11	It is important for me to have the ability to work flexible hours
Q12	It is important for me to have the opportunity to take study leave
Q14	It is important for me to be able to structure my remuneration package according to my own needs
Q16	I value having the work that I produce praised and rewarded
Q19	I would move to another job for skills development
Q50	I would like to have opportunities to obtain global exposure

FACTOR 4 (Long-Term Individualised Incentivisation):	
Q09	It is important for me to receive contributions towards a pension or provident scheme
Q10	It is important for me to receive contributions towards medical aid
Q30	Job security is important to me
Q49	Loyalty towards an organisation is important for me

5.3.5 Descriptive statistics of factors

The descriptive statistics for each of the factors is displayed in Table 19. As can be seen from the table, Factor 3 (Short-term individualised incentivisation) contained the highest mean, followed by Factor 4 (Long-term individualised incentivisation). This may indicate that the total samples dominant retention preference is based on short-term and long term incentivisation mechanisms.

Table 19: Descriptive statistics on all Factors

	N	Sum	Mean	Std. Deviation	Variance
FACTOR 1	188	999.8	5.3181	0.95816	0.918
FACTOR 2	188	1010.8	5.3766	0.96211	0.926
FACTOR 3	188	1135.46	6.0397	0.65647	0.431
FACTOR 4	188	1094.25	5.8205	1.07444	1.154
Valid N (listwise)	188				

5.3.6 Reliability and item analysis

Reliability analysis was conducted on each of the factors that were determined as a result of the exploratory factor analysis rotation technique. As mentioned previously, the Cronbach Coefficient Alpha is the most widely accepted and commonly used measure of reliability (Pallant, 2011), with an acceptable result ideally above 0.7 (DeVellis, 2003; Pallant, 2011). Furthermore, the mean, variance and standard deviation were calculated for each of the items to asses the distribution of the responses of the sample.

As can be seen in Table 20 through to Table 23, the Cronbach Alpha's calculated for each of the factors range from 0.683 to 0.922, which can be considered as fairly reliable to extremely reliable. Furthermore, it is apparent that each of the items contributed to the high reliability of the Cronbach Coefficient Alpha's of each factor.

Table 20: Reliability and item statistics for Factor 1

Item	Mean	Std. Deviation	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q17	5.23	1.615	0.607	0.918
Q18	4.89	1.658	0.631	0.918
Q20	5.85	1.188	0.366	0.922
Q21	4.89	1.735	0.710	0.916
Q22	5.85	1.308	0.659	0.918
Q24	5.67	1.410	0.739	0.916
Q25	5.11	1.674	0.415	0.922
Q26	5.62	1.495	0.647	0.917
Q27	5.33	1.571	0.439	0.922
Q28	5.39	1.449	0.721	0.916
Q29	5.62	1.296	0.551	0.919
Q31	6.24	0.822	0.268	0.923
Q32	5.62	1.305	0.543	0.920
Q34	5.24	1.388	0.715	0.916
Q51	4.41	1.964	0.488	0.922
Q53	4.94	1.873	0.628	0.918
Q54	5.61	1.314	0.353	0.923
Q55	4.78	1.744	0.666	0.917
Q56	5.25	1.543	0.645	0.917
Q57	5.32	1.536	0.671	0.917
Q58	4.81	1.805	0.659	0.917

Reliability Statistics	N of Items	Mean item correlation	Cronbach's Alpha
	21	0.577	0.922
Scale Statistics	**Mean**	**Variance**	**Std. Deviation**
	111.68	404.819	20.120

Table 21: Reliability and item statistics for Factor 2

Item	Mean	Std. Deviation	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q36	6.14	0.850	0.449	0.768
Q40	5.69	1.337	0.435	0.769
Q43	5.08	1.356	0.618	0.706
Q44	4.99	1.565	0.666	0.687
Q45	4.98	1.422	0.604	0.711

Reliability Statistics	N of Items	Mean item correlation	Cronbach's Alpha
	5	0.554	0.774
Scale Statistics	**Mean**	**Variance**	**Std. Deviation**
	26.88	23.141	4.811

Table 22: Reliability and item statistics for Factor 3

Item	Mean	Std. Deviation	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q07	6.29	1.005	0.364	0.656
Q08	6.54	0.886	0.487	0.637
Q11	6.01	1.085	0.373	0.654
Q12	6.09	1.073	0.410	0.646
Q14	5.93	1.195	0.478	0.628
Q16	6.17	1.081	0.396	0.649
Q19	5.35	1.577	0.318	0.678
Q50	5.92	1.372	0.273	0.682

Reliability Statistics	N of Items	Mean item correlation	Cronbach's Alpha
	8	0.387	0.683
Scale Statistics	**Mean**	**Variance**	**Std. Deviation**
	48.3	27.569	5.251

Table 23: Reliability and item statistics for Factor 4

Item	Mean	Std. Deviation	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q09	5.75	1.519	0.624	0.583
Q10	5.72	1.538	0.693	0.534
Q30	6.18	1.226	0.442	0.695
Q49	5.64	1.526	0.313	0.773

Reliability Statistics	N of Items	Mean item correlation	Cronbach's Alpha
	4	0.518	0.72
Scale Statistics	**Mean**	**Variance**	**Std. Deviation**
	23.28	18.471	4.298

5.4 Results of statistical tests

5.4.1 Non-parametric testing

In order to fulfil the objectives of this research and test the proposed hypotheses, it was necessary to conduct further statistical tests as discussed in chapter 3. A test for normality was undertaken to determine whether to use parametric or non-parametric tests to fulfil the research objectives (Table 24).

Table 24: Test for normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	**Df**	**Sig.**	**Statistic**	**df**	**Sig.**
FACTOR 1	0.090	188.000	0.001	0.964	188.000	0.000
FACTOR 2	0.087	188.000	0.001	0.955	188.000	0.000
FACTOR 3	0.106	188.000	0.000	0.912	188.000	0.000
FACTOR 4	0.157	188.000	0.000	0.897	188.000	0.000

a. Lilliefors Significance Correction

As per Table 24, the scales were determined as non-normally distributed as the null hypothesis that data is normally distributed was rejected at the 5% level of significance.

Consequently, further analysis was conducted using non-parametric comparative statistics to answer the research hypotheses. This was achieved by determining the mean of each of the classes relating to each of the factors and then simultaneously analysing the factor structure.

The Kruskal-Wallis test was conducted to compare the data at a multivariate level, and subsequent non-parametric *post hoc* testing, such as Mann-Whitney was used to determine the statistical significance of the difference between the various groups.

Hypothesis 1:

There is no difference in employees' perceived intention to resign from employment based on the grouping variable, 'generation'.

Table 25: Kruskal-Wallis test (Hypothesis 1)

	Age	N	Mean Rank
FACTOR 1	1 Generation Y (1983 - 2000)	57	88.77
	2 Generation X (1963 - 1982)	112	95.73
	3 Boomers (1943 - 1962)	19	104.42
	Total	**188**	
FACTOR 2	1 Generation Y (1983 - 2000)	57	84.49
	2 Generation X (1963 - 1982)	112	99.41
	3 Boomers (1943 - 1962)	19	95.61
	Total	**188**	
FACTOR 3	1 Generation Y (1983 - 2000)	57	95.81
	2 Generation X (1963 - 1982)	112	97.12
	3 Boomers (1943 - 1962)	19	75.13
	Total	**188**	
FACTOR 4	1 Generation Y (1983 - 2000)	57	102.53
	2 Generation X (1963 - 1982)	112	88.95
	3 Boomers (1943 - 1962)	19	103.13
	Total	**188**	

Test Statistics[a,b]

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4
Chi-Square	1.321	2.862	2.713	2.916
df	2	2	2	2
Asymp. Sig.	0.517	0.239	0.258	0.233

The Kruskal-Wallis test, as per Table 25, was used to calculate whether there was a significant difference in employees' perceived intention to resign from employment based on the grouping variable 'gender'. The non-parametric comparison of the different generational groups showed that there was no significant difference in employee's perceived intention to resign at the 5% level of significance. Consequently, there was no need to conduct *post hoc* non-parametric testing, as there was no significant difference found in the grouping variable 'generations'.

Hypothesis 2:

There are no significant differences between males' and females' intention to resign from employment.

Table 26: Kruskal-Wallis test (Hypothesis 2)

	GENDER	N	Mean Rank
FACTOR 1	1 Female	44	96.36
	2 Male	144	93.93
	Total	**188**	
FACTOR 2	1 Female	44	92.64
	2 Male	144	95.07
	Total	**188**	
FACTOR 3	1 Female	44	99.72
	2 Male	144	92.91
	Total	**188**	
FACTOR 4	1 Female	44	114.31
	2 Male	144	88.45
	Total	**188**	

Test Statistics[a,b]

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4
Chi-Square	0.067	0.068	0.53	7.697
df	1	1	1	1
Asymp. Sig.	0.795	0.795	0.466	0.006

The Kruskal-Wallis test, as per Table 26, was used to determine whether there was a significant difference in males' and females' intention to resign from employment. The non-parametric comparison of the different genders showed that there was a significant difference at the 5% level of significance in the mean ranking between males' and females' intention to resign from employment based on the behavioural scale, Long-term incentivisation benefits. Consequently, there was no need to conduct *post hoc* non-parametric testing, as The Mann-Witney test would yield the same results as the two variables, male and female were mutually exclusive.

5.5 Conclusion

This chapter presented an analysis of the research results that were obtained from the research questionnaire. These results were presented by means of tables and graphs in the form of descriptive and inferential statistics. Exploratory factor analysis was conducted to determine the constructs of the underlying structure of the turnover intention of employees in the IT industry.

Additionally, non-parametric tests were conducted to examine the research hypotheses in order to fulfil the objectives of this research. The findings confirm that there was no significant difference in employee generational group's perceived intention to resign. However, there was a significant difference in the mean ranking between males' and females' intention to resign from employment based on the behavioural scale, Long-term incentivisation benefits.

The following chapter will present an in depth analysis of the findings of the results based on the elucidation of the literature review.

CHAPTER 6

DISCUSSION OF RESULTS

6.1 Introduction

The previous chapter presented the results that were obtained from the descriptive and inferential statistical analyses performed on the study. This chapter is to answer the research propositions and hypotheses by interpreting the results developed in chapter 5 in light of a thorough analysis of the review of the literature pertinent to the study.

6.2 Interpretation of results

The review of the literature identified three levels of analyses that were used to understand the latent structure of the turnover intention of employees within the IT industry in South Africa. These consisted of the micro, meso and macro elements adapted from the organisational behavioural framework.

The micro level of analysis consisted of components relating to the individual, such as remuneration, job satisfaction, training and development. The meso level of analysis incorporated items that related to working in teams and aspects relating to group dynamics. The macro level of analysis consisted of items pertaining to the organisation design, culture and environment.

Furthermore, these three systemic levels of analysis were integrated into the antecedents of turnover intention in order to gain a deeper understanding of the behaviours of employees in the IT industry and the determinants of these employees' intention to resign. Each of the research propositions and hypotheses were analysed in the subsequent section in order to fulfil the objectives of the study.

Proposition 1:

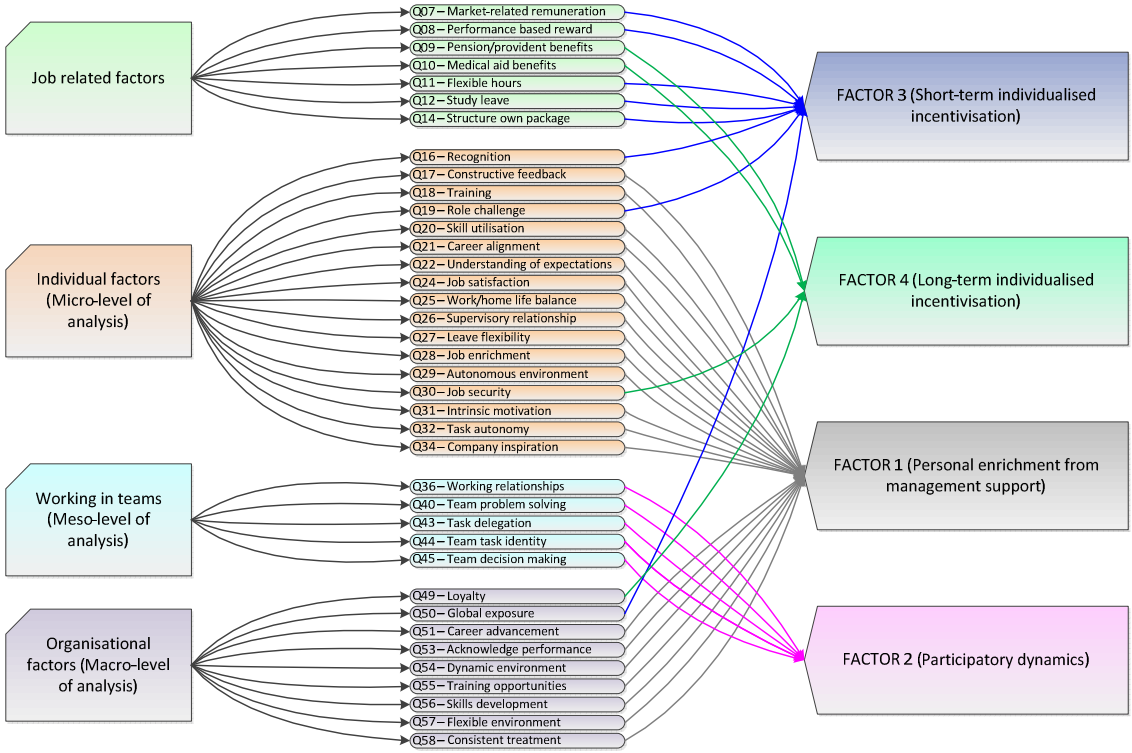
South African IT employees' perceived intention to resign can be described by a latent factorial structure.

Research has in the past attempted to gain a deeper understanding of the determinants that significantly correlate with employees' intentions to resign from employment, by investigating specific antecedents of turnover (Gaylard et al., 2005; Ghapanchi & Arum 2011; Ongori, 2007). Although there has been little consistency in the findings due to the diversity of employees in the workplace and the complex nature of turnover intention, a number of varying models and theories have been proposed to aid with future studies of the turnover phenomenon. For instance, Ghapanchi and Aurum (2011) developed a classification of 70 conceptually distinct turnover drivers, which were further embedded into five categories consisting of individual attributes, organisational factors, job related factors, psychological factors and environmental factors.

Furthermore, Gaylard et al. (2005) established three latent factors that were significantly responsible for the variability in the retention of IT workers. These factors were labelled: equity and enablement for high performance; a liberated and empowered culture; and an effective and interactive communication channel between management and employees. Although these aspects of turnover intention were comprehensively studied, they were not developed from an organisational behaviour perspective and it was established that the evaluation and exploration of the main construct was clearer when positioned within the context of the main organisational theories.

The research instrument was subsequently created by operationalising the main research construct by developing an appropriate pool of items relating to the antecedents of turnover intention and organisational behavioural attributes. A flow chart was designed to determine the most critical attributes and constructs relating to turnover intention of employees in the IT industry from the conclusions drawn in a factor analytic computation of the data set (Figure 14).

Figure 14: Construction of turnover intention factors from factorial analysis



Source: Author

Figure 14 clearly indicates that items amongst some of the latent behavioural scales overlap the sub-constructs from an organisational behavioural perspective (that is, at a micro, meso and macro level). Such a structure within the data set could thus assist managerial decision-making and future research efforts in obtaining clearer descriptive explanations of the underlying phenomena of IT employees' turnover intention.

The components that were uncovered from exploratory factor analysis of the present data set, culminated in four significant behavioural scales, which were labelled as follows:

- Factor 1 – Personal enrichment from management support.
- Factor 2 – Participatory dynamics.
- Factor 3 – Short-term individualised incentivisation.
- Factor 4 – Long term individualised incentivisation.

The reliability and item statistics were subsequently generated for each of these factors (refer to Table 20 through to Table 23) to determine the ranking of importance and the level of required attention from management.

After an examination of these data in conjunction with the literature review, it was deduced that items relating to Factor 1 (Personal enrichment from management support), play possibly the most significant role in understanding, monitoring, leading, planning and managing in terms of IT employees' perceived intention to resign from employment within the organisational context. For instance, items which describe constructive feedback, training, skills development and utilisation, supervisor support, job satisfaction, intrinsic motivation, career advancement and a comfortable working environment (Figure 14), all provide indicators to organisational decision-makers in designing appropriate intervention strategies so as to retain their most valued employee, the IT professional.

6.3 Factor 1: Personal enrichment from management support

6.3.1 Supervisor support

Jiang and Klein (1999) and more recently, Westlund and Hannon (2008), proposed that IT professionals found more satisfaction with their career when they received on-going supervisory support. The same was true when a range of opportunities that satisfied their career aspirations and desires existed within an organisation. The importance of supervisory support for employees in this study was echoed in the open-ended sections of the research instrument where participants indicated their affinity towards support from management. For instance, one respondent stated:

"I would like more support from management".

It was determined that supervisory support created job satisfaction for the employees as they had direction and goals, and they could rely on management to monitor and guide them in terms of achieving such individual goals and ambitions.

6.3.2 Job satisfaction

Job satisfaction can be defined as an affective or emotional reaction and attitude that employees have towards their job (Castro & Martins, 2010; Cranny et al., 1992; Weiss, 2002). Furthermore, Tietjen and Myers (1998) posit that job satisfaction is a crucial task of management, which creates confidence and loyalty and improves quality in the output of the employed.

The findings of this study similarly indicate that employee job satisfaction is an extremely significant retention mechanism to ensure that turnover rates are kept to a minimum. This sentiment is consistent with the literature and was reiterated in the open-ended section of the research instrument. Comments from participants that included words such as “like” or “dislike”, point to the more emotionally motivated attitude towards employment. The following elicited responses support such a conclusion:

“What I like is the constant change of work providing new challenges every day. I dislike the fact that we are understaffed”.

“The aspect that I like least about the organisation is that my job is unfulfilling as it has become very routine”.

Therefore, it may be surmised that intrinsically motivating employees by means of creating a challenging and interesting work environment may directly lead to a more committed and stable IT professional workforce.

6.3.3 Skills development and training

The literature proposes incongruent arguments concerning organisations skills development and training opportunities offered to employees. On the one hand, research indicates that organisations involved in continual training, development and improvement of employees’ skills sets results in reduced turnover rates (Coetzee & Gunz, 2012). Additionally, Westlund and Hannon (2008) propose that training and a realistic opportunity to learn new skills are highly valued by employees.

Alternatively, Mohlala et al. (2012) provide a somewhat contrary argument and propose that, because employers perceive highly trained employees as more employable and thus easily mobile in terms of a willingness to vacate present positions of employment, organisations find that investment in employee training can be counter-productive and ultimately an erosion of competitive advantage. In turn, skills shortages experienced in industry result from a lack of training and development.

Nonetheless, the findings of the present study support the arguments presented by Coetzee and Gunz (2012) and Westlund and Hannon (2008), suggesting that

employees viewed skills development and training as important mechanisms to improve knowledge and job satisfaction, in turn reducing an employee's intention to leave an organisation. For instance, one participant stated:

"The best aspect that I like about our organisation is the growth and training opportunities"

6.3.4 Organisational environment, design and flexibility

Organisational climate is aptly defined by Castro and Martins (2010) as the "shared perceptions, feelings and attitudes that organisational members have about the fundamental elements of the organisation, which reflect the established norms, values and attitudes of the organisation's culture" (p.2). Castro and Martins (2010) suggest that the organisational climate has significant implications for understanding human behaviour in organisations. They further postulate that there is a positive relationship between organisational climate and job satisfaction.

Generally, much of the evidence suggests that when employees are settled and satisfied within an organisation's culture and climate, they are less likely to leave that organisation. According to van Dyk and Coetzee (2012), this can occur because employee commitment consists mainly of the positive attitudes that employees have towards their jobs and the working environment. In fact, it is instability that leaves businesses with high employee turnover and increasing levels of inefficiency (Ongori, 2007).

The present study has found that one aspect of organisational design of particular interest to employees is the ability to work from home. Participants perceive a sense of freedom, trust and responsibility embedded within their actions with such "flexi-time". Another advantage of the ability to work from home relates to increased productivity due to the minimisation of employee disturbances (Grobler & de Bruyn, 2011). From these findings, it is evident that the organisational climate and culture plays a significant role in the decision of an employee to remain with or leave an organisation.

6.3.5 Aspects of turnover intention

It is apparent from both the literature review and results of the present study that many factors play a pertinent role in influencing the turnover intention of employees within the IT industry. In response to this, management should analyse the psychological aspects related to turnover intention, in order to ensure a long-term effectiveness of the organisation (Martins and Meyer, 2012). Lockwood and Ansari (1999) found that strategies such as raising salaries, offering stay bonuses, career advancements, promotions, training, personal recognition and time off were successful in retaining employees that wanted to resign.

Additionally, it may also be pertinent for enterprises to focus on key management aspects to increase employee productivity and in turn reduce turnover (Luftman & Rajkumar, 2007). Therefore the results from the present study provide evidence to suggest that aspects such as maintaining open and honest communication channels, providing good worker supervision, maintaining trust among co-workers, enabling a challenging work experience, providing opportunities for advancement and maintaining a work-life balance, are important facets for retaining the expertise of the IT professional.

Furthermore, Martins and Meyer (2012) found that knowledge behaviour, strategy, implementation and leadership proved to be the most important factors that influenced knowledge retention.

Alternative studies found that employee groups are in fact motivated by different retention variables. According to Gaylard et al. (2005), key areas fundamental to retention include; job satisfaction, financial reward, employability and personal growth, the job itself, relationship with and support received from management.

The results of the present study therefore enhance the findings from similar previous studies in the aforementioned discussion.

6.4 Factor 2: Participatory dynamics

The behavioural scale relating to Factor 2 consisted of items pertaining specifically to teamwork and team dynamics. However, this study presented conflicting results regarding the benefits achieved from working within teams. Some of the participants argued that teamwork was beneficial as members were able to share ideas and thoughts, and brainstorm together with the opportunity of collectively assessing task requirements and consequently determining the best course of action to take to complete a task.

The challenges that participants reported in terms of team dynamics suggested that some members were free riding on the efforts of other members and that individual work was not recognised. Furthermore, team disruptions could arise from disputes and conflicting suggestions from team members resulting in poor team productivity levels.

A number of statements were elicited from the open-ended sections of the research instrument. These were used to substantiate the findings of the benefits and challenges that were encountered from team dynamics, and are presented below.

"I like working in teams and brainstorming together. The best ideas come from teamwork as you have a greater wealth of knowledge".

"If you put effort into the team dynamics, you can consistently get outputs that are greater than the sum of their parts. I love that".

"I like the fact that there are people to bounce ideas from and therefore come to conclusions quicker, and come up with conclusions that are more suitable to the problems".

"I feel there has to be a balance between working in teams and working alone suited to an individual's character. Strategy for getting things done efficiently comes from teams working together towards a goal".

"A combined, coordinated team can achieve great things in a shorter period of time. A disorganised team has the opposite effect".

"I dislike the fact that sometimes the individual work is over-looked. Sometimes there might be a clash of ideas which might take long to overcome".

"I dislike that one person can drag the team down - no responsibility of individual to contribution".

"Team work teaches you to have confidence in others but might cause problems when people are not working on the same level".

Proposition 2:

An employee's perceived intention to resign from employment is dependent on specific differences in demography.

There are a number of different demographic factors that can be identified among employees to determine their levels of intention to vacate employment. A non-exhaustive listing of these items consists of gender, age, qualifications, remuneration and income levels. The impact on two of the demographic variables, namely gender and age on turnover intention were examined by means of comparative statistical testing.

6.5 Remuneration and reward

Although an abundance of information regarding employee remuneration and benefit offerings is found within the literature, pointing to remuneration and reward as both a retention mechanism and a way to harness employee interest in the company, there is little further explanation of the phenomena (Moore & Bussin, 2012; Nujjoo & Meyer, 2012; Sutherland & Jordaan, 2004; Weibel et al., 2009; Yang, et al., 2012). This may be the reason why Yang et al., (2012) postulate that organisations tend to focus on rewards management as their main strategy to attract, retain and incentivise staff, with the intent to create a committed workforce.

Weibel et al. (2009) found that individuals performed best when the incentive system linked rewards closely to performance. However, Nujjoo and Meyer (2012) established that employees were unlikely to remain in the employment relationship when incentivised by monetary benefits alone. In fact, Lockwood and Ansari (1999) identified that money was the most important factor in an employee's decision to join

an organisation, but an attractive base salary alone was not enough to retain the employee. Additionally, Pouliakas (2010) proposed that incorrect monetary incentives could incite dysfunctional behaviour responses negatively influencing employee morale.

Responses to the research instrument regarding remuneration preferences showed an affinity toward share options as a retention mechanism for employees that have worked in a company for a number of years. The offering of shares to entice employees to stay with an organisation is a practical option that employers could consider when faced with turnover challenges with an organisation. For instance:

"Share options would be attractive, although I feel that these should be only given to employees that have been working at the organization for a substantial amount of time".

"Share options based on time worked within a company and contribution to the business".

Other findings in the literature relating to employee demographics suggest that education levels are positively related to employee turnover, because the better qualified a person is, the more marketable they are, and the better their job opportunities (Cotton & Tuttle, 1986; du Plooy & Roodt, 2013).

From these studies and those of the literature, it can be concluded that monetary rewards and incentives are important in attracting employees. However, non-monetary reward mechanisms, such as job satisfaction and other forms of personal employee recognition are more effective in building long-term employee engagement, consequently reducing an employee's intention to leave an organisation.

In terms of remuneration preferences, participants indicated that being offered shares in a company could be seen as an effective retention mechanism both for employees that have long service tenure, and to entice shorter serving employees to stay with an organisation for extended periods. Participants also indicated the satisfaction that they derived from recognition of exceptional performance and welcomed remuneration in the form of performance bonuses.

The following hypotheses were evaluated to fulfil the secondary objectives of the study.

Hypothesis 1:

There is no difference in employees' perceived intention to resign from employment based on the grouping variable, 'generation'.

The generational school of thought postulates that unique human behavioural beliefs, values and attitudes are developed as a result of major defining historical events (Codrington & Grant-Marshall, 2004; Giancola, 2006; Giancola, 2008; Moore & Bussin, 2012). Furthermore, the classification of generations as a result of these events resemble different characteristics of the individuals pertaining to the various generational categorisations. Consequently, it can be concluded that different generations are driven by different factors (Table 3), and that employees differing intentions to resign can be based on these different characteristics. This is consistent with the assumptions in the literature that different age groups respond differently to stimuli, based on generational or age differences (du Plooy & Roodt, 2013).

According to Moore and Bussin (2012), Giancola (2008), Lockwood and Ansari (1999) and van der Merwe, et al. (2009), there are conflicting views as to whether employees from various generations and socio demographic groups desire different rewards and benefits in terms of retention mechanisms. In order to better understand the reward preferences of different generations, Moore and Bussin (2012) conducted a study which concluded that generations displayed different life cycle preferences rather than reward preferences. These findings supported the research conducted by Giancola (2008), who also found that different generations did not necessarily prefer different rewards.

Although there was no conclusive finding between generations and reward preferences, the literature indicated that there is a significant relationship between age and turnover intention. Du Plooy and Roodt (2013) conducted a study to explore the moderation effects of demographical variables on turnover intention, and found that age related considerations, negatively-impacted on an employee's intention to vacate his or her position. It follows that conflicting research results exist for the relationship between these demographical variables and turnover intention. This continues to remain unclear in the literature as du Plooy and Roodt (2013) found that

Industrial and Organisational psychology theory provided few substantial links on the predictive model of turnover intention.

The non-parametric, Kruskal-Wallis test was used in this study to calculate whether there was a significant difference in employees' perceived intention to resign from employment based on the grouping variable 'generation' (Table 25). The test was originally conducted on the participants' age brackets grouped into decades such as 20-30 years of age, 30-40 years of age and 50-60 years of age. The Kruskal-Wallis test result of this grouping classification against the four developed constructs of turnover intention did not yield any significant difference (at the 5% level of significance) between the different age classifications and employees' intention to leave.

Following from this result, it was decided to conduct further testing after grouping the ages into the generational categories as explained in Chapter 2 in order to discover whether a significant difference existed at a deeper level. The Kruskal-Wallis test was subsequently performed to achieve this objective on the four developed constructs, against the generation classifications of Baby Boomers, Generation X and Generation Y participants (Table 25). The test result also failed to reject the null hypothesis at the 5% level of significance, concluding that there was no significant difference in employees' perceived intention to resign based on their generation.

These results were consistent with the findings that were achieved in the literature by Moore and Bussin (2012), Giancola (2008), Lockwood and Ansari (1999) and van der Merwe, et al. (2009). Additionally, in a study investigating the possible antecedents of turnover intention, du Plooy and Roodt (2003) found that neither age, nor education levels, nor tenure, nor race had any significant impact on an employee's intention to leave.

Hypothesis 2:

There are no significant differences between males' and females' intention to resign from employment.

Much of the research on gender within the IT industry assumes that all organisational factors affect females in the same way (Trauth et al., 2009). Kroger (1997) and du Plooy and Roodt (2013), contend that although men and women share similar psychological structures and developmental processes, their spheres of work differ. Du Plooy and Roodt (2013) further theorised that males and females differ in how they respond to stimuli leading to different withdrawal behaviour patterns.

Additionally, Trauth et al. (2009) show that three organisational factors affect women's career development, these are work-life balance, organisational climate, and mentoring. However, the literature begs the question whether different genders are motivated by different retention variables. The assumption by Trauth et al. (2009) is that women are not all the same, and that within-gender variation is expected to exist, providing a further opportunity to develop a deeper understanding of gender relations in the IT field.

The non-parametric Kruskal-Wallis test was used to test the hypothesis whether there was a significant difference between males' and females' intention to resign from employment (Table 26). The non-parametric comparison of the different genders showed that there was a significant difference at the 5% level of significance in the mean ranking between males' and females' intention to resign from employment based on the behavioural scale, Long-term individualised incentivisation benefits.

The behavioural scale item, Long-term individualised incentivisation consisted of remuneration items such as pension and provident benefits, and medical aid benefits. It also consisted of job security and loyalty. The present study thus found that females demand higher job security and are more attracted to benefits such as medical aid and pension funds. A possible explanation for this phenomenon could be due to the disparity of female versus male employee participation in the IT environment. The current study showed a representation of 76.6% consisting of male participants with 23.4% being female. Although other studies have suggested slightly more balanced gender participation rates (Moore & Bussin, 2012), the scales lean towards a higher rate of male participants in the IT industry. The lower participation

rate of females in the IT industry could result in higher loyalty towards employers because of the lower demand of female employees. Furthermore, male employees in the present sample perceive that they are not as restricted in moving between organisations.

6.6 Conclusion

The three levels of analysis relating to organisational behaviour were integrated into studies that were used to determine the antecedents of turnover intention in order to develop a model that established the latent structure of IT employees' perceived intention to resign from employment. This was achieved by a statistical data reduction method, namely exploratory factor analysis. Four significant factors were subsequently uncovered.

The findings suggested that items grouped into the construct; Personal enrichment from management support was deemed the most important with the highest level of attention required from management. These items consisted of supervisor support, job satisfaction, skills development and training.

Furthermore, hypotheses were tested to determine if there existed any significant differences in employees' perceived intention to resign based on their generation and gender groupings. The study concluded that there was no significant difference in an employees' perceived intention to resign based on their generational groupings. However, there was a significant difference in the mean ranking between males' and females' intention to resign based on the Long-term individualised incentivisation benefits behavioural scale.

The following, final chapter of this study highlights the main findings of this research, and presents recommendations to stakeholders on this basis. It also provides suggestions for further research opportunities to add to the available studies of turnover intention of employees in the IT industry.

CHAPTER 7

CONCLUSION

7.1 Introduction

The previous chapter discussed the findings of the research propositions and hypotheses following a review of the relevant literature. The purpose of this chapter is to summarise the main findings of the study, provide recommendations based on these findings and also to provide suggestions for further research opportunities not covered under the scope of this study.

7.2 Main findings of the study

Despite the extensive nature of research that has been conducted in the field of turnover and turnover intention, there is still much to be learnt about the mechanics that drive people's behaviour and ultimately their decision of whether to stay with or leave an organisation. The reason for conducting this study was to provide management and organisations with further insight into understanding the underlying factors that, if monitored consistently, could potentially result in a reduction of turnover of employees in the IT industry. The research also set out to determine whether there were any significant differences in employees' perceived intention to resign based on demographics such as generations and gender groupings.

The research objectives were achieved by incorporating the elements of the three levels of organisational behaviour (micro, meso, and macro level of analysis) with previous studies of antecedents of intention to vacate employment. The understanding of these three levels of organisational behaviour were used to guide the exploration of the turnover intention of IT employees as previous studies relating to turnover intention had not been developed from this systemic viewpoint. This resulted in the development of a model containing four constructs relating to the underlying structure of turnover intention of employees in the IT industry (Figure 14).

Proposition 1:

South African IT employees' perceived intention to resign can be described by a latent factorial structure.

The four constructs that were developed comprised of items relating to turnover intention from the integration of the organisational behavioural framework and the studies pertaining to the antecedents of turnover. A summary of the items pertaining to each construct is displayed in Table 27.

Table 27: Table of turnover intention constructs

Construct	Construct Name	Items comprising of construct
Factor 1	Personal Enrichment from Management Support	Constructive feedback, training, skills development and utilisation, supervisor support, job satisfaction, intrinsic motivation, career alignment, work/home life balance, leave flexibility, understanding of expectations, flexible environment
Factor 2	Participatory Dynamics	Working relationships, team problem solving, task delegation, team task identity, team decision making
Factor 3	Short-term Individualised incentivisation	Market-related remuneration, performance based reward, flexible hours, study leave, structure own package, recognition, role challenge, global exposure
Factor 4	Long-term Individualised incentivisation	Pension / provident benefits, medical aid benefits, job security, loyalty

The study deduced that although the items pertaining to these four constructs are very important in terms of mechanisms in which to retain employees, the primary construct that required a significant level of management involvement was Personal enrichment from management support. A non-exhaustive listing of the items pertaining to this construct were analysed further. The highlights of the findings are presented below:

- IT employees found more satisfaction with their jobs and career when they received on-going supervisory support.
- Employee job satisfaction is an extremely important mechanism that management must maintain in order to reduce turnover intention of employees.
- Employees who are intrinsically motivated by means of challenging and interesting work are more committed to an organisation and therefore, less likely to quit.
- Employees viewed skills development and training as important retention mechanisms to create job satisfaction and improve their knowledge.

- Organisational flexibility, such as the ability to work from home, created a sense of freedom and trust from an employee's point of view. If employees are settled and satisfied within an organisation's culture and environment, they are less likely to leave the organisation.

The finding relating to team dynamics presented conflicting results in terms of the benefits achieved and disruptions encountered ultimately influencing overall levels of productivity.

Proposition 2:

An employee's perceived intention to resign from employment is dependent on specific differences in demography.

The literature indicated that organisations often focussed on rewards management as their primary strategy to attract, incentivise and retain staff (Yang et al., 2012). However, research by Nujjoo and Meyer (2012) established that employees were unlikely to stay with an organisation when incentivised by monetary benefits alone.

Furthermore, non-monetary mechanisms such recognition, training, skills development and job satisfaction were found to be more effective in building long-term employee engagement, consequently reducing employees' intention to leave an organisation.

The present study found that participants in the sample had a greater affinity towards the incentive of receiving company share options in the form of a retention mechanism. This is a feasible option, which could be exercised by employers when facing turnover challenges within an organisation.

Hypothesis 1:

There is no difference in employees' perceived intention to resign from employment based on the grouping variable, 'generation'.

Although various age groups respond differently to stimuli based on generational age differences (du Plooy & Roodt, 2013), conflicting research results were obtained for the relationship between demographic variables and turnover intention. This study found that there was no significant difference in an employee's perceived intention to resign between 'generations'.

Hypothesis 2:

There are no significant differences between males' and females' intention to resign from employment.

According to Trauth et al. (2009), much of the research on gender in the IT industry assumes that all organisational factors affect females in the same ways. Additionally, Trauth et al. (2009) postulate that factors such as work-life balance, organisational climate, and mentoring affect females' career development. Non-parametric comparison of the different genders showed that there was a significant difference in the mean ranking between males' and females' intention to resign based on the behavioural scale, Long-term individualised incentivisation benefits.

This behavioural scale consisted of remuneration items such as pension, provident and medical aid benefits. It also contained items relating to loyalty and job security. The study concluded that the primary reason for this explanation was the disparity between female and male participants in the IT industry, and that a lower supply and demand for female employees resulted in higher levels of loyalty. It was determined that respondents who indicated their gender as "female", viewed benefits such as medical aid and pension funds as more important.

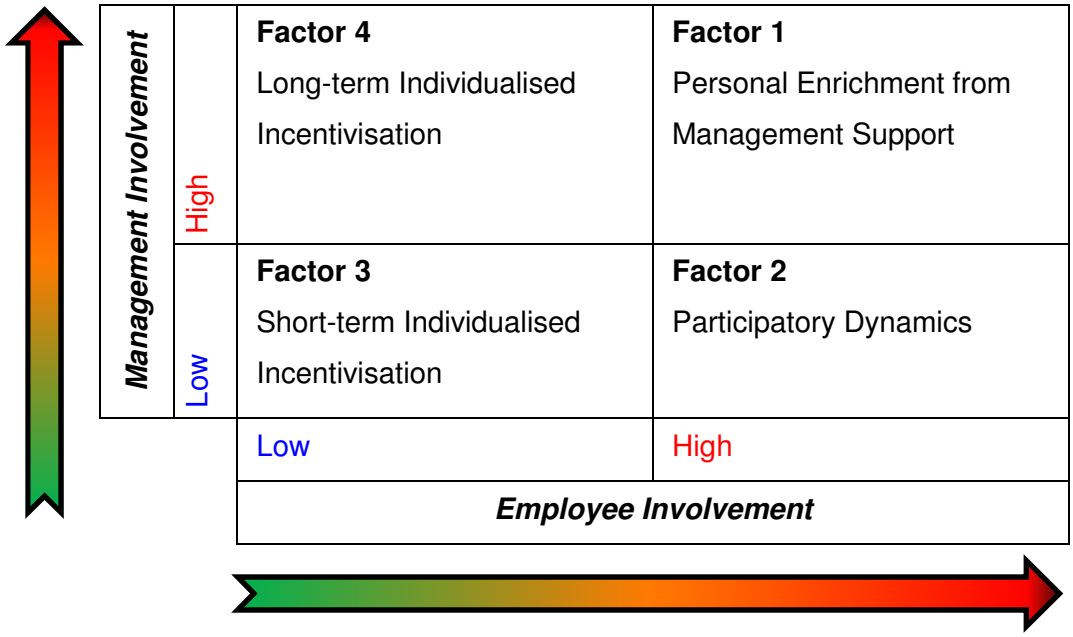
7.3 Recommendations to employers

The purpose of this research was to explore the latent structure of the turnover phenomenon experienced by employers in the IT industry. Furthermore, it was intended to identify any mechanisms that could be employed to retain the institutional knowledge of these employees, so maintaining an organisation's competitive advantage.

Turnover can largely be classified into two categories: voluntary and involuntary turnover. Employers would like to identify ways to manage the former successfully. Voluntary turnover describes employees terminating the employer-employee relationship of their own accord, usually owing to factors such as pay, benefits, and frustrations with the working environment (Wanous, 1979; Yang et al., 2012).

The following model (Figure 15) has been developed to inform employers of the level of commitment required from management, and the corresponding factors that need to be monitored in order to reduce the turnover intention of employees in the IT industry.

Figure 15: Management Involvement (Turnover Intention)



Source: Author

In order to achieve this, the four factors that were developed in terms of the factorial analyses (Figure 14) were positioned relative to the involvement levels required from employees and employers. This model (Figure 15) is to be used in conjunction with Figure 14, the constructed factors of turnover intention model, and with the table of turnover intention constructs (Table 27). Figure 14 shows how the constructs were developed and Table 27 shows a summary of the items relating to the constructs. A further elucidation regarding positioning of these constructs in the model is given below.

Factor 1: Personal enrichment from management support.

This construct was deemed the most important component that management would need to monitor in order to reduce the turnover intention of employees. Figure 15, shows the high level of involvement required of management, and the correspondingly high level of involvement required of the employee. By illustration, some of the most important items relating to this construct are: receiving constructive feedback from management, training, skills development and supervisory support. It is evident that these factors require a significant level of involvement from both management and employees. This would improve the levels of employee job satisfaction reached by employees and would ensure that their desires and goals within the organisation are achieved, ultimately resulting in the reduction of their intention to leave the company.

Factor 2: Participatory dynamics.

This construct largely involves team dynamics, problem solving and team decision-making. Although management involvement is required to monitor and oversee the running of teams, a high level of employee involvement in teamwork is essential in order to increase productivity levels and performance within teams.

This study indicated that team participation could be extremely beneficial in terms of brainstorming, sharing of knowledge and ideas, and in achieving synergies in work related aspects. However, disruptions experienced within teams could be devastating to the organisation and might reduce the productivity levels and the morale of employees drastically. As long as teams are performing well, very little intervention is required from management. However, it is imperative that management acts when disruptions are being experienced among team members.

Factor 3: Short-term individualised incentivisation.

This construct pertains to important items that motivate and keep employees engaged in the short-term. These include market-related remuneration, performance based reward, flexible hours, study leave and the ability to structure one's own package according to one's needs. These items require a certain level of involvement from management and employees in the initial negotiation stages but once they are agreed to and aligned with employee's and employer's expectations, they do not need to be constantly monitored; hence, a lower level of involvement is required from both employers and employees.

Factor 4: Long-term individualised incentivisation

This construct consists of benefits that employees deem important in the long-run, such as pension and provident benefits, medical aid, job security and loyalty. Employees require a relatively high level of involvement from management in terms of mentoring and guidance in order to keep employee satisfaction and loyalty in organisations. Furthermore, in many respects, job security is seen as an extremely important factor given the current challenging economic climate.

Further recommendations to employers

According to the literature, organisations often focus on rewards management as their main strategy to attract, retain and incentivise staff (Yang et al., 2012). It was also established that monetary benefits were useful in attracting employees to an organisation; however, non-monetary mechanisms such as recognition, training and skills development were found to be more effective in building long-term employee engagement. Management should therefore consider focusing on non-monetary factors as further retention mechanisms.

A factor that employees indicated that would significantly reduce their intention to leave an organisation was job satisfaction, attained through being intrinsically motivated by interesting and challenging work assignments. This, together with on-going beneficial supervisory support to facilitate employee development and growth, were deemed important factors that managers must continually monitor and maintain.

Finally, participants indicated the importance of organisational flexibility and design within a working environment. An environment that is conducive to learning is said to positively impact job satisfaction among employees, resulting in a reduction of their intention to leave an organisation.

7.4 Future research opportunities

This research revealed several further research opportunities, which are presented below:

The present study was conducted on employees in the IT industry in South Africa. Due to the extensive turnover intention that is experienced among other business industries, it is suggested that a similar study is conducted on knowledge workers within other sectors in South Africa, such as in the financial sector. This will enable employers and academics to establish whether members from other industries are driven by the same retention factors. Additionally, it will be interesting to determine whether the same latent structure and retention mechanisms developed in this study, in terms of reducing turnover intention of employees, can be employed in other business industries.

Another suggestion for further research would be to understand the impact on turnover intention of employees of technological advancements and the continual changing dynamics of the working environment, such as being able to work remotely from almost any location via the internet and cloud computing. It would also be interesting to determine the impact of these technological advancements on turnover intention as they continually change the scope of conducting business.

A quantitative research approach was utilised for this study, where data was collected via a questionnaire. This research methodology, sacrificed depth of understanding of the psychology behind turnover drivers. Further qualitative research could be conducted to develop a deeper understanding of the psychology behind the drivers of turnover intention in the IT industry.

Additionally, as this research was carried out in the IT industry in South Africa, it would be beneficial to conduct the same research in neighbouring countries to South Africa, to determine whether the working dynamics and retention variables are similar. It would also be interesting to determine the drivers behind an employees' intention to resign in these neighbouring countries.

Lastly, due to the extensive nature of turnover intention and the non-exhaustive listing of factors identified and covered in this study, an opportunity exists to further analyse the drivers of turnover intention at a deeper level by conducting individual studies on

each of the organisational behavioural attributes. Comprehensive analysis on the psychology of each of these individual factors, could further aid employers in reducing the turnover intention of IT employees.

7.5 Conclusion

The literature indicates that a general characteristic of IT workers in technologically advanced industries is their desire for education and training. Employees that are consistently exposed to training and those that are intrinsically motivated by means of challenging and interesting work are more committed to an organisation and therefore less likely to quit. However, staff turnover studies suggest that employees want to capitalise on their skills and knowledge and thus chose to move to different companies to accelerate their learning and career paths, posing a further dilemma towards employers.

According to the literature, there are several reasons why people resign from organisations, amongst them, job related stress, boredom, lack of training, personality clashes, lack of commitment to the organisation, job dissatisfaction and exhaustion (Gaylard et al., 2005; Ongori, 2007; Scorce, 2008; van der Merwe et al., 2009). Although the literature articulates a number of various retention mechanisms, there have been no studies that incorporated these items into the organisational behaviour framework. This research developed four latent constructs pertaining to turnover intention of IT employees.

This study has contributed to the available literature in attempting to determine the most critical retention factors that management need to monitor in order to alleviate the high turnover rates being experienced across the IT industry. The ill management of these high turnover rates poses a major challenge to IT organisations due to the cost consequences (both direct and indirect) attributable to employee turnover. Some of these costs are training and sourcing, as well as the loss of institutional knowledge, which diminish an organisation's competitive advantage. The retention of these workers will avoid unnecessary costs and expenditures, and consequently, will benefit companies in maintaining their bottom line profits.

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APPENDICES

Appendix A: Questionnaire

EXPLORING THE LATENT STRUCTURE OF SOUTH AFRICAN INFORMATION TECHNOLOGY (IT) EMPLOYEES' INTENTION TO RESIGN

The purpose of this survey is to explore your perceptions and experiences within the IT industry. The information obtained from the questionnaire will add to the present body of knowledge in human resource management. Your co-operation in completing the survey is paramount to the overall success of this research project.

It is expected that the questionnaire should take you between 10 minutes to 20 minutes to complete..

Dear Colleague:

You are invited to participate in an academic research study because of your experience and knowledge in the area of interest, and within the South African IT industry. This study is being conducted by the Gordon Institute of Business Science (GIBS) at the University of Pretoria.

This research involves an anonymous survey. By completing this online questionnaire you give your consent to participate in this survey on a voluntary basis. Furthermore, you may withdraw from participation at anytime, without prejudice.

Your name will not appear on the questionnaire and the answers you give will be treated as strictly confidential and will be used for academic purposes only. Data is only accessible by the researchers at the University of Pretoria, GIBS. Additionally, you cannot be identified from the answers that you provide.

I thank you in advance for your kind participation.

Yours sincerely,

Research Student: Mark Le Roux (mark.leroux@hotmail.com)

Supervisor: Dr. Preven Naidoo (drpreven@gmail.com)

Please feel free to email any comments or suggestions.

There are 60 questions in this survey.

A Note On Privacy

This survey is anonymous.

The record kept of your survey responses does not contain any identifying information about you unless a specific question in the survey has asked for this. If you have responded to a survey that used an identifying token to allow you to access the survey, you can rest assured that the identifying token is not kept with your responses. It is managed in a separate database, and will only be updated to indicate that you have (or haven't) completed this survey. There is no way of matching identification tokens with survey responses in this survey.

Load Unfinished Survey | Next >> | [Exit and Clear Survey]

EXPLORING THE LATENT STRUCTURE OF SOUTH AFRICAN INFORMATION TECHNOLOGY (IT) EMPLOYEES' INTENTION TO RESIGN

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It is expected that the questionnaire should take you between 10 minutes to 20 minutes to complete..

0% 100%

Section 1: Demographic Information

The following section of information is important in order to compile an accurate description of the demographics of the sample used for this research study

***I acknowledge that I have read and understand the introductory information pertaining to this survey.**

- Yes
- No

? We thank you for participating in the survey.

***What is your gender?**

- Female
- Male

***What is your primary home language?**

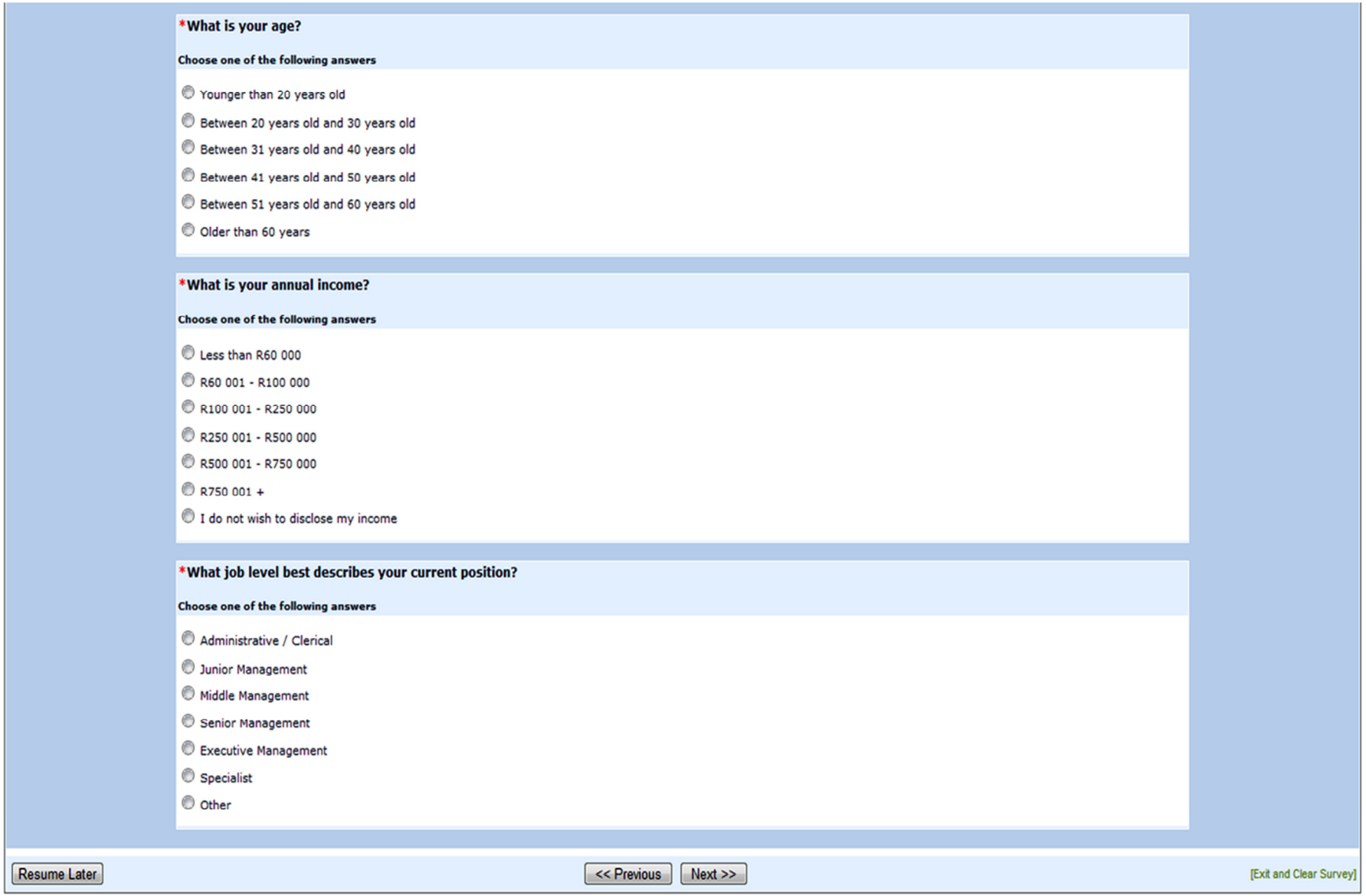
Choose one of the following answers

- English
- Afrikaans
- Zulu
- Other

***What is your highest level of academic qualification?**

Choose one of the following answers

- Less than matric
- Matric
- Diploma
- University degree
- Post graduate degree
- Other



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It is expected that the questionnaire should take you between 10 minutes to 20 minutes to complete..

0% 100%

Section 2: Job-related Factors

Please read each question carefully and complete all the questions in this section. Indicate within the appropriate bullet how strongly you disagree or agree with the statement.

Each item is rated on a scale of 1 – 7 where 1 is "COMPLETELY DISAGREE" and 7 is "COMPLETELY AGREE".

Please choose the answer which best represents your opinion. There is no incorrect answer, simply answer each question to the best of your ability.

If you are unsure or neutral with a statement please indicate this with the option "NEITHER DISAGREE NOR AGREE" however, please try to avoid using this option as much as possible.

*

It is important for me to have a competitive market-related remuneration package

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

It is important for me to be financially rewarded in accordance with my performance

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

It is important for me to receive contributions towards a pension or provident scheme

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

It is important for me to receive contributions towards medical aid

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

It is important for me to have the ability to work flexible hours

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

It is important for me to have the opportunity to take study leave

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

It is important for me to receive bursaries/funding for education advancement

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

It is important for me to be able to structure my remuneration package according to my own needs

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

EXPLORING THE LATENT STRUCTURE OF SOUTH AFRICAN INFORMATION TECHNOLOGY (IT) EMPLOYEES' INTENTION TO RESIGN

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It is expected that the questionnaire should take you between 10 minutes to 20 minutes to complete..

0% 100%

Section 3: Individual Factors (Micro level of analysis)

The following section is used to establish how important personal drivers are to you

***I value having the work that I produce praised and rewarded**

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

***I receive constructive feedback on my performance**

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

I receive adequate training

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

I would move to another job for skills development

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

I am able to use newly acquired skills in challenging ways

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

My career path with my organisation is aligned with my personal goals

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

I have a clear understanding of what is expected of me

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

It's important for me to have a close colleague at work

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

I enjoy my job

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

***I have a good balance between my work and home life**

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

I have a constructive working relationship with the manager I report to

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

I am able to take leave whenever it suits me

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

I find my job enriching

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

I work in an environment which allows a high level of autonomy to get the work done

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

Job security is important to me

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

I put in a great deal of effort beyond what is normally expected

Choose one of the following answers

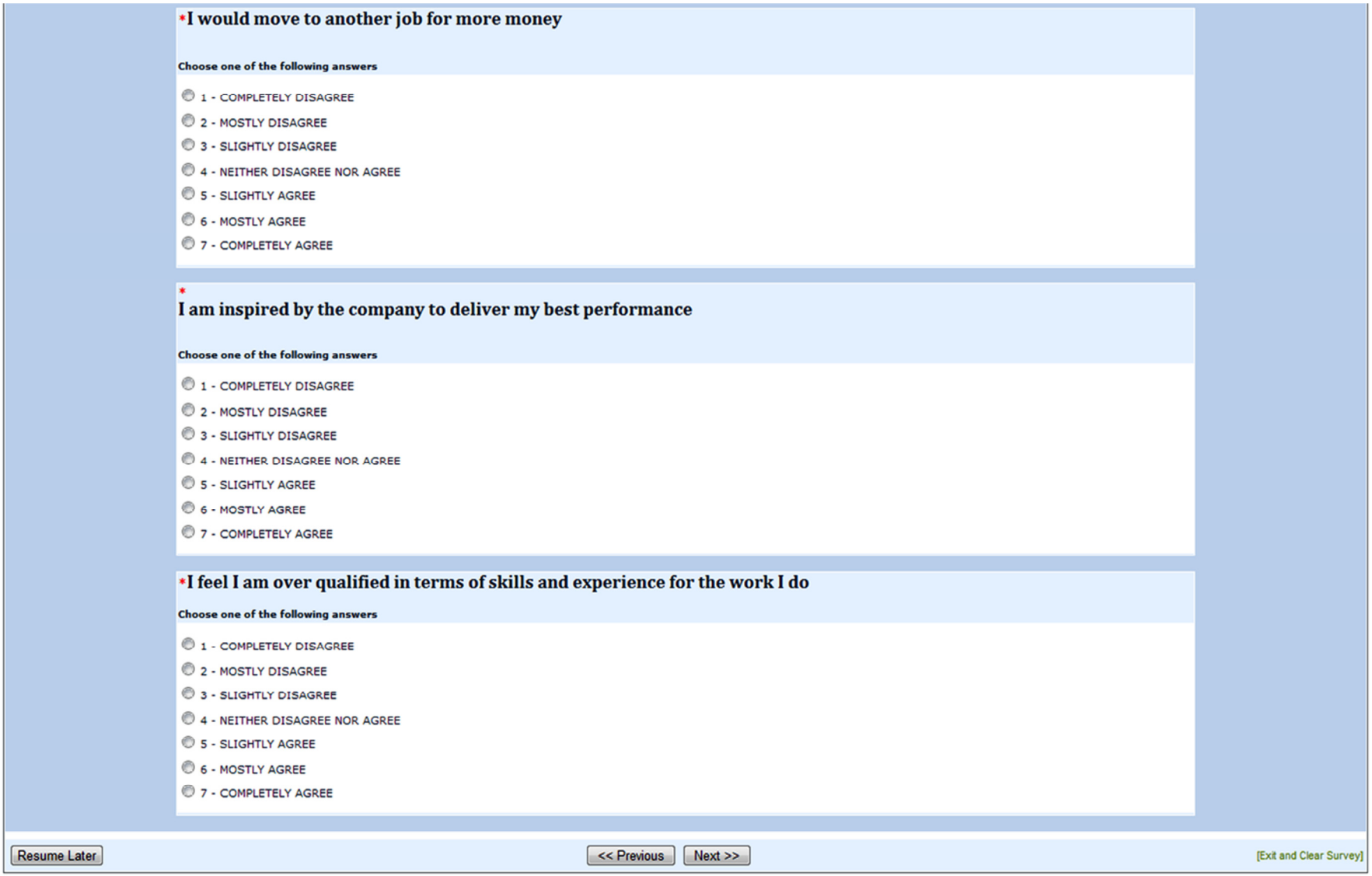
- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

I have total control over my work methods without my managers interference

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE



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It is expected that the questionnaire should take you between 10 minutes to 20 minutes to complete..

0% 100%

Section 4: Working in Teams (Meso level of analysis)

The following statements are used to establish the role of specific issues related to working in teams

*

I have a good working relationship with my colleagues

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

I have opportunities to develop new skills from exposure to team work

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

I get constructive feedback on team performance from team members

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

Teams are recognised for work well done

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

I enjoy problem solving in teams

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

I prefer to work alone than in teams

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

I have a good support structure that I can rely on in solving work problems

Choose one of the following answers

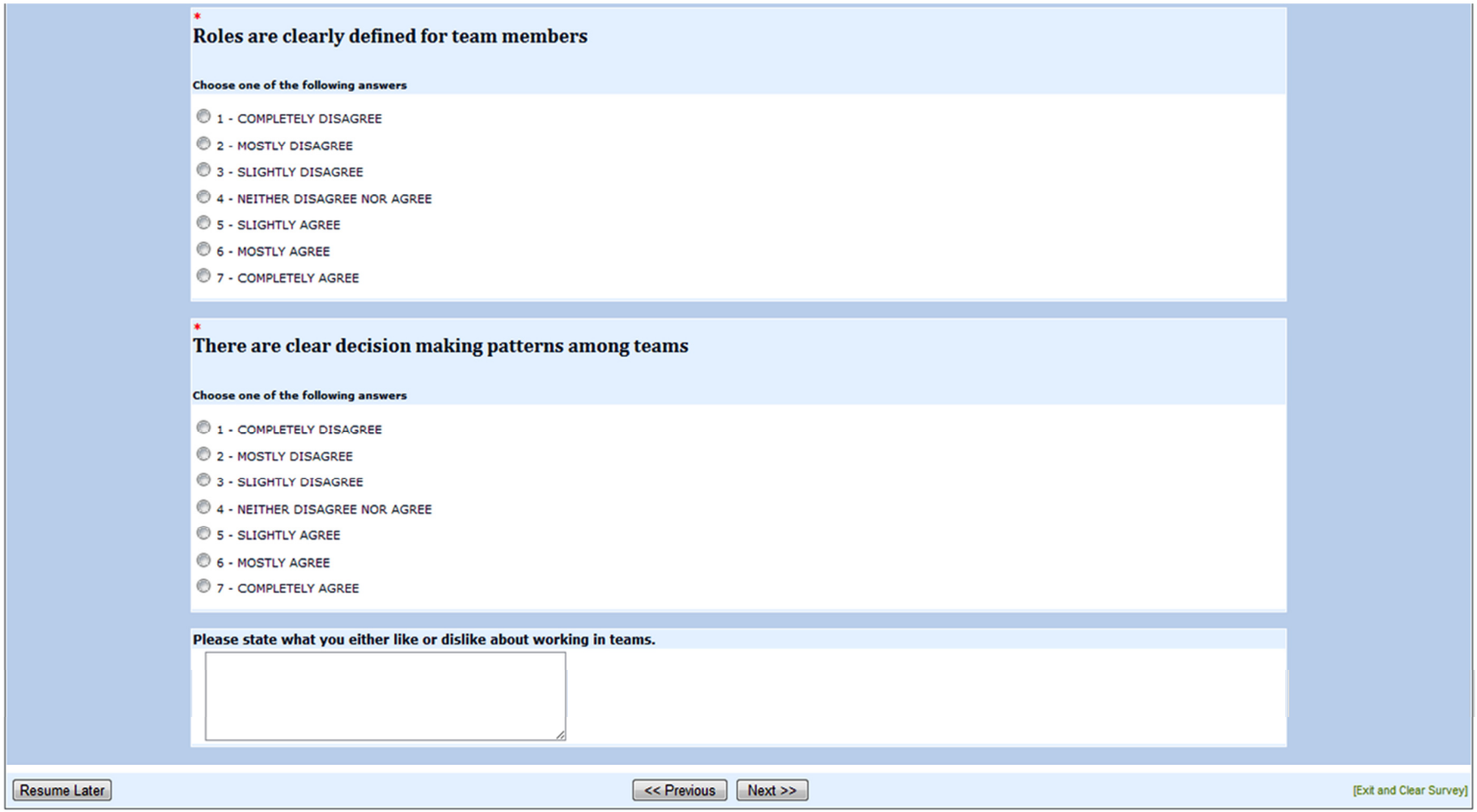
- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

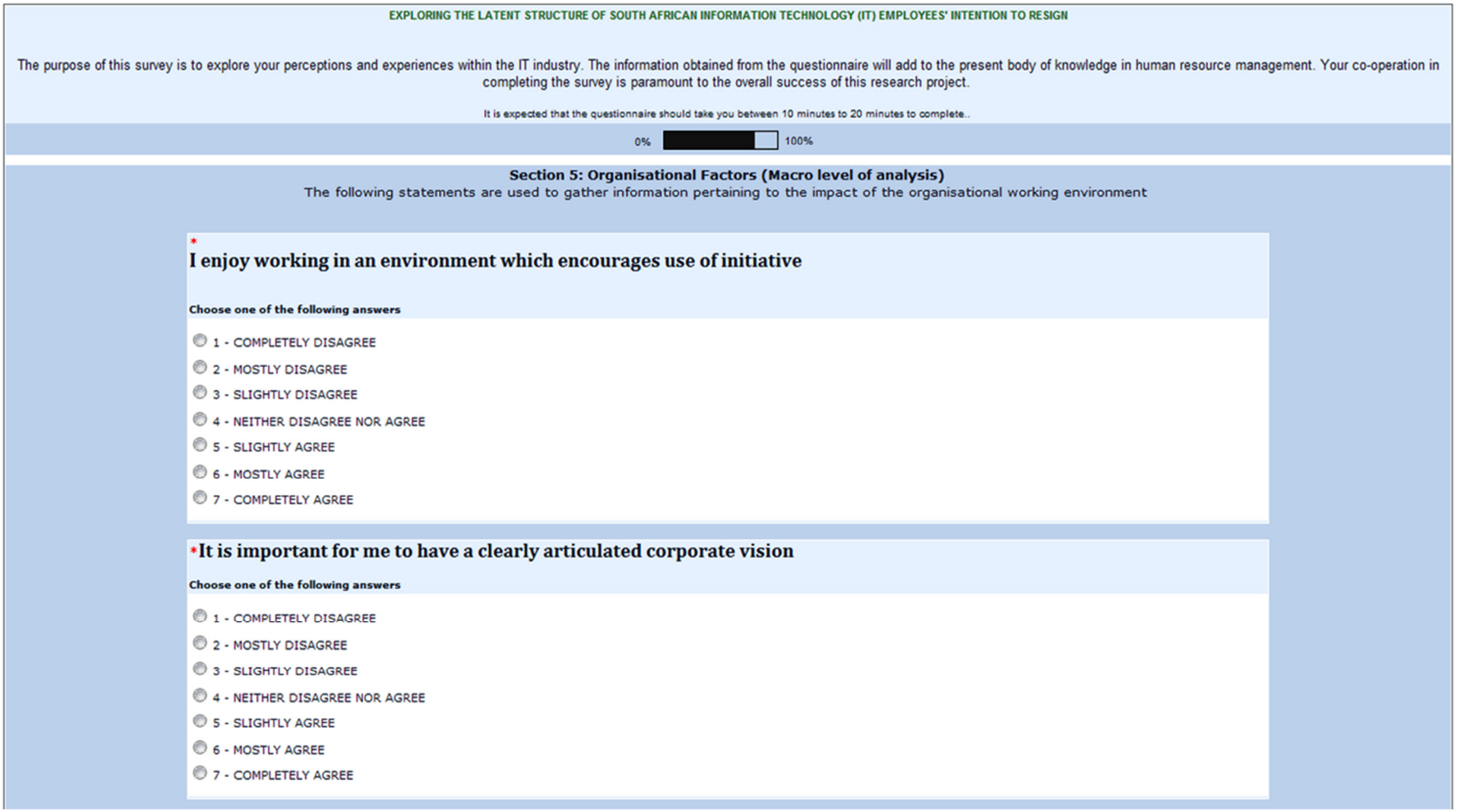
*

The assigning of tasks to group members is easy

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE





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It is expected that the questionnaire should take you between 10 minutes to 20 minutes to complete..

0% 100%

Section 5: Organisational Factors (Macro level of analysis)

The following statements are used to gather information pertaining to the impact of the organisational working environment

*

I enjoy working in an environment which encourages use of initiative

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

***It is important for me to have a clearly articulated corporate vision**

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

Loyalty towards an organisation is important for me

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

I would like to have opportunities to obtain global exposure

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

***I have the opportunity to change careers within the same organisation**

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*I like to interact socially with other employees at work

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

I work for a company that acknowledges its high performers

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*I enjoy working in an ever-changing environment

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

I have fair training opportunities where I work

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

I have the opportunity to develop new skills

Choose one of the following answers

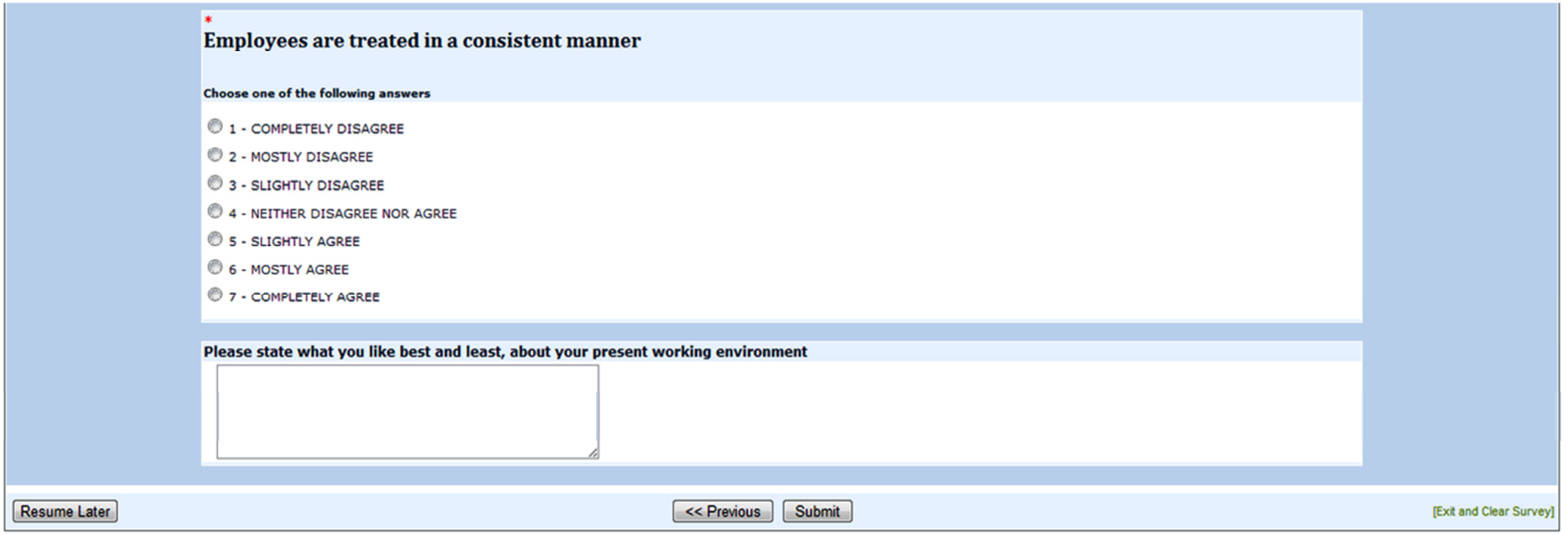
- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE

*

Our management practices allow flexibility in work

Choose one of the following answers

- 1 - COMPLETELY DISAGREE
- 2 - MOSTLY DISAGREE
- 3 - SLIGHTLY DISAGREE
- 4 - NEITHER DISAGREE NOR AGREE
- 5 - SLIGHTLY AGREE
- 6 - MOSTLY AGREE
- 7 - COMPLETELY AGREE



Appendix B: Consent to participate in an academic research study.

"E*xploring the latent structure of IT employees' intention to resign in South Africa".*

Dear participant,

I am conducting research that explores the latent structure of IT employee's turnover intention in South Africa. To that end, you are requested to participate in a questionnaire that will help us better understand the factors from an organisational behavioural perspective, which could in the future, possibly aid in retaining these knowledge workers. The survey should not take more than 20 minutes of your time.

Your participation is voluntary and you can withdraw at any time without prejudice. Completion of the questionnaire will be on an anonymous basis, and all data will be kept confidential and utilised for academic purposes only.

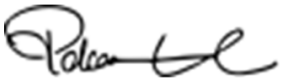
By ticking the box below and completing the survey, you indicate that you voluntarily participate in this research, and give permission for further use of the data. If you have any concerns, please do not hesitate to contact my supervisor or me. Our details are provided below for your ease of reference.

Please indicate your consent that you have read and understood the information provided above by ticking this box ☐

Designation	Name	Contact Number	Email address
Researcher:	Mark Le Roux	082 713 8158	mark.leroux@hotmail.com
Supervisor:	Dr. Preven Naidoo	083 620 7299	prevennaidoo@rocketmail.com

_____

Researcher



_____

Supervisor

Appendix C: Coding of Likert items and demographic items

Likert Type Scale	
1 - COMPLETELY DISAGREE	1
2 - MOSTLY DISAGREE	2
3 - SLIGHTLY DISAGREE	3
4 - NEITHER DISAGREE NOR AGREE	4
5 - SLIGHTLY AGREE	5
6 - MOSTLY AGREE	6
7 - COMPLETELY AGREE	7

Q1: Gender	
Female	1
Male	2

Q2: Language	
English	1
Afrikaans	2
Zulu	3
Other	4

Q3: Qualification	
Less than matric	1
Matric	2
Diploma	3
University degree	4
Post graduate degree	5
Other	6

Q4: Age	
Younger than 20 years old	1
Between 20 years old and 30 years old	2
Between 31 years old and 40 years old	3
Between 41 years old and 50 years old	4
Between 51 years old and 60 years old	5
Older than 60 years	6

Q5: Income	
Less than R60 000	1
R60 001 - R100 000	2
R100 001 - R250 000	3
R250 001 - R500 000	4
R500 001 - R750 000	5
R750 001 +	6
I do not wish to disclose my income	7

Q6: Job level	
Administrative / Clerical	1
Junior Management	2
Middle Management	3
Senior Management	4
Executive Management	5
Specialist	6
Other	7

Appendix D: Research questionnaire constructs

Participation Information	A	id
	B	Completed
	C	I acknowledge that I have read and understand the introductory information pertaining to this survey.
Section 1: Demographic Information	Q1	What is your gender?
	Q2	What is your primary home language?
	Q3	What is your highest level of academic qualification?
	Q4	What is your age?
	Q5	What is your annual income?
	Q6	What job level best describes your current position?
Section 2: Job-related Factors	Q7	It is important for me to have a competitive market-related remuneration package
	Q8	It is important for me to be financially rewarded in accordance with my performance
	Q9	It is important for me to receive contributions towards a pension or provident scheme
	Q10	It is important for me to receive contributions towards medical aid
	Q11	It is important for me to have the ability to work flexible hours
	Q12	It is important for me to have the opportunity to take study leave
	Q13	It is important for me to receive bursaries/funding for education advancement
	Q14	It is important for me to be able to structure my remuneration package according to my own needs
Section 2: Job Related Factors - Qualitative	Q15	Please indicate any other type of remuneration mechanism that may be attractive to you that has not been mentioned. For example; share options, commissions, etc.
Section 3: Individual Factors (Micro level of analysis)	Q16	I value having the work that I produce praised and rewarded
	Q17	I receive constructive feedback on my performance
	Q18	I receive adequate training
	Q19	I would move to another job for skills development
	Q20	I am able to use newly acquired skills in challenging ways
	Q21	My career path with my organisation is aligned with my personal goals
	Q22	I have a clear understanding of what is expected of me
	Q23	It's important for me to have a close colleague at work
	Q24	I enjoy my job
	Q25	I have a good balance between my work and home life
	Q26	I have a constructive working relationship with the manager I report to
	Q27	I am able to take leave whenever it suits me
	Q28	I find my job enriching
	Q29	I work in an environment which allows a high level of autonomy to get the work done
	Q30	Job security is important to me
	Q31	I put in a great deal of effort beyond what is normally expected
	Q32	I have total control over my work methods without my managers interference
	Q33	I would move to another job for more money
	Q34	I am inspired by the company to deliver my best performance
	Q35	I feel I am over qualified in terms of skills and experience for the work I do
Section 4: Working in Teams (Meso level of analysis)	Q36	I have a good working relationship with my colleagues
	Q37	I have opportunities to develop new skills from exposure to team work
	Q38	I get constructive feedback on team performance from team members
	Q39	Teams are recognised for work well done
	Q40	I enjoy problem solving in teams
	Q41	I prefer to work alone than in teams
	Q42	I have a good support structure that I can rely on in solving work problems
	Q43	The assigning of tasks to group members is easy
	Q44	Roles are clearly defined for team members
	Q45	There are clear decision making patterns among teams
Section 4: Working in Teams (Meso level of analysis) - Qualitative	Q46	Please state what you either like or dislike about working in teams.
Section 5: Organisational Factors (Macro level of analysis)	Q47	I enjoy working in an environment which encourages use of initiative
	Q48	It is important for me to have a clearly articulated corporate vision
	Q49	Loyalty towards an organisation is important for me
	Q50	I would like to have opportunities to obtain global exposure
	Q51	I have the opportunity to change careers within the same organisation
	Q52	I like to interact socially with other employees at work
	Q53	I work for a company that acknowledges its high performers
	Q54	I enjoy working in an ever-changing environment
	Q55	I have fair training opportunities where I work
	Q56	I have the opportunity to develop new skills
	Q57	Our management practices allow flexibility in work
	Q58	Employees are treated in a consistent manner
Section 5: Organisational Factors (Macro level of analysis) - Qualitative	Q59	Please state what you like best and least, about your present working environment