The relationship between diversity climate perceptions and turnover intentions

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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

Submission Date: 13 November 2008
ABSTRACT

The purpose of this research was to study the relationship between diversity climate perceptions and turnover intention among knowledge workers in the South African nuclear industry. The researcher hypothesised that race will moderate the above-mentioned relationship (Hypothesis 1), and organisational commitment will mediate the same relationship (Hypothesis 2). The research problem was a challenge seemingly facing South African businesses regarding Black knowledge worker retention.

The research was a quantitative, cross-sectional study, and was a replication of a study conducted in the United States of America (USA). Data was collected by means of a questionnaire, which was e-mailed to subjects selected randomly from strata of Black and White knowledge workers. In total, 128 questionnaires were e-mailed to subjects, out of a population of 143. Multiple regression methods for testing moderator and mediator effects were used to test the hypotheses.

The response rate was 56% (N=72). From the data collected, there was sufficient evidence in support of hypothesis 1. The null hypothesis was therefore rejected. Data collected did not support hypothesis 2 for the two race groups analysed together. However, when race was controlled for, mediation of the above-mentioned relationship was found among Whites. There was no evidence for mediation among Blacks.
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.

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Signature: _________________________

Date: _____________________________
ACKNOWLEDGEMENTS

Research Supervisor

Dr. Caren Scheepers was a pillar of strength during this research. Her enthusiasm right at the beginning and onwards was contagious: she contacted the researcher two days after her appointment as supervisor for this research project! Her guidance throughout has been phenomenal, and she made many valuable suggestions which had a profound impact on the success of this research.

The fact that Dr. Scheepers has done extensive consulting work in the SAn nuclear industry and understands knowledge workers’ issues in that industry can help explain the high quality of inputs she made towards successful completion of the research project. Caren was an absolute pleasure to with.

Family

My wife, Portia Selome, and our boys, Botlhale and Kagiso, were very supportive throughout. Also, the generosity that they displayed by allowing me to spend so much time away from them is highly appreciated.

Companies & Respondents

The data collected from knowledge workers in the South African nuclear industry was the cornerstone of this research. A special vote of thanks goes to involved companies for permission to collect data among their employees.

Respondents are thanked for contributing the data which enabled the testing of research hypotheses. Without the data collected, this research would not have been completed.
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LIST OF ABBREVIATIONS

The following abbreviations have been used in this proposal.

ANOVA: Analysis of variance
BBBEE: Broad-based black economic empowerment
CEE: Commission for employment equity
EAP: Economically active population
EE: Employment equity
EEA: Employment equity act
MBA: Master of Business Administration
Necsa: The South African nuclear energy corporation
SA: South Africa
SA:n: South African
SEM: Structural equation modelling
USA: United States of America
1. CHAPTER 1: INTRODUCTION TO THE RESEARCH PROBLEM

1.1 Research problem

The research problem at hand is the challenge facing South African (SAn) organisations regarding the retention of Black knowledge workers (Black in the context of the Employment Equity Act (EEA) of 1998 and the Broad-Based Black Economic Empowerment (BBBEE) Act No. 53 of 2003, which includes Africans, Coloureds and Indians).

The broad objective of the EEA is to achieve an employment profile of people from designated groups that is similar to their Economically Active Population (EAP). Two of the seven elements of the generic BBBEE scorecard, employment equity and skills development, are weighted at 15% each. They are geared at encouraging organisations to identify, recruit, train and develop Black people at professional, middle and lower management and skilled worker levels. Statistics given in the annual reports of the Commission for Employment Equity (CEE) suggest that very little progress is being made by SAn organisations in transforming their workforces.

Based on data reported by companies to the CEE over the period 2000 to 2006, the representation of Black knowledge workers (reported as professionally qualified and experienced specialists and mid-management) decreased by 7.6% (CEE Annual Report, 2006-2007). The report suggests that over the same period, White, representation at the same level increased by 6.1% (See Appendix 1).

It seems that while SAn businesses struggle to attract and hold on to talent in general, the situation is worse regarding the retention of Black knowledge
workers. This research sets out to seek answers to the following key questions:

- Does diversity climate in SAn nuclear firms influence their ability to retain Black knowledge workers?
- Are diversity climate perceptions of knowledge workers in the SAn nuclear industry related to their turnover intentions?
- Does race play any moderating role on the relationship between diversity climate perceptions and turnover intentions?
- Does commitment to their organisations mediate the link between diversity climate perception and knowledge workers’ turnover intention?

### 1.2 Background to the research problem

Knowledge worker retention is an area that is receiving a lot of research attention recently due to an ongoing war for talent, the need to comply with transformation targets, a shortage of talent, and a high mobility rate among knowledge workers.

#### 1.2.1 The job-hopping phenomenon

Job-hopping can be defined as the frequent, voluntary mobility of individual employees from one organisation to next, for a variety of reasons.

Frustrations caused by the job-hopping phenomenon were clearly evident in a recent statement allegedly made by the Governor of the SAn Reserve Bank, “I have sought to recruit many competent Black people, and no sooner have we trained them that they leave. I get so upset…I am stopping this recruitment of Black people. I am OK with my Afrikaners. They do the work, and become experts” (Khanyile and Maponga, 2007, p. 3).

Khanyile et al.’s (2007) findings suggest that while people from all races are
likely to change jobs, Blacks find it particularly hard to fit in SAn organisations and are more likely to leave due to several push factors, among them:

- Racial discrimination in the workplace
- Lack of support, for example, lack of mentors
- Being pressured to work much harder to prove they’re not tokens

Among the factors expressed as important by Black professionals are equal opportunities to learn, grow and add value to the business and an environment that embraces their individuality and promotes diversity (Khanyile et al., 2007).

According to Cruz (2006), while there are perceptions that the job-hopping phenomenon is exacerbated by transformation imperatives and scarcity of Black talent, findings of a recent study by the Consumer Insight Agency suggest otherwise. Sparked by corporate complaints regarding their difficulty in retaining Black talent, the study found that job-hopping by Black talent is driven by several factors, among them a culture clash, hostility at work and lack of recognition (Cruz, 2006).

A recent study by Wöcke and Sutherland (2008) conducted among managerial staff across all four ethnic groups in SA found that despite their perceptions that employment equity legislation has affected them positively, Africans still show the highest propensity to leave organisations.

### 1.2.2 Transformation in the SAn workplace

The SAn population profile and EAP by race and gender is given in table 1 below.
Table 1: Profile of the national population and the EAP by race and gender  
(Source: CEE annual report 2006-2007)

<table>
<thead>
<tr>
<th>Population group</th>
<th>National population distribution (Census 2001)</th>
<th>Economically active (LFS, September 2006)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male (%)</td>
<td>Female (%)</td>
</tr>
<tr>
<td>African</td>
<td>37.7%</td>
<td>41.3%</td>
</tr>
<tr>
<td>Coloured</td>
<td>4.3%</td>
<td>4.6%</td>
</tr>
<tr>
<td>Indian</td>
<td>1.2%</td>
<td>1.3%</td>
</tr>
<tr>
<td>White</td>
<td>4.8%</td>
<td>5.0%</td>
</tr>
<tr>
<td>Total</td>
<td>47.8%</td>
<td>52.2%</td>
</tr>
</tbody>
</table>

Information in table 1 above suggests that at the time the Labour Force survey of 2006 was conducted, Whites and Blacks formed 12.8% and 87.2% of South Africa’s EAP respectively. This is typically the type of representation that EE legislation aims to achieve in SAn workplaces across all levels. However, at the level of interest to this research (professionals and middle management), Black representation was only 36.5%, while Whites accounted for 62.2% (see appendix 1). This implies a significant under-representation of Blacks and over-representation of Whites at the professionals and middle management level.

Comparative changes in the workforce profile at all levels reported on by companies to the CEE from 2000 to 2006 are given in Appendix 1. The data collected from South African organisations’ EE reports suggests that Black representation dropped, while Whites representation increased by 6.1%.

The percentage distribution of terminations at the knowledge worker level by race and gender is given in figure 1 below.
Figure 1: Terminations in professional and middle management positions (CEE Annual Report, 2005-2006).

The highest percentage of terminations accounted for by Whites needs to be viewed in context with their strong representation, and a higher percentage of Whites recruited and promoted during the 2005-2006 reporting period compared to their Black counterparts. Whites accounted for 52.5% of all recruits and 41.8% of all promotions at the knowledge worker level during the 2005-2006 reporting period. Blacks accounted for 37.8% of all terminations during the reporting period.

While there are many factors that contribute to knowledge worker mobility, such as globalisation, a high demand for skills and the current skills shortage, their need for new challenges, it is important to investigate whether diversity climate is an important retention factor among SAn knowledge workers or not.

1.3 Rationale for conducting the research

The area of diversity management is very relevant to the SAn business landscape, given the SAn demographic profile that the EAP has got to mirror across all positions or levels in the long term (See table 1 above).
It is a course for concern that while the area of diversity management is so relevant to the SAn business landscape given SA’s diverse ethnic workforce and cultures, very little evidence exist of published studies conducted in SA to gain a deeper understanding of this area, and to determine the potential of a pro-diversity workplace as an important knowledge worker retention factor. This research is an effort to assist to close this research gap.

The researcher hopes to contribute towards a growing body of knowledge on what really drives Black talent from organisations in the SAn nuclear industry. The researcher also hopes to contribute towards research efforts aimed at understanding drivers of employee turnover in SA among knowledge workers in general.

1.4 The Purpose and Scope of the Research

1.4.1 Purpose and aim of the research

The purpose of this research is to determine the role played by diversity climate perceptions of knowledge workers on their intention to leave organisations, and how that relationship is influenced by race and organisational commitment. Specifically, this research sets out to investigate the following:

- The moderating effect of race on the link between diversity climate perception and turnover intention amongst knowledge workers in the SAn nuclear industry: the main aim is to determine whether the relationship between diversity perceptions and turnover intentions is stronger among Black knowledge workers compared to their White counterparts when race is controlled for as a moderator.

- The mediating effect of organisational commitment on the link between diversity climate perception and turnover intention amongst knowledge
workers in the SAn nuclear industry.

This research is essentially a replication of a study conducted in the United States of America (USA) recently by McKay, Avery, Tonidandel, Morris, Hernandez and Hebl (2007). McKay *et al.*’s (2007) study was triggered by a relatively higher turnover rate among African-American managers compared to their Hispanic and White counterparts in the USA.

1.4.2 Scope of the research

Due to a limited time within which this research has to be completed, data collection is aimed at a sample of knowledge workers in service in the SAn nuclear industry at the time of data collection. Specifically, knowledge workers of interest to this research comply with the following criteria:

**Race and Gender:** All races and genders are included. Gender is not a variable of interest in this study, even though it is one of the primary dimensions of diversity.

**Occupations:** Professionals as defined in the CEE annual report of 2005-2006. This group includes those occupying middle management positions; engineers; architects; lawyers; biologists; geologists; psychologists; accountants; physicists; system analysts; assayers; valuators; town and traffic planners (CEE annual report, 2005-2006, p.7).

**Occupational Levels:** Knowledge workers of interest to this research are on one of the following occupational levels, depending on the job-grading system used in their company: D-upper and lower (Paterson); 4, 5 and 6 (Perommes); 3 and 4 (Hay) and 11, 12, 13 (Castellation).

**Geographical location:** Research subjects/respondents of interest are based
at the SAn Nuclear Energy Corporation (Necsa) premises in Pelindaba, 30km west of Pretoria.

1.5 Relevance of the topic to business in SA

1.5.1 Retention of knowledge workers

This researcher sets out to contribute towards SAn businesses’ ability to retain knowledge workers by making recommendations based on findings of this research.

From the financial perspective, employee turnover is a course for concern given high costs of recruiting, training and developing new employees. According to Cruz (2006, p. 25), “it could cost more than R80,000 in commission and advertising alone to place a person earning between R400,000 and R600,000 per annum, excluding training costs and the opportunity cost of assigning someone out of their ordinary job to train the newcomer”.

Knowledge workers leaving organisations often take some critical knowledge and organisational memory with them, which can be detrimental to an organisation should the leaving employee join its direct competitor.

1.5.2 Compliance with EE and BBBEE legislation

The EE and BBBEE Acts are drivers for change emanating from companies’ external environment. According to the 2006-2007 CEE annual report, companies might be pressured to comply with Employment Equity targets in the near future.
Among strategies set to be implemented by the CEE between 2005 and 2010 are to develop and implement systems to assess and enforce substantive compliance with the EEA; to enhance the organisational culture of stakeholders by promoting diversity management in the workplace and by conducting anti-racism campaigns; and to create a conducive environment for whistle blowing against non-compliant companies (CEE annual report, 2006-2007, p.1).

Companies’ BBBEE rating is increasingly becoming an important factor in South Africa. As from 2006, organs of state and public entities started taking an entity’s BEE rating into account when determining qualification criteria for the granting of licenses and concessions, developing and implementing a preferential procurement policy, determining qualification criteria for the selling of state-owned enterprises and developing criteria for entering into partnerships with the private sector (BEE~MATRIX).

It is therefore very important for companies to be proactive in creating a diverse workforce profile and a pro-diversity work environment rather than wait for the Government to force them to. That way, they can improve their BEE rating, comply with the CEE requirements, and retain their knowledge workers.

1.5.3 The link between diversity and performance

In a study conducted recently to test arguments regarding the business case for diversity, data collected reveals that racial diversity may enhance business performance when an organisation foster an environment that promotes learning from diversity (Kochan, Bezrukova, Ely, Jackson, Joshi, Jehn, Leonard, Levine and Thomas, 2003, p. 17).

In a survey of Fortune 100 company human resource executives, strong arguments for the pursuit of diversity are given as cost savings, winning the war for talent and the opportunity to drive business growth by leveraging the many
facets of diversity (Robinson and Dechant, 1997).

Therefore, it can be concluded that while the biggest driving force for diversity in SAn workplaces is a plethora of EE legislation, companies can gain an improved performance from effective diversity management.
2. CHAPTER 2: THEORY AND LITERATURE REVIEW

The purpose of this chapter is to present a review of an existing body of knowledge of relevance to this research, and pull it all together at the end.

2.1 The essence of knowledge workers

In order to understand what drives the behaviour of this very important group of workers, the following background information about them is necessary.

2.1.1 Definition and characteristics of knowledge workers

A knowledge worker is defined as someone who applies their brainpower, with great autonomy and discretion as the primary resource in the execution of their work activities (Bagraim, 2003, p. 13). According to Drucker (1994), he first coined the term “knowledge worker” in 1959 in a book titled “Landmarks of Tomorrow”. He suggests that knowledge workers require a great deal of formal education and the ability to acquire and to apply theoretical and analytical knowledge. According to Sutherland and Jordaan (2004, p.2-3), knowledge workers carry knowledge as a powerful resource which they, rather than the organisation, own. Davenport, Thomas and Cantrell (2002, p. 23) emphasise the need to pay more attention to knowledge work and the people doing such work.

Drucker (1992) suggests that knowledge workers are the core competitive resource in an increasingly knowledge-based global economy. Ten years later, Drucker (2002) suggests that a knowledge-based workforce is qualitatively different from a semi-skilled one, and knowledge workers have become the major creators of wealth and jobs for companies.
Birt, Wallis and Winternitz (2004) suggest that the value created by knowledge workers' ability to solve complex problems means that organisations need knowledge workers far more than knowledge workers need them. While organisations may be willing to forego commitment in exchange for flexibility and responsiveness to environmental changes, this does not apply to knowledge workers, largely due to the dependence of the firm's competitive edge on their specialised skills. As these workers' skills and knowledge are in their heads, the implications are that for firms to retain skills and knowledge, they have to retain their knowledge workers (Birt et al., 2004).

One of the key features of knowledge workers in the new world of work is their increasing mobility and the consequences of this to the organisation (Sutherland et al., 2004, p. 3). In the 2005-2006 CEE annual report, the number of terminations attributable to knowledge workers is estimated at 18,025. This is high considering that it excludes terminations attributable to knowledge workers whose companies did not submit EE reports to the CEE.

Birt et al. (2004) suggest that this mobility is driven by the market. Given their importance towards organisational performance and value creation and their high mobility rate, one of the biggest workforce challenges facing organisations today is thus the retention of knowledge workers (Birt et al., 2004). In order to overcome this challenge, organisations need to positions themselves as employers of choice to this exceptional, value creating group of employees.

The researcher hopes that findings of this research will shed some light on the prospects of a pro-diversity workplace climate as an important factor to knowledge workers regarding their retention.

2.1.2 Factors affecting the retention of knowledge workers

Sandweiss and Lewin (2000) suggest a new retention model for dealing with
knowledge workers. In a research conducted among part-time MBAs in the USA, their results suggest that the applicable model is one in which corporations demonstrate both the pecuniary and intangible value they place on knowledge workers (part-time MBAs in their study). They suggest that this new retention model portrays a company that follows very closely the needs and desires of its employees, and that such a company manifests markedly lower turnover rates.

Sutherland et al.’s (2004) research into factors affecting the retention of knowledge workers reveals that the following five factors are considered to be important to knowledge workers: independence; career development support by organisation; egocentricity and challenge within the organisation; organisational setting; and performance related rewards.

In another study conducted among South African knowledge workers in a financial services organisation, Birt et al. (2004) asserts that the interviews conducted with some respondents were instrumental in highlighting a variable not mentioned in other research, but of relevance to South African talent, namely, employment equity and affirmative action. Findings of Birt et al. (2004) suggest that while both intrinsic and extrinsic variables are important to knowledge workers, the following five intrinsic factors are most important in their decisions to leave: challenging and meaningful work; advancement opportunities; high manager integrity and quality; empowerment and responsibility; and new opportunities/challenges.

A recent study conducted by Booysen (2007) to investigate barriers to employment equity implementation and retention of blacks in management in SA reveals the following barriers:

- Slow EE progress at management level and inconsistent progress across departments in organisations
- Low commitment to EE from top management, with lip service by
leadership about the need for EE
  o Ineffective consultation and communication around EE progress and implementation
  o A lack of cultural sensitivity where new recruits are expected to assimilate into the current organisational culture
  o A lack of cultural awareness programmes and of an organisational culture that values diversity
  o A White male dominant organisational culture that continues to exclude Black recruits
  o Black people are perceived as tokens and not fully integrated into companies because of little delegation of real responsibility or decision-making authority, owing to persistent stereotypes
  o Black staff are not systematically developed and trained – no effective talent management
  o Lack of mentors and role models

In a recent study conducted among managerial staff in the USA, McKay et al. (2007) found a negative correlation between knowledge workers’ turnover intention and diversity climate perception among all races. Their research was triggered by a higher turnover rate among Blacks compared to their White and Hispanic counterparts. Their findings imply that a pro-diversity workplace climate can contribute towards the retention of knowledge workers. No similar research has been done in SA, a gap which this research sets out to close.

According to the comprehensive voluntary turnover model, factors that influence employee turnover include job characteristics, leadership, relationships, work environment and individual characteristics (Allen, 2008).

The unfolding model of turnover identifies four different paths to turnover, namely, leaving an unsatisfying job, leaving for a better option, following a plan and leaving without a plan (Lee and Mitchell, 1994; Mitchell, Holtom and Lee, 2001).
Mitchell, Holtom, Lee, Sablynski and Erez (2001) suggest that as employees become embedded in their jobs and communities, they develop a web of connections and relationships on and off the job, and develop more reasons to stay in the job. According to them, there are three types of connections that foster embedded-ness, namely, connections with co-workers, relatives or church groups; the extent to which they feel compatible with their jobs, organisation or community and sacrifice they would have to make in leaving a job (e.g. financial rewards based on tenure, a positive work environment, status, and promotional opportunities).

2.2 The link between diversity climate perception and turnover intention

One of this research’s main objectives is to investigate the link between diversity climate perceptions and turnover intention among knowledge workers in the SA nuclear industry, and study the moderating effect of race on this relationship.

2.2.1 Relevance of individual perceptions

According to Robbins and Judge (2007), perception can be defined as a process by which individuals organise and interpret their sensory impressions in order to give meaning to their environment. Robbins et al. (2007, p.146) assert that “perception is important in the study of organisational behaviour simply because people behaviour is based on their perception of what is reality”. Individual perceptions are said to influence behaviour.

Psychological climate consists of employee perceptions. According to Stewart, Bing, Gruys and Helford (2007), psychological climate can be defined as sets of perceptually-based descriptions of relevant organisational features, events, and
processes. They assert that these perceptions represent cognitive interpretations of the organisational context or situation, and summarise an individual’s descriptions of their work experiences. Also, perceptions of recognition among women predict turnover (Stewart et al., 2007).

2.2.2 Diversity

Many definitions of diversity exist, e.g. “all the ways in which we differ” (Hayles and Russell, 1997). According to Robinson and Dechant (1997), in the USA, the Equal Employment Opportunity Commission’s traditional definition of diversity deals with differences in gender, racio-ethnicity and age. The definition of diversity by its South African equivalent, the CEE, deals with difference in race, gender, and physical ability. The CEE sets out to improve representation of people from designated groups in SAn workplaces, who include Blacks (Africans, Coloureds and Indians), White women and people with disabilities (CEE annual report, 2006-2007) across all levels reported on by companies.

According to Erwee and Innes (1998, p. 2), “diversity is a socially constructed issue that must be studied in a cultural-historical context”. The primary dimensions of diversity include age, ethnicity, gender, physical ability, race and the secondary dimensions include geographic location, income, marital status, military experience, class, etc. (Erwee et al., 1998, p. 2; Merrill-Sands, Holvino and Cumming, 2000; Hicks-Clarke and Iles, 2000).

Merrill-Sands et al. (2000) suggest that in order for diversity initiatives to compete successfully for a company’s scarce resources, a compelling case needs to be created which involves the following four steps:

- Determining the business objectives or needs
- Identifying actions required for each objective or need
- Conducting a cost/benefit analysis
- Developing tracking mechanisms to assess progress and financial impact

The research at hand focuses on the racial/ethnicity dimension at organisational level in the SAn context, where a plethora of EE legislation is driving the creation of diversity in the workplace. Diversity in SAn workplaces was prevented through discriminatory legislation during the era of White minority rule (Erwee et al., 1998). The current Employment Equity regulations are aimed at redressing the resultant socio-economic imbalances.

Merrill-Sands et al. (2000) suggest that it is a major challenge to develop a supportive work environment that enables people of diverse backgrounds to perform at their highest levels. This seems to be the case with SAn organisations, given the ongoing high turnover rate among Black knowledge workers despite their under-representation reported in the abovementioned CEE annual reports.

### 2.2.3 Why should diversity matter to SAn organisations?

Findings of several studies suggest that there is a link between workforce diversity and business performance.

In a study conducted recently to test arguments regarding the business case for diversity, data collected reveals that racial diversity may enhance business performance when an organisation foster an environment that promotes learning from diversity (Kochan, Bezrukova, Ely, Jackson, Joshi, Jehn, Leonard, Levine and Thomas, 2003, p. 17). In a survey of Fortune 100 company human resource executives, strong arguments for the pursuit of diversity are given as cost savings, winning the war for talent and the opportunity to drive business growth by leveraging the many facets of diversity (Robinson and Dechant,
Robinson *et al.* (1997) suggest that the following benefits can be derived from managing diversity effectively:

- Cost savings from reduced turnover costs and lower absenteeism rates and reduced lawsuits
- Winning the war for talent
- Driving business growth

Also, diversity in South African workplaces is one of the intended consequences of a plethora of EE legislation. EE legislation is a driver for change emanating from organisations’ external environment. Therefore, companies do not have a lot of choices but to comply with legislation, or face the consequences of non-compliance. According to the CEE annual report of 2006-2007, some of the strategies set to be implemented by the CEE between 2005 and 2010 are to develop and implement systems to assess and enforce substantive compliance with the EEA; to enhance the organisational culture of stakeholders by promoting diversity management in the workplace and by conducting anti-racism campaigns; and to create a conducive environment for whistle blowing against non-compliant companies.

Therefore, it can be concluded that while the biggest driving force for diversity in SAn workplaces is a plethora of EE legislation, companies stand to gain an improved performance from effective diversity management.

### 2.2.4 Diversity climate perceptions

Diversity climate perception is defined as the diversity atmosphere that employees perceive as prevalent in their organisations by practices, procedures and rewards (Hicks-Clarke *et al.*, 2000). Merrill-Sands *et al.* (2000) suggest that
it is important for organisations to constantly monitor their performance regarding diversity management through employee perceptions.

2.2.5 Employee turnover

Turnover can be defined as an individual's permanent withdrawal from an organisation (Robbins et al., 2007). Turnover is classified into voluntary and involuntary turnover. Voluntary turnover is defined as employee initiated, with the employee seeking better employment conditions or job satisfaction (Allen, 2008; and Sutherland et al., 2004). In turn, involuntary turnover is defined as employer initiated and due to retrenchment or dismissal (Sutherland et al., 2004; Allen, 2008). Turnover is classified in the following figure (Allen, 2008; Griffeth and Hom, 2001; Dalton, Todor and Krackhardt, 1982).

Figure 2 Turnover Classification Scheme
(Source: Allen, 2008; Griffeth and Hom, 2001; Dalton, Todor and Krackhardt, 1982)

Voluntary turnover is classified into functional and dysfunctional voluntary turnover. Dysfunctional voluntary turnover is harmful to the organisation, and its examples include the departure of high performers and employees with rare
skills, departure of employees that erode workforce diversity and turnover rates that lead to high replacement costs (Allen, 2008). He asserts that functional voluntary turnover is not harmful to the organisation, and examples thereof include the departure of poor performers and employees whose skills are easy to replace.

According to Allen (2008), some voluntary turnover is avoidable, while some is unavoidable. He asserts that avoidable voluntary turnover stems from causes that an organisation may be able to influence, e.g. employees leaving due to low job satisfaction. Unavoidable turnover stems from causes that are beyond an organisation’s control, e.g. departure due to ill health or an employee’s desire to go back to school on a full time basis.

Dalton et al. (1982) suggest that by focusing on measuring voluntary turnover, a notion can be perpetuated that voluntary turnover is harmful to the company, and the negative effects of turnover can be overstated. They suggest that an attempt to reduce turnover that is not under the control of the organisation tends to focus organisational resources in vain. According to Dalton et al. (1982), controllable, dysfunctional turnover represents a more realistic portrayal of the impact of turnover on the organisation, and money spent on trying to reduce this type of turnover is responsible expenditure.

This research focuses on the dysfunctional, avoidable voluntary turnover among knowledge workers in the SAn nuclear industry specifically, and SA in general, of which one of the consequences is the erosion of workforce diversity.

2.2.6 Turnover intention

Turnover intention refers to an intention to permanently withdraw from an organisation. Turnover intention has been studied intensively, and is sometimes synonymously referred to as intention to leave (Lance, 1988).
Turnover intention is the best predictor of employee turnover (Wöcke et al., 2008; Allen, 2008; Van Breukelen, Van der Vlist and Steensma, 2004). These researchers' studies reveal a correlation between turnover intentions and actual turnover. Their findings are corroborated by those of a research conducted by Griffeth, Hom and Gaetner (2000), whose findings reveal a correlation coefficient of 0.46. According to Lance (1988), turnover intention is viewed as the most immediate determinant of voluntary turnover. He asserts that the study of intention to leave is important as it focuses on a voluntary component of turnover and avoids involuntary determinants.

The dependent variable in this research is turnover intention, and the researcher is satisfied with adequate and strong empirical evidence suggesting that turnover intention is a strong predictor of eventual turnover.

According to Allen (2008, p. 7), most of the strongest predictors of turnover are related to the withdrawal part of the turnover process, suggesting that managers must monitor these variables, e.g. through employee surveys.

### 2.2.7 The relationship between diversity climate perceptions and turnover intention

Findings of McKay et al. (2007) suggest a negative correlation between diversity climate perceptions and turnover intention. They suggest that while this relationship prevailed among all ethnic groups of interest to their research, the relationship was stronger among Blacks compared to their White and Hispanic counterparts.

The paucity of similar research conducted in the South African context is conspicuous, considering that SAn organisations are facing the same challenge that triggered McKay et al.’s (2007) research. This challenge is compounded by the CEE’s drive towards enforcing compliance with the EE Act of 1998, as
stated in the CEE annual report of 2006-2007. This is one of the main driving forces behind this research, to test the relevance of McKay et al.'s findings in the SAn context.

According to Khanyile et al. (2007) and Cruz (2006), some of the push factors that drive mobility of Black talent in SA are racial discrimination and a cultural clash. Findings of a recent research by Booysen (2007) imply that the turnover of Black talent from SAn organisations is linked to a lack of cultural awareness programmes and of an organisational culture that values diversity. She suggests that white fear and lack of meaningful engagement by Whites are also barriers to retention of Blacks by SAn organisations.

2.2.8 The moderation effect

A moderator is defined as a qualitative or quantitative variable that affects the direction and/or strength of a relationship between an independent variable and a dependent variable (Baron and Kenny, 1986; Holmbeck, 1997; Frazier, Barron and Tix, 2004).

Figure 3 below illustrates the moderating effect of variable B on the relationship between the independent variable A and dependent variable C. According to Holmbeck (1997) and Frazier et al. (2004), if A is expected to be related to C but, only under certain conditions of B, then B is the moderator variable.
Frazier et al. (2004) suggest that questions involving moderators address “when” or “for whom” a variable most strongly predicts or causes an outcome variable.

The general statistical strategy for testing moderators is the same regardless of the nature of the variables involved, and the preferred strategies are multiple regression techniques and structural equation modelling or SEM (Holmbeck, 1997, Frazier et al., 2004). According to them, multiple regression is more suitable compared to SEM in cases where the sample size (N) is small. Quintana and Maxwell (1999) suggest that a minimum sample size of 200 is needed for effective SEM analysis for moderation or mediation.

In cases where categorical variables are involved, Frazier et al. (2004) suggest that ANOVA procedures can also be used, although multiple regression is preferred because of the flexibility in options it provides for coding categorical variables. They suggest that the categorical data must first be coded prior to performing multiple regression.

According to Kang and Waller (2005), multicollinearity, inappropriate median
splits and ordinal measurement level can lead to false interaction effects, leading to Type I errors. The problem of multicollinearity can be overcome by standardising the predictor variable (Frazier et al., 2004; Holmbeck, Holmbeck, 1997).

2.2.9 Moderation of the relationship between diversity climate perceptions and turnover intention by race

Findings of a study by McKay et al. (2007) conducted on 6823 managerial employees from diverse races in the USA suggests that Blacks’ diversity climate perceptions are significantly associated with turnover intentions, more strongly so than their Hispanic and White counterparts. More interesting though, the study suggests a negative relationship between diversity climate perceptions and turnover intentions across all races, meaning that diversity is an important factor among the entire population of interest to that research!

Netswera, Rankhumise and Mavundla (2005) suggest that discriminatory practices are one of the factors that negatively affect Black employees and their retention in SA. A positive work environment, the institution’s track record, staff development and promotion were found among factors that positively influences retention (Netswerera et al., 2005).

According to findings of a recent study by Khanyile et al. (2007), Black professionals are leaving organisations due to an unfavourable work environment they experience compared to their White counterparts. This could be the missing piece in the job-hopping puzzle: Black knowledge workers might be consistently on the move due to their perceptions of anti-diversity climate in workplaces.

It can therefore be deducted that while there are several factors influencing the high mobility rate of knowledge workers in general, among them labour market
conditions, the search for challenges, money and their highly marketable skills, it is important to establish any contributory role that is possibly played by workplace diversity climate perceptions of South African knowledge workers in particular, given the plethora of labour legislation that is driving the creation of a diverse workforce in SAn organisations.

2.3 Mediation of the link between diversity climate perception & turnover intention by organisational commitment

2.3.1 Organisational commitment

Organisational commitment is defined as the psychological bond between employees and their employing organisation (Bagrain, 2003).

Birt et al. (2004) mentions two types of commitments prevalent among knowledge workers, namely continuance commitment and affective commitment. Continuance commitment is defined as the type whereby the employee bases his/her decision to remain in the organisation on perceptions of other available opportunities and the cost of leaving. Affective commitment is defined as the type whereby the employee bases his/her decision to remain in the organisation on the basis of his/her emotional attachment to the firm (Birt et al., 2004).

According to Kinnear and Sutherland (2000), drivers of commitment among knowledge workers are their need for individual gain, independence and personal achievement. They suggest that in order for organisations to increase their chances of retaining knowledge workers, they need to give them freedom to act independently, provide financial rewards and recognition, provide developmental opportunities and provide access to leading edge technology.
2.3.2 Organisational commitment and turnover

Bagaim (2003)’s research reveals a strong correlation between intent to quit and the following commitment foci: affective commitment to co-workers, affective commitment to the organisation and affective commitment to the manager. However, the research was conducted in Cape Town among a population of young, mainly white knowledge workers, which can limit the findings regarding generalising to SA knowledge workers, the population of interest in Bagaim’s study.

In another research conducted in SA, Smith and Speight's (2006) results reveal a negative correlation between organisational commitment and turnover intention. Griffeth, Hom and Gaetner (2000) conducted research on a meta-analysis of antecedents and correlates of employee turnover. Findings of their study reveal a weak link between commitment and turnover as well as satisfaction and turnover, with correlation coefficients of 0.27 and -0.19 respectively.

According to Birt et al. (2004), affective commitment has been postulated to increase retention, particularly amongst high performing employees. They suggest that affective commitment is impacted upon positively by challenging and meaningful work, advancement opportunities, high manager integrity and quality, empowerment and responsibility, new opportunities/challenges.

Organisational commitment is viewed by most turnover models as an intervening variable in the turnover process rather than an antecedent of turnover (Wöcke et al., 2007).

Sutherland et al. (2004) and Wöcke et al. (2008) suggest that organisational commitment is not a determinant of turnover among knowledge workers. These suggestions are further corroborated by findings from Birt et al.’s research (2004).
2.3.3 The mediation effect

A mediation effect is defined as the generative mechanism through which the focal independent variable is able to influence the dependent variable of interest (Holmbeck, 1997). According to him, the nature of the mediated relationship is such that the independent variable influences the mediator, which in turn, influences the outcomes.

Figure 4 below illustrates the mediating effect. If A is significantly associated with C, and if A influences B and B influences C, then B is a mediating variable between A and C (Holmbeck, 1997; Frazier et al., 2004).

The general statistical strategy for testing mediators is the same regardless of the nature of the variables involved, and the preferred strategies are multiple regression techniques and structural equation modelling or SEM (Holmbeck, 1997, Frazier et al., 2004).

Figure 4: A mediating effect
(Source: Holmbeck, 1997)
2.3.4 Mediation of the link between diversity climate perceptions and turnover intentions by organisational commitment

Hick-Clarke et al. (2000) suggest that a positive climate for diversity is strongly correlated with organisational commitment, and reports a correlation coefficient of 0.432.

Findings of McKay et al. (2007) suggests that there is a mediating effect played by organisational commitment on the relationship between diversity climate perceptions and turnover intention among all races.

The second hypothesis of this research sets out to test the above-mentioned mediation effect of organisational commitment among knowledge workers in the SAn nuclear industry. However, SEM

2.4 PULLING IT ALL TOGETHER

From the above review of pertinent literature, the following summary can be made:

2.4.1 Common threads from the literature review

Common threads from the literature review include the following:

- Knowledge workers are of critical importance and are value creators
- It is important to retain knowledge workers in order to retain skills and knowledge embedded in them
- One of key characteristics of knowledge workers is their mobility, which is driven by a plethora of factors, such as their shortage, globalisation, and some intrinsic factors
- The workplace environment seems to be an important factor in the retention of knowledge workers
EE is emerging as a common factor of importance among knowledge workers in the South African literature, which is not surprising considering the fact that the EE process is gaining momentum.

2.4.2 Contrasts and insights gained from the literature review

The following contrasts emerged from the literature review:

- While some of the articles reviewed find a link between organisational commitment and turnover intentions, others do not, viewing organisational commitment as a moderating factor rather than an antecedent of turnover.

- There is no consensus among researchers regarding factors that influence the retention of knowledge workers. This is not surprising considering that factors such as context, geographical location and a variety of other intrinsic and extrinsic factors vary in importance among various groups of knowledge workers. The challenge for firms is thus to identify such groupings, e.g. by race, age, gender, and develop retention strategies for them based on the most important retention factors of relevance to them.

This is one of the main aims of this research, to investigate whether race moderates the link between turnover intention and diversity climate perceptions among SAn knowledge workers in the nuclear industry.

The following insights emerged from the literature review:

- The importance of context in research: This is evidenced by the emergence of Affirmative Action and EE as an important retention factor among SAn knowledge workers. The unsolicited response by one respondent on EE and Affirmative Action matters was quite insightful, indicating the importance of context in developing measurement
scales/questionnaires

2.4.3 Conclusions from the literature review

Based on information presented in section 2 of this report and the above analysis, the following conclusions are drawn:

- While in general, there is agreement among researchers about the importance of knowledge workers to the current economy and their high mobility rate, it seems that there are a whole lot of factors attributable to their mobility with no consensus among the most important. This calls for a meta-analysis of factors that are of importance to various groups or clusters of knowledge workers.
- There is a definite need for this research, given the importance of EE and Affirmative Action that emerged from SAn literature.
- Findings of McKay et al. are supported by findings of SAn research in the literature review, albeit not explicitly, which further strengthens the need for replicating that research in the SAn context.
- Given the challenges experienced by Black talent regarding acceptance into workplaces dominated by White cultures, it can be expected that work-place diversity will be more important among them compared to their White counterparts. However, findings of Booysen (2007) suggest that Whites are concerned about diversity in SAn workplaces. Therefore, while a relationship between diversity climate perceptions and turnover intentions can be expected among both Black and White subjects of this research, the relationship is expected to be stronger among Blacks compared to their White counterparts.
3. CHAPTER 3: RESEARCH HYPOTHESES

Since this research is a replication of the work done by McKay et al. (2007) in the SAn context, the researcher will gather data to test the relevance of McKay et al. (2007) to the SAn context. This research’s hypotheses are stated below.

3.1 Research Hypothesis 1

Race will moderate the relationship between diversity climate perceptions and turnover intentions such that the relationship between diversity climate perceptions and turnover intentions will be stronger amongst Blacks than amongst Whites. Figure 5 below presents the hypothesised moderation effect in graphical form:

Figure 5: Hypothesis 1 in graphical form

Hypothesis 1 can be restated as follows:

Null Hypothesis (H₀):

race will not moderate the relationship between diversity climate perceptions and turnover intention
Alternative hypothesis \((H_a)\): race will moderate the relationship between diversity climate perceptions and turnover intention

3.2 Research Hypothesis 2

Organisational commitment will mediate the interactive effects of race and diversity climate perceptions on turnover intentions. Figure 6 below presents this hypothesis in graphical form:

Figure 6: Hypothesis 2 in graphical form

Hypothesis 2 can be restated as follows:

**Null Hypothesis \((H_0)\):** organisational commitment will not mediate the relationship between diversity climate perceptions and turnover intention

**Alternative hypothesis \((H_a)\):** organisational commitment will mediate the relationship between diversity climate perceptions and turnover intention
4. CHAPTER 4: RESEARCH METHODOLOGY

This research was a replication of a study conducted in the USA by McKay et al. (2007) regarding a similar research problem to the research problem at hand. Even though this study was a replication of an earlier study in a different geographical location, certain changes were made to align this research with the SAn context. However, any deviations were stated and defended in relevant sections of this report.

4.1 Research Design

Zikmund (2003) suggests that the major purpose of descriptive research is to describe characteristics of a population or phenomenon. Also, unlike exploratory research, Zikmund (2003) suggests that descriptive studies are based on some previous understanding of the nature of the research problem.

The research at hand was essentially a replication of McKay et al.’s (2007) study, which was a quantitative study. Also, the problem at hand was well defined, and a plethora of studies have been completed to gain a deeper insight into in an area of knowledge worker retention. It is on that basis that the researcher used quantitative, descriptive research techniques in this study.

4.1.1 Unit of analysis

The unit of analysis was turnover intention of knowledge workers in the SAn nuclear industry. Findings of this research will be generalise-able to all SAn nuclear industry knowledge workers either occupying positions or on occupational levels stated in section 1.4.2 of this proposal (not true, only those in post-levels in the third row, i.e. knowledge workers only).
4.1.2 Variables

The dependent variable was turnover intention. Independent variables were diversity climate perceptions, race (Black and White) and organisational commitment.

4.2 Population and Sampling

The population of interest to this research and sampling method are described in this section.

4.2.1 Population

The population of interest was all knowledge workers in the SAn nuclear industry. Such knowledge workers were geographically based in SA, are South Africans as defined in the EEA, and complied with the criteria given in section 1.4.2 of this research proposal.

The population size of knowledge workers in Necsa and its subsidiaries who complied with the abovementioned criteria was 143 at the time of data collection, made up of 104 and 39 from companies A and B respectively. Members from the White race formed 60.8% of the entire population (N_{White}=87), while Blacks accounted for 39.2% of the entire population (N_{Black}=56). The abovementioned population size excludes all knowledge workers from company C based on the Pelindaba site, of which the decision makers declined an invitation to participate in this research.

4.2.2 Sampling Frame

A comprehensive, up to telephone directory of Necsa and its subsidiaries exists. Demographic characteristics listed on the directory for each employee name
include occupation, e-mail address, telephone number, mobile phone number, building where the employee is based, etc. This telephone directory is easily accessible through Necsa’s intranet. The above-mentioned directory served as a sampling frame for this research.

4.2.3 Sampling

Descriptive precision was aimed at, so one of the main impetuses during sampling was to minimise sampling errors.

In order to study the moderating effect of race on the relationship between diversity climate perceptions and turnover intentions, a cross-sectional study was implied. A representative sample was needed across various races of interest to this research (Black and White) represented in Necsa’s population of knowledge workers. According to Zikmund (2003), stratified sampling was the most suitable sampling method in this case.

Information from the Necsa telephone directory was extracted and sorted by employee race and occupation. Strata of knowledge workers were compiled from the extracted, sorted data, resulting in 2 strata of Black and White SAn nuclear industry knowledge workers.

E-mail addresses of member were written down on pieces of paper, which were folded closed. The pieces of paper were placed in two containers representing the Black and White population groups. Samples were drawn randomly from both strata/population groups.

A sample size of at least 90% of the number of knowledge workers in each stratum was taken so that the researcher could be able to make statistical inferences on the population as a whole from findings of this research (Albright, Winston and Zappe, 2006).
A final sample size from the Black knowledge workers’ stratum was 50, and that from the White knowledge workers’ stratum was 78.

4.3 Data collection

4.3.1 Data collection instrument

According to Reynaldo and Santos (1999), Chronbach’s Alpha can be used to describe the reliability of factors extracted from multi-point formatted scales, and ranges from 0 to 1. They state that the higher the score, the more reliable the scale is.

A series of questions on a 6 point Likert scale used in McKay et al.’s study yielded Chronbach alphas of 0.9, 0.91 and 0.82, for turnover intention, diversity climate perception and organisational commitment respectively. This implies the above-mentioned scales are highly reliable, and were therefore used in this study. Alterations made to the original questionnaire included the replacement of some American words with their more familiar South African (UK English) equivalents.

A series of questions on a 6-point Likert scale were decided upon to measure turnover intention, diversity climate perception and organisational commitment. A copy of the questionnaire is shown in appendix 2.

4.3.2 Pre-testing of the questionnaire

The questionnaire was pre-tested among 4 respondents, of whom 2 were White and 2 Black. The initial feedback revolved around the demographics part. The White respondents felt that the part where they had to specify their race made them uncomfortable. All 4 respondents understood all the questions well, from
which the researcher deducted that there was no need for further refinement of the questionnaire. The demographics section was removed from the questionnaire, and two questionnaires were prepared with exactly the same contents, but one in Times New Roman and the other in Arial font.

4.3.3 Data collection

The questionnaires in times new roman font were sent to randomly selected White respondents, and questionnaires in Arial font were sent to randomly selected Black respondents.

In order to ensure confidentiality of respondents, respondents were requested to drop their filled questionnaires into properly marked boxes placed at the Necsa library, and the two cafeterias on the Pelindaba site. The recipients of the questionnaires were given one month in which to respond. A copy of the questionnaire indicating informed consent and the questions asked is given in Appendix 2.

After the closing date for responses, data collection boxes were collected, completed questionnaires were retrieved and the checked for any mistakes. All questionnaires were filled in properly and none were rejected. This was not surprising as can be expected of knowledge workers. The observations were captured on an MS Excel spreadsheet for further analysis.

4.4 Data analysis

The researcher solicited services of a knowledgeable Statistician to assist with data processing for a fee. The SAS statistical package, Version SAS 9.1.3, was used for performing the necessary statistical analyses. Techniques that were used in making sense of collected data include those given below:
4.4.1 Frequency analysis

Frequency analysis was performed by means of MS Excel and entailed counts of the captured observations, and the histograms of frequency as a function of the response (from disagree strongly to agree strongly) were plotted for responses to the two questions used to measure turnover intentions. The purpose of doing that was to determine any pattern of responses to those questions by race. Results are presented in figure 7 and figure 8 in chapter 5.

4.4.2 Scale reliability

Reynaldo et al. (1999) suggest that Chronbach’s alpha value can be used to describe the reliability of factors extracted from multi-point formatted scales, and ranges from 0 to 1. They state that the higher the score, the more reliable the scale is.

SAS tests were performed to calculate Cronbach alphas in order to estimate reliability of the diversity climate, turnover intention and organisational climate scales.

Two questions were used to measure turnover intention, namely:

- I hardly ever think about leaving my current employer
- It would take a lot to make me leave the company I currently work for

The means of these items were determined and used to form the turnover intention scale. A Cronbach alpha was estimated to determine the reliability of the turnover intention scale, using the SAS program.

The following nine items were used to determine the diversity climate perception scale:
- My company recruits from diverse sources
- My company offers equal access to training
- There is open communication on diversity/transformation
- My company’s diversity/transformation principles and/or policies are publicised
- My company offers training on managing people from diverse races
- My company respects perspectives of people of a race like mine
- My company maintains a diversity-friendly work environment
- My company has a climate that embraces diverse perspectives
- Top leaders are visibly committed to diversity/transformation

The means of these items were determined and used to form the turnover intention scale. A Cronbach alpha was estimated to determine the reliability of the new turnover intention scale, using the SAS program.

Similarly, nine items were used to determine the organisational commitment scale:

- I am willing to put a great deal of effort beyond that normally expected in order to help this company be successful
- I talk positively about this company to my friends as a great company to work for
- I feel very little loyalty to this company (reverse coded)
- I find that my values and organisation’s values are very similar
- I am proud to tell others that I am part of this company
- This organisation really inspires the very best in me in the way of job performance
- I am extremely glad that I chose this organisation to work for over others that I was considering at the time I joined
- Often, I find it difficult to agree with this company’s policies on important matters relating to its employees
- I really care about the success of this company
Cronbach alpha values indicating the reliability of the turnover intention, diversity climate perceptions and organisational commitment scales are presented in chapter 5 of this report.

4.4.3 Hypothesis test: moderation of the diversity climate perception-turnover intention relationship by race

In order to test for moderation of the relationship between diversity climate perceptions and turnover intentions by race, multiple regression tests were performed on the SAS system, in accordance with the guide for moderator testing in multiple regressions by Frazier et al. (2004):

The tests were performed as follows:

**Step 1:** Categorical variables were coded. Initially, effects coding was used to code the race variable, with Blacks assigned 1 and Whites assigned -1.

**Step 2:** The diversity climate perceptions scale was standardised such that it had a mean of 0 and standard deviation of 1.

**Step 3:** The product term (interaction term) was created by multiplying the diversity climate perceptions scale with race

**Step 4:** A series of multiple regression tests were then performed using SAS statistical programme, with turnover intention as the dependent variable; diversity climate perception as the independent variable; race as a moderator variable, and the product of diversity climate perceptions as the interaction term. A stepwise regression was conducted. In the first regression step, turnover intention was regressed against diversity climate perceptions and race (race was effects coded). In the second step, the interaction term was
introduced.

**Step 5:** Results were interpreted. Outputs from the above multiple regression tests were compared to the criteria for moderation effects found in the literature (Barron *et al.*, 1986; Holmbeck, 1997; Frazier *et al.*, 2004), and a decision was made to accept or reject the null hypothesis.

The above-mentioned regression tests were repeated twice, initially with dummy coding of race such that Black = 1 and White = 0, and then with the dummy code reversed (i.e. Black = 0 and White = 1).

The criteria used to interpret results for moderation is also described by Frazier *et al.* (2004). They suggest that in cases where the predictor variable is standardised and the categorical moderator variable is coded by means of effects coding, then the first order effect of the predictor represents average effects. In that case, the $R^2$ change associated with introduction of the interaction term to the stepwise regression model can be said to explain further variance in the outcome variable, and is evidence of moderation.

Frazier *et al.* (2004) suggest that once an interaction has been found, it must be explored further to understand its form. They suggest that one of the approaches to follow is to test the significance of the slopes for each group. This can be done by conducting two additional regression analyses with dummy coding such that in the first test, one group is coded 1 and other group 0, and this coding is reversed in the second regression analysis.

The regression coefficients from the two analyses with dummy coding of the categorical moderator variable are then compared to check for any significant differences. Significant difference is a basis for rejecting the null hypothesis that the relationship between the two groups is the same.
Results of the above-mentioned tests are presented in chapter 5.

4.4.4 Hypothesis test: mediation of the relationship between diversity climate perceptions and turnover intentions by organisational commitment

A guide to testing mediation effects in multiple regression by Frazier et al. was used to test Hypothesis 2 (that organisational commitment will mediate the interactive effects of race and diversity climate perceptions on turnover intention).

The following regression tests were run for all 72 observations:

**Test 1**: Dependent variable: turnover intention; independent variable: diversity climate perceptions

**Test 2**: Dependent variable: turnover intention; independent variable: diversity climate perceptions

**Test 3**: Dependent variable: turnover intention; independent variable: diversity climate perceptions

Next, the abovementioned regression tests were repeated for the following scenarios:

- Blacks only (N=33)
- Whites only (N=39)

Finally, outputs from the abovementioned tests evaluated against the criteria for testing mediation effects in multiple regression specified in the literature (Barron et al., 1986; Holmbeck, 1997; Frazier et al., 2004)

Results of this analysis are shown in chapter 5.
4.5 Assumptions

The following assumptions were made:

- The directory of all employees on the Necsa site was up to date, and reflected all knowledge workers in service at the time of data gathering.
- The responses from respondents were honest and truthful, based on feelings and own perceptions at the time of the survey.
- All responses on turnover intention were regarding dysfunctional voluntary, not involuntary turnover (i.e. respondents are good performers and intend to leave voluntarily).
- All e-mails reached the intended respondents (e.g. firewalls can prevent that in certain cases).

4.6 Limitations

This research must be read or referred to with the following limitations borne in mind:

- Company C’s refusal to participate may limit the generalise-ability of this research’s findings to the SAn nuclear industry. However, it is of critical importance to note that Company C is only working towards a big project, whereas companies A and B are in the manufacturing sector of the SAn nuclear industry. Therefore, while Company C’s participation might have improved the generalise-ability of results to the SAn nuclear industry, the unique environment (a major project environment) might have distorted the overall picture.
- Due to time limitations, only one cross-sectional study was performed. A longitudinal study would have been more useful to verify the truthfulness of the responses, and to further verify the strong link between turnover intention and eventual turnover.
The size of the population is fairly small, and excluded the use of SEM analysis to test for moderation and mediation. A sample greater than 200 is needed for effective SEM analysis, which is greater than the population of interest.

The influence of the location: Companies A, B and C are located in Pelindaba in isolation, and that implies that findings may not be extrapolated to SAn knowledge workers in general, as there could unique situational factors which influenced the responses.

4.7 Proposed Future Studies

The researcher proposes the following studies to be completed in future:

- An exact repeat of this study, but with Company C and other relevant companies included. That will help so far as generalising findings to the SAn nuclear industry is concerned.
- A repeat of this study in the SAn nuclear industry, approximately two years later. This will be a confirmatory, longitudinal study which will reveal any impact of time on findings of the current research.
- Replication of this study among the general SAn knowledge worker population. The generalise-ability of findings will be improved by representation of knowledge workers from various industries and sectors in that research. A big population will also enable analysis using SEM which requires more than 200 observations for effective analysis.
- Repeating the current study in SA but instead of the only two race variables (Black and Whites), extend it to Africans, Coloureds, Indians and Whites
- A study of retention factors important to various clusters of knowledge workers. Such clusters can be determined by race, gender, sector, geographical location, and so forth. Findings of this research can then be used in formulating more specific retention strategies per sector.
5. CHAPTER 5: RESEARCH RESULTS

Findings of this research are presented below:

5.1 Data Collected

A total of 128 questionnaires were sent out to respondents, of which 50 was sent to Black respondents and 78 to White respondents. All respondents met the criteria for inclusion into the population of interest.

Of the 128 questionnaires sent out, 72 (33 and 39 from Black and White respondents respectively) completed questionnaires were returned. This represents an overall response rate of 56%. The response rate by race was 66% and 50% from Black and White groups respectively.

All 72 questionnaires were filled in appropriately and were error-free, therefore no questionnaire was rejected. Observations captured from the 72 returned questionnaires are given in Appendix 3.

5.2 Frequency analysis and scale reliability

The following results are based on questionnaires that were accepted as correct upon return from the respondents (i.e. not rejected).

5.2.1 Turnover intention

Turnover intention was measured by two questions on the questionnaire, namely,

- I hardly ever think about leaving my current employer
- It would take a lot to make me leave the company I currently work for

Responses to the above two questions by race are represented in figures 7 and 8 below:

**Figure 7: Responses to “I hardly ever think about leaving my current employer” (N=72)**

- **Figure 7 above indicates that while an overwhelming majority of Black respondents disagreed to the question asked, the majority of White respondents agreed in general. Based on their responses to the questions, 53% of the respondents’ responses revealed an intention to leave, while 47% of the respondents did not.**

- **Among the Black respondents only, an overwhelming 88%‘s responses revealed an intention to leave, compared to 23% among the White respondents who responded similarly.**
Figure 8: Responses to “it would take a lot to make me leave the company I currently work for” (N=72)

<table>
<thead>
<tr>
<th>Response</th>
<th>Black</th>
<th>White</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree strongly</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>Disagree somewhat</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Agree somewhat</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>Agree</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Agree strongly</td>
<td>6</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>6</td>
</tr>
</tbody>
</table>

Figure 8 above also revealed a higher turnover intention among Black respondents than their White counterparts.

5.2.2 Diversity climate perceptions

Diversity climate perceptions were measured by responses to the following questions on the questionnaire:

- My company recruits from diverse sources
- My company offers equal access to training
- There is open communication on diversity/transformation
- My company’s diversity/transformation principles and/or policies are publicised
- My company offers training on managing people from diverse races
- My company respects perspectives of people of a race like mine
- My company maintains a diversity-friendly work environment
o My department has a climate that embraces diverse perspectives

o Top leaders are visibly committed to diversity/transformation

Responses to the abovementioned questions are reflected in Appendix 3.

5.2.3 Organisational commitment

Organisational commitment was measured by responses to the following questions in the questionnaire.

o I am willing to put a great deal of effort beyond that normally expected in order to help this company be successful

o I talk positively about this company to my friends as a great company to work for

o I feel very little loyalty to this company (reverse coded)

o I find that my values and organisation’s values are very similar

o I am proud to tell others that I am part of this company

o This organisation really inspires the very best in me in the way of job performance

o I am extremely glad that I chose this organisation to work for over others that I was considering at the time I joined

o Often, I find it difficult to agree with this company’s policies on important matters relating to its employees

o I really care about the success of this company

Responses to the abovementioned questions are reflected in Appendix 3.

5.2.4 Scale Reliability

Table 2 shows the Cronbach alphas obtained by combining the two items used to measure turnover intention into a single scale for both raw data and standardised data.
Table 2: Cronbach coefficient alpha for the turnover intentions scale (N=72)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw</td>
<td>0.841564</td>
</tr>
<tr>
<td>Standardized</td>
<td>0.841582</td>
</tr>
</tbody>
</table>

The correlation coefficients are very close to 1, which indicates that the scale used for turnover intention is highly reliable.

Table 3 shows the Cronbach alphas obtained by combining the nine items used to measure diversity climate perception into a single scale for both raw data and standardised data.

Table 3: Cronbach coefficient alpha for the diversity climate perceptions scale (N=72)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw</td>
<td>0.880833</td>
</tr>
<tr>
<td>Standardized</td>
<td>0.883233</td>
</tr>
</tbody>
</table>

The coefficients of are very close to 1, which indicates that the scale used for diversity climate perception is highly reliable.

Table 4 shows the Cronbach alphas obtained by combining the nine items used to measure organisational commitment into a single scale for both raw data and standardised data.

Table 4: Cronbach coefficient alpha for the organizational commitment scale

<table>
<thead>
<tr>
<th>Variables</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw</td>
<td>0.861387</td>
</tr>
<tr>
<td>Standardized</td>
<td>0.864344</td>
</tr>
</tbody>
</table>

The coefficients of ~0.86 are very close to 1, which indicates that the scale used for organisational commitment is highly reliable.
5.3 Hypothesis Tests for Moderation and Mediation

In this section, findings of various tests conducted to prove or disprove the research hypotheses are presented.

5.3.1 Hypothesis 1: The moderating effect of race

Results from the stepwise multiple regression tests for moderation performed with the SAS statistical system for various race codes are presented below:

a) Multiple regression test with effects coding of race (Black=1; White=-1)

**Step 1**: In this step, turnover intention was the dependent variable and was regressed against race and diversity climate perceptions.

Table 5 shows parameter estimates from the resultant multiple regression model using the SAS statistical programme. The race variable was effects coded (Black=1 and White = -1).

| Variable           | DF | Parameter Estimate | Standard Error | t Value | Pr > |t| |
|--------------------|----|--------------------|----------------|---------|-------|---|
| Intercept          | 1  | -0.03830           | 0.07629        | -0.50   | 0.6173|
| Race               | 1  | -0.45958           | 0.08451        | -5.44   | <.0001|
| Diversity climate  | 1  | 0.45144            | 0.08480        | 5.32    | <.0001|

Data in table 5 suggests that there is a negative relationship between turnover intention and race, and a positive relationship between turnover intention and diversity climate perceptions, indicated by a regression coefficient of 0.451.

The root mean standard error (RMSE), $R^2$ and adjusted $R^2$ obtained from this regression test are 0.645, 0.5962 and 0.5845 respectively. According to the $R^2$
values, race and diversity climate explain about 59% of the variance in turnover intentions scores.

**Step 2**: In this step, turnover intention was regressed against race and diversity climate perceptions, with the interaction term included.

The RMSE, $R^2$ and adjusted $R^2$ obtained from this regression test are 0.645, 0.6011 and 0.5835 respectively. The $R^2$ value from step 1 above increased by 0.49%.

Table 6 shows parameter estimates from the multiple regression model with the interaction term included.

**Table 6: Parameter estimates with effects coding, with interaction term (N=72)**

| Variable             | DF | Parameter Estimate | Standard Error | t Value | Pr > |t|  
|----------------------|----|--------------------|----------------|---------|------|   
| Intercept            | 1  | -0.07242           | 0.08507        | -0.85   | 0.3976 |     
| Race                 | 1  | -0.45155           | 0.08507        | -5.31   | <.0001 |     
| Diversity climate    | 1  | 0.47689            | 0.08938        | 5.34    | <.0001 |     
| Interaction term     | 1  | -0.08146           | 0.08938        | -0.91   | 0.3653 |     

The regression coefficient for diversity climate has improved from 0.45 to 0.47 ($p<0.0001$). The change in this coefficient can be attributed to the interaction term.

b) **Multiple regression test with dummy coding of race (Black=1; White=0)**

**Step 1**: In this step, turnover intention was regressed against race and diversity climate perceptions, with race coded using the dummy coding method such that Black = 1 and White = 0.

The RMSE, $R^2$ and adjusted $R^2$ obtained from this regression test are 0.64458, 0.5962 and 0.5845 respectively. According to the $R^2$ values, race and diversity
climate still explains about 59% of the variance in turnover intentions scores, irrespective of the change in the race code.

Table 7 below shows parameter estimates from the multiple regression model from step 1 above, with the interaction term excluded.

Table 7: Parameter estimates with dummy coding (Black =1), without interaction term (N=72)

| Variable       | DF | Parameter Estimate | Standard Error | t Value | Pr > |t| |
|----------------|----|--------------------|----------------|---------|-------|---|
| Intercept      | 1  | 0.42128            | 0.10850        | 3.88    | 0.0002|
| Race           | 1  | -0.91916           | 0.16901        | -5.44   | <.0001|
| Diversity climate | 1  | 0.45144           | 0.08480        | 5.32    | <.0001|

Table 7 shows that with effects coding replaced by dummy coding, the diversity climate perception regression coefficient stayed almost the same at about 0.45.

**Step 2**: In this step, turnover intention was regressed against race and diversity climate perceptions, with the interaction term included.

The RMSE, $R^2$ and adjusted $R^2$ obtained from this regression test are 0.64537, 0.6011 and 0.5835 respectively. An increase in value of the $R^2$ when the interaction is included implies that the interaction term helps explain the additional ~0.49% in variance of turnover scores.

Table 8 below shows that with effects coding replaced by dummy coding and the interaction term included in the model, the diversity climate perception regression coefficient increased significantly, from ~0.450 ($p<0.0001$) to 0.558 ($p<0.0003$).
Table 8: Parameter estimates with dummy coding (Black =1), with interaction term (N=72)

| Variable              | DF | Parameter Estimate | Standard Error | t Value | Pr > |t| |
|-----------------------|----|--------------------|----------------|---------|------|---|
| Intercept             | 1  | 0.37913            | 0.11807        | 3.21    | 0.0020 |
| Race                  | 1  | -0.90311           | 0.17013        | -5.31   | <.0001|
| Diversity climate     | 1  | 0.55835            | 0.14482        | 3.86    | 0.0003|
| Interaction term      | 1  | -0.16292           | 0.17877        | -0.91   | 0.3653|

c) Multiple regression output with dummy coding of race (Black=0; White=1)

**Step 1**: In this step, turnover intention was regressed against race and diversity climate perceptions.

The RMSE, $R^2$ and adjusted $R^2$ obtained from this regression test are 0.64458, 0.5962 and 0.5845 respectively. According to the $R^2$ values, race and diversity climate perceptions still explain about 59% of the variance in turnover intentions scores, irrespective of the change in race coding and inclusion of the interaction term.

Table 9: Parameter estimates with dummy coding (White=1), without interaction term (N=72)

| Variable              | DF | Parameter Estimate | Standard Error | t Value | Pr > |t| |
|-----------------------|----|--------------------|----------------|---------|------|---|
| Intercept             | 1  | -0.49788           | 0.11896        | -4.19   | <.0001|
| Race                  | 1  | 0.91916            | 0.16901        | 5.44    | <.0001|
| Diversity climate     | 1  | 0.45144            | 0.08480        | 5.32    | <.0001|

Reversal of the dummy coding for race did not affect the regression coefficient for diversity climate perceptions, which remained at about 0.451 (p<0.0001).

**Step 2**: In this step, turnover intention was regressed against race and diversity climate perceptions, with the interaction term included.

The RMSE, $R^2$ and adjusted $R^2$ obtained from this regression test are 0.64537, 0.6011 and 0.5835 respectively. The $R^2$ value went up by ~0.4% as a result of
introducing the interaction term.

Table 10: Parameter estimates with dummy coding (White=1), with interaction term (N=72)

| Variable           | DF | Parameter Estimate | Standard Error | t Value | Pr > |t| |
|--------------------|----|--------------------|----------------|---------|------|---|
| Intercept          | 1  | -0.52398           | 0.12250        | -4.28   | <.0001|
| Race               | 1  | 0.90311            | 0.17013        | 5.31    | <.0001|
| Diversity climate  | 1  | 0.39543            | 0.10481        | 3.77    | 0.0003|
| Interaction term   | 1  | 0.16292            | 0.17877        | 0.91    | 0.3653|

As a result of introducing the interaction term to this regression test, the regression coefficient for diversity climate perceptions decreased from 0.451 (p<0.0001) to 0.395 (p<0.0003), which is quite significant.

5.3.2 Hypothesis 2: The mediating effect of organisational commitment

The purpose of results from multiple regression results in this section was to generate results that will be evaluated against criteria for mediation specified by Frazier et al. (2004). This entailed a series of multiple regression tests to determine the relationships between various variables in order to can test for mediation. Results are presented below.

a) First regression test (Path 1): Dependent variable = turnover intention; independent variable = diversity climate perceptions (N=72)

The following results are output of a regression test in which the dependent variable was turnover intention, and the independent variable was diversity climate perceptions for all 72 observations. The purpose of the test was to determine the strength of the relationship between diversity climate perceptions and turnover intention.
The first necessary condition for any mediation effects to be prevalent is a strong relationship between the independent and dependent variables (Frazier et al., 2004; Baron et al., 1986).

In this test, $R^2$ and adjusted $R^2$ values are 0.4231 and 0.4149 respectively, which implies that diversity climate perceptions only explains ~42% of the variance in turnover intention scores.

The regression coefficient for diversity climate perception is 0.650 ($p<0.0001$), as shown in table 11 below. This implies a significant relationship between diversity climate perceptions and race at a conventional 95% confidence level (Frazier et al., 2004; Albright et al., 2007).

| Variable | DF | Parameter Estimate | Standard Error | t Value | Pr > |t| |
|----------|----|--------------------|----------------|---------|------|--|
| Intercept| 1  | 8.30312E-16        | 0.09015        | 0.00    | 1.0000 |
| climate  | 1  | 0.65049            | 0.09078        | 7.17    | <.0001 |

The following results are output of a regression test in which the dependent variable was turnover intention, and the independent variable was diversity climate perceptions for observations from Black respondents only.

In this test, $R^2$ and adjusted $R^2$ values were 0.326 and 0.305 respectively, implying that diversity climate perceptions only explained approximately 32% of the variance in turnover intention scores.

For the 33 observations from Black respondents, the regression coefficient for diversity climate perception was 0.395 ($p<0.0005$), as shown in table 12 below.

| Variable | DF | Parameter Estimate | Standard Error | t Value | Pr > |t| |
|----------|----|--------------------|----------------|---------|------|--|
| Intercept| 1  | -0.52398           | 0.11928        | -4.39   | 0.0001 |
| climate  | 1  | 0.39543            | 0.10205        | 3.87    | 0.0005 |
The following results are output of a regression test in which the dependent variable was turnover intention, and the independent variable was diversity climate perceptions for observations from White respondents only.

R² and adjusted R² values were 0.278 and 0.258 respectively, implying that diversity climate perceptions only explained approximately 28% of the variance in turnover intention scores for Whites when controlling for race.

Table 13: Parameter estimates for path 1, Whites only (N=39)

| Variable | DF | Parameter Estimate | Standard Error | t Value | Pr > |t| |
|----------|----|--------------------|----------------|---------|------|---|
| Intercept | 1  | 0.37913            | 0.12061        | 3.14    | 0.0033 |
| climate  | 1  | 0.55835            | 0.14793        | 3.77    | 0.0006 |

The regression coefficient for diversity climate perceptions among White respondents is higher than that among Blacks only, indicated by regression coefficients for diversity climate perceptions of 0.558 (p<0.0006) and 0.395 (p<0.0005) for White and Black respondents respectively.

b) Second regression test (path 2): Dependent variable = organizational commitment independent variable = diversity climate perceptions

The following results are output of a regression test in which the dependent variable was organizational commitment, and the independent variable was diversity climate perceptions for all 72 observations. The purpose of the test was to determine the strength of the relationship between diversity climate perceptions and organizational commitment in order to test for the second necessary condition for mediation. The second necessary condition for any mediation effects to be prevalent is a strong relationship between the independent variable and the moderator variable (Frazier et al., 2004).
R² and adjusted R² values were 0.5186 and 0.5118 respectively, implying that diversity climate perceptions explained about 51% of variance in organisational commitment. A regression coefficient of 0.720 (p<0.0001) in table 14 below implies a strong relationship between diversity climate perceptions and organizational commitment for all 72 observations.

Table 14: Parameter estimates for path 2, all observations (N=72)

| Variable         | DF  | Parameter Estimate | Standard Error | t Value | Pr > |t| |
|------------------|-----|--------------------|----------------|---------|------|--|--| |
| Intercept        | 1   | 1.82109E-15        | 0.08235        | 0.00    | 1.0000 | |
| climate          | 1   | 0.72017            | 0.08292        | 8.68    | <0.0001 | |

Table 15 below shows outputs of a regression test in which the dependent variable was organizational commitment, and the independent variable was diversity climate perceptions for Black respondents’ observations only. Among Black respondents only, diversity climate perceptions explained only 34% of variation in organisational commitment, indicated by R² and adjusted R² values of 0.3445 and 0.3234 respectively.

Table 15: Parameter estimates for path 2, Black (N=33)

| Variable              | DF  | Parameter Estimate | Standard Error | t Value | Pr > |t| |
|-----------------------|-----|--------------------|----------------|---------|------|--|--| |
| Intercept             | 1   | -0.16838           | 0.16544        | -1.02   | 0.3167 | |
| Diversity climate     | 1   | 0.57136            | 0.14155        | 4.04    | 0.0003 | |

Among Black respondents only, the regression coefficient for diversity climate perceptions was 0.571 (p<0.0003), which is significant at the normal confidence level of 95% and implies a strong relationship between the two variables.

Table 16 below shows outputs of a regression test in which the dependent variable was organizational commitment, and the independent variable was diversity climate perceptions for White respondents' observations only.

Diversity climate perceptions explain 62% of the variation in organisational commitment, indicated by R² and adjusted R² values of 0.6272 and
0.6171 respectively.

Table 16: Parameter estimates for path 2, White (N=39)

<table>
<thead>
<tr>
<th>Variable</th>
<th>DF</th>
<th>Parameter Estimate</th>
<th>Standard Error</th>
<th>t Value</th>
<th>Pr &gt;</th>
<th>t</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>1</td>
<td>0.02762</td>
<td>0.08914</td>
<td>0.31</td>
<td>0.7585</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diversity climate</td>
<td>1</td>
<td>0.86269</td>
<td>0.10934</td>
<td>7.89</td>
<td>&lt;.0001</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Among White respondents alone, the regression coefficient for diversity climate perceptions was a very significant 0.862 (p<0.0001). This implies a very strong relationship between diversity climate perceptions and organisational commitment.

c) 3rd regression test (path 3): Dependent variable = turnover intention; independent variable = diversity climate perceptions and moderator = organizational commitment

The following results are output of a regression test in which the dependent variable was turnover intention; the independent variable was diversity climate perceptions; and the mediator variable was organizational commitment for all 72 observations.

The purpose of the test was to test for the third necessary condition for mediation to prevail, which is that the mediator must be related to the dependent variable, and the relationship between the independent and dependent variable must be zero when controlling for the mediator (Frazier et al., 2004).

Combined, the independent and moderator variable explain 45% of variation in turnover intention for all 72 observations.
Table 17: Parameter estimates for path 3, all observations (N=72)

| Variable       | DF | Parameter Estimate | Standard Error | t Value | Pr > |t| |
|----------------|----|--------------------|----------------|---------|------|---|
| Intercept      | 1  | 3.52496E-16        | 0.08815        | 0.00    | 1.0000 |
| org            | 1  | 0.26238            | 0.12795        | 2.05    | 0.0441 |
| climate        | 1  | 0.46154            | 0.12795        | 3.61    | 0.0006 |

Regression coefficients of 0.26 and 0.46 for organisational commitment and diversity climate perceptions respectively in table 17 indicate that both variables form a positive relationship with turnover intention. However, the relationship between diversity climate perception and turnover intention is stronger without the mediation variable in the model, at a regression coefficient of 0.650 (p<0.0001).

The following results are output of a regression test in which the dependent variable was turnover intention; the independent variable was diversity climate perceptions; and the mediator was organizational commitment for Black respondents only.

When controlling for the mediator variable, diversity climate perceptions only explained 33% of the variation in turnover intention for Black respondents only.

Table 18: Parameter estimates for path 3, Black (N=33)

| Variable                  | DF | Parameter Estimate | Standard Error | t Value | Pr > |t| |
|---------------------------|----|--------------------|----------------|---------|------|---|
| Intercept                 | 1  | -0.51307           | 0.12276        | -4.18   | 0.0002 |
| Organisational commitment | 1  | 0.06479            | 0.13110        | 0.49    | 0.6248 |
| Diversity climate         | 1  | 0.35841            | 0.12762        | 2.81    | 0.0087 |

For Black respondents only, there was a significant relationship between diversity climate perceptions and turnover intention when the controlling for the mediator variable (organisational commitment).

The following results are output of a regression test in which the dependent
variable was turnover intention; the independent variable was diversity climate perceptions; and the moderator was organizational commitment for White respondents only.

Diversity climate perceptions accounted for 35% of variation in turnover intention when controlling for the mediator variable.

Table 19: Parameter estimates for path 3, White (N=39)

| Variable                | DF | Parameter Estimate | Standard Error | t Value | Pr > |t| |
|-------------------------|----|--------------------|----------------|---------|------|---|
| Intercept               | 1  | 0.36713            | 0.11594        | 3.17    | 0.0031|
| Organisational commitment | 1  | 0.43467            | 0.21354        | 2.04    | 0.0492|
| Diversity climate       | 1  | 0.18337            | 0.23261        | 0.79    | 0.4357|

When controlling for the mediator variable, the regression coefficient variable for diversity climate perceptions came down substantially, from 0.558 to 0.1833.
6. CHAPTER 6: DISCUSSION OF RESULTS

The purpose of this chapter is to analyse findings of this research in context with the research aims stated in chapter 1, the literature review in chapter 2 and the research hypotheses postulated in chapter 3.

In chapter 1, the research aims were stated as follows:

This research sets out to investigate the following:

- The moderating effect of race on the link between diversity climate perception and turnover intention amongst knowledge workers in the SAn nuclear industry: the main aim is to determine whether the relationship between diversity perceptions and turnover intentions is stronger among Black knowledge workers compared to their White counterparts when race is controlled for as a moderator.

- The mediating effect of organisational commitment on the link between diversity climate perception and turnover intention amongst knowledge workers in the SAn nuclear industry.

In view of the subsequent literature review in chapter 2, the following research hypotheses were then postulated in chapter 3:

**Hypothesis 1**

**Null Hypothesis (H₀):** race will not moderate the relationship between diversity climate perceptions and turnover intention

**Alternative hypothesis (H₁):** race will moderate the relationship between
diversity climate perceptions and turnover intention

Hypothesis 2

Null Hypothesis (H₀): organisational commitment will not mediate the relationship between diversity climate perceptions and turnover intention

Alternative hypothesis (Hₐ): organisational commitment will mediate the relationship between diversity climate perceptions and turnover intention

The analysis of the research findings follows.

6.1 Data Collected

A response rate to the questionnaires sent to respondents was 56% overall. This is a very good response rate when considering that in order to make statistical inferences to the entire population regarding findings of a research, the minimum required response rate is 35% (Albright, Winston and Zappe, 2006). Therefore, the researcher concludes that findings of this research can be generalised to the entire population of interest, that is, knowledge workers in the South African nuclear industry.

6.2 Scale reliability

Cronbach coefficient alphas for turnover intention, diversity climate perceptions and organisational commitment were found to be ~0.84, 0.88 and 0.86 respectively. This implies that the scales used in this research for the abovementioned variables are highly reliable, indicated by the alpha coefficient
values closer to 1, as suggested by Reynaldo et al. (1999). This supports findings of recent research conducted by McKay et al. (2007) in the USA.

Therefore, the scales used in this research can be used reliably for follow-up studies to this one or by companies, e.g., to measure diversity climate perception among their workforce using the diversity climate perceptions scale used in this research.

The slight reduction in the Cronbach coefficient alphas for scales in the current research compared to those reported by McKay et al. is minimal, and can be attributed to a change in context (USA vs. SA), and the change in some words to the more familiar UK English version.

### 6.3 Turnover intention

Figure 7 in section 5 shows a bi-modal distribution of responses from all 72 observations to the first question measuring turnover intention. According to Albright et al. (2007), such a distribution provides clear evidence of two distinct populations. In this case, those populations are the Black and White groups. Data collected from Black respondents revealed that 53% of all respondents intended leaving. More insightful though, an overwhelming 82% of all Black respondents intended leaving compared to only 23% of all White respondents.

This finding supports findings or assertions made in other prior studies on the mobility of knowledge workers (Sutherland et al., 2004; Birt et al., 2004; Booysen, 2007; McKay et al., 2007). More importantly, it provide evidence in support of statements in the public debate in SA regarding the higher mobility rate among Black knowledge workers compared to their White counterparts.

These findings support findings from Wöcke et al. (2008) in particular regarding the relatively higher mobility rate among Black SAn knowledge workers
compared to their White counterparts.

6.4 Hypothesis 1: Race will moderate the relationship between diversity climate perceptions and turnover intention

This research did not find sufficient evidence in support of hypothesis 1 regarding moderation by race of the relationship between diversity climate perceptions and turnover intention. The regression coefficient for diversity climate perceptions was 0.451 (p<0.0001) for averaged effects (due to effects coding of race and standardisation of the diversity climate perception variable).

This regression coefficient increased slightly to 0.477 (p<0.0001) with an introduction of the interaction term to the model. The interaction term also increased the variance in turnover intention scores by about 0.5%, evidenced by an $R^2$ change from 0.596 to 0.6011 when the interaction term was introduced to the regression model in step 2.

To understand the form of the interaction, two more regressions (b and c) performed in section 5.3.1, yielded very interesting results when the race variable was coded with the dummy coding method.

When controlled for race using dummy coding, the regression coefficients for diversity climate perceptions among Black and White groups were found to be 0.558 (p<0.0003) and 0.395 (p<0.0003) respectively (see tables 8 and 10 in chapter 5). This implies that the relationship between turnover intention and diversity climate perceptions is stronger among Blacks than Whites when the interaction between race and diversity climate perception was controlled for. In both cases of dummy coding, the additional variance explained by the interaction term remained at 0.5% (i.e. the increase in $R^2$ value remained 0.005).
On the basis of the above discussion, the null hypothesis that the relationship between diversity climate perceptions and turnover intention will be the same between the two race groups is rejected.

This finding supports findings of McKay et al.’s research that race is a moderator of the relationship between diversity climate perceptions and turnover intention. A key insight though, was that the relationship between diversity climate and turnover intention was strong for both race groups in South Africa, although stronger for Blacks on a comparative basis to Whites. This can be viewed in context with findings of Booysen’s (2007) study. Her research found that Whites are also concerned about workplace environment and Affirmative Action in particular.

It can therefore be concluded that when managing diversity in organisations, companies must realise that there are two distinct groups (Black and White), to whom diversity climate is an important factor and is linked to their turnover intention. The one-size-fits all approach in creating a pro-diversity climate is therefore likely to appeal to one group more than the other. Companies will have to develop customised strategies to look good in the eyes of each group, based on what is most important to each group.

Companies will therefore benefit from ensuring that in pursuit of EE targets, they do not neglect the interests of White knowledge workers, as that can lead to their eventual turnover.

6.5 Hypothesis 2: Organisational commitment will mediate the relationship between diversity climate perceptions and turnover intention

In table 20 below, findings of multiple regression tests for mediation tests are evaluated against the criteria for mediation described by Frazier et al. (2004) for
all 72 observations.

Table 20: An evaluation of multiple regression results for mediation (N=72)

<table>
<thead>
<tr>
<th>Condition/Criteria</th>
<th>Findings of this research</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. There must be a significant relationship between the independent and dependent variables</td>
<td>There was a significant relationship between diversity climate perceptions and turnover intention (0.650, p&lt;0.0001)</td>
<td>Significant, therefore the first requirement is met.</td>
</tr>
<tr>
<td>2. There must be a relationship between the independent and mediator variables</td>
<td>There was a relationship found between diversity climate perceptions and organisational commitment (0.720, p&lt;0.0001)</td>
<td>The requirement is met</td>
</tr>
<tr>
<td>3. The mediator must be related to the dependent variable when controlling for the mediator</td>
<td>A relationship was found between organisational commitment and turnover intention (0.262, p&lt;0.0441)</td>
<td>Requirement was met</td>
</tr>
<tr>
<td>4. When controlling for the mediator, the relationship between the independent and dependent variables must be zero</td>
<td>The regression coefficient for diversity climate perceptions when controlling for the mediator was 0.461, p&lt;0.0006. This is lower than 0.650 but not zero.</td>
<td>Met partially</td>
</tr>
</tbody>
</table>

On the basis of the above analysis, it can be concluded that the requirements were not met fully, and the null hypothesis that organisational commitment will not mediate the relationship between diversity climate perceptions and turnover intention among all respondents is accepted.

In table 21 below, findings of multiple regression tests for mediation tests are
evaluated against the criteria for mediation described by Frazier et al. (2004) for Black respondents only.

Table 21: An evaluation of multiple regression results for mediation (N=33)

<table>
<thead>
<tr>
<th>Condition/Criteria</th>
<th>Findings of this research</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. There must be a significant relationship between the independent and dependent variables</td>
<td>There was a significant relationship between diversity climate perceptions and turnover intention (0.395, p&lt;0.0005)</td>
<td>Significant, therefore the first requirement is met.</td>
</tr>
<tr>
<td>2. There must be a relationship between the independent and mediator variables</td>
<td>There was an insignificant relationship found between diversity climate perceptions and organisational commitment (0.065, p&lt;0.6248)</td>
<td>The requirement is not met</td>
</tr>
<tr>
<td>3. The mediator must be related to the dependent variable when controlling for the mediator</td>
<td>A relationship was found between organisational commitment and turnover intention (0.358, p&lt;0.0087)</td>
<td>The requirement is met</td>
</tr>
<tr>
<td>4. When controlling for the mediator, the relationship between the independent and dependent variables must be zero</td>
<td>The regression coefficient for diversity climate perceptions when controlling for the mediator was 0.461, p&lt;0.0006. This is lower than 0.650 but not zero.</td>
<td>The requirement is met</td>
</tr>
</tbody>
</table>

On the basis of the above analysis, it can be concluded that the requirements were not met fully, and the null hypothesis that organisational commitment will not mediate the relationship between diversity climate perceptions and turnover intention among Black respondents is accepted.
In table 22 below, findings of multiple regression tests for mediation tests are evaluated against the criteria for mediation described by Frazier et al. (2004) for White respondents only.

Table 22: An evaluation of multiple regression results for mediation (N=33)

<table>
<thead>
<tr>
<th>Condition/Criteria</th>
<th>Findings of this research</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. There must be a significant relationship between the independent and dependent variables</td>
<td>There was a significant relationship between diversity climate perceptions and turnover intention (0.558, p&lt;0.0006)</td>
<td>Significant, therefore the first requirement is met.</td>
</tr>
<tr>
<td>2. There must be a relationship between the independent and mediator variables</td>
<td>There was a strong, significant relationship found between diversity climate perceptions and organisational commitment (0.863, p&lt;0.0001)</td>
<td>The requirement is met</td>
</tr>
<tr>
<td>3. The mediator must be related to the dependent variable when controlling for the mediator</td>
<td>A relationship was found between organisational commitment and turnover intention (0.434, p&lt;0.0492)</td>
<td>Requirement is met</td>
</tr>
<tr>
<td>4. When controlling for the mediator, the relationship between the independent and dependent variables must be zero</td>
<td>The regression coefficient for diversity climate perceptions when controlling for the mediator was 0.18, p&lt;0.434, which is insignificant. This is much lower than 0.650.</td>
<td>Requirement is met</td>
</tr>
</tbody>
</table>

Based on the above analysis, all 4 criteria for mediation are met. The null hypothesis that organisational commitment will not mediate the relationship between diversity climate perceptions and turnover intention among White
respondents is therefore rejected.
In summary, findings of this research suggest that organisational commitment is not a mediator of the relationship between diversity climate perceptions and turnover intention in general. However, when the mediator tests were done across racial groups, organisational commitment emerged as a mediator of that relationship among Whites.

Another interesting finding was the very strong relationship between diversity climate perceptions and organisational commitment (see tables 14, 15 and 16), despite that it was not found to be a mediator for the combined groups and among Blacks.

6.5 The implications for future research

This research holds the following implications for future research:

A growing body of empirical evidence found for the reliability of the diversity climate, organisational commitment and turnover intentions suggest that the scales used in this research and in a similar one conducted in the USA earlier can be used with increased confidence in relevant future research.

Diversity climate has emerged as a factor of importance to knowledge workers in the SAn nuclear industry. Given the drive by the CEE for workplace diversity in SA, the importance of diversity climate perceptions among knowledge workers in SA needs to be tested by means of a similar research to this one, but with samples taken from strata of SAn knowledge workers.

Findings of this research regarding organisational commitment suggested that it is definitely not an antecedent of turnover, but a mediator of turnover among White knowledge workers in the SAn nuclear industry. This supports findings from other studies referred to in chapter 2, although for Whites only. This
implies that instead of studying organisational commitment as a mediator, there is a need to study its role as a predictor of turnover in a moderated or mediated relationship, say by race or gender.

Based on $R^2$ reported in various in tables, future research needs to include more independent variables or moderators/mediators to help explain the other ~38% in variance which is not accounted for in this research by diversity climate perceptions.

### 6.6 Implications to SAn organisations

This study’s findings have corroborated ample empirical evidence already in the public domain regarding the high mobility rate among knowledge workers. It has also provided further evidence in support of assertions that the mobility rate among Black knowledge workers is higher than that of their White counterparts.

For the SAn nuclear industry in particular and companies that it consist of, findings of this research imply that they’ve got to work on strategies to retain those talented employees that they want to retain. Based on findings of this research, one of the key issues they need to improve upon is creating a pro-diversity workplace climate in their organisations. Among Black and White knowledge workers, diversity climate perceptions emerged as a factor of importance.

Organisations that embrace the EE initiatives and create a pro-diversity workplace are likely to improve their chances of retaining their knowledge workers, while at the same time complying with laws of the country.

Regarding turnover intention, and in light of the current boom in the nuclear industry in South Africa and elsewhere the SAn nuclear industry cannot afford to lose its knowledge workers. The high turnover intention found by this
research implies that companies need to start on working towards preventing major losses of knowledge through a high turnover.

Loss of knowledge workers to the industry will be a major setback given the critical role that they will need to play towards completion of major projects. Loss of knowledge workers to foreign countries (brain drain) or to other sectors will be a major drawback as very likely to result in a slowdown in major projects, if not their eventual failure.

For the SAn nuclear industry in particular and companies that it consist of, findings of this research imply that they’ve got to work on strategies to retain those talented employees that they want to retain with immediate effect.

6.7 Implications to knowledge workers

This research has the following implication for knowledge workers:

- As future organisational leaders, they need to take note of the importance of diversity climate perceptions among knowledge workers, and create an environment in their companies which will be conducive for retaining talent.

- Currently, knowledge workers need to be aware of their stereotypes which may negatively or positively influence their decision to leave. That will improve the quality of their eventual decision to leave.
7.  CHAPTER 7: CONCLUSION

This research set out to test the hypothesis that race will moderates the relationship between turnover intention and diversity climate perceptions. Sufficient evidence emerged from the ensuing analysis suggesting that race indeed moderated the abovementioned relationship. The relationship between diversity climate perceptions and turnover intention was found to be stronger among Blacks when race was controlled for. The null hypothesis was rejected.

The research at hand also set out to test the hypothesis that organisational commitment will mediate the relationship between diversity climate perceptions and turnover intention. However, there was only enough evidence for this hypothesis among the White group only, when race was controlled for. Therefore, the null hypothesis was rejected for Whites only, but was accepted in analyses of observations from both races combined (N=72) and Blacks only (N=33).

It can therefore be concluded that this research has achieved the aims it set out to from the onset.

In light of the analysis in chapter 6, the following recommendations are made to various stakeholders.

7.1 Recommendations to SAn organisations

Companies in the SAn nuclear industry need to act swiftly to ensure that the high turnover intentions found by this research do not materialise. In the short term (within the next 3 months), it is recommended that the companies engage knowledge workers urgently to determine other factors which will help retain them, in addition to creating a pro-diversity workplace climate. The companies should then intervene appropriately to prevent dysfunctional, voluntary turnover.
of these critical employees. Given the sense of urgency, Companies are advised to use the services of experts (consultants) to come up with a short term retention strategy that will ensure that knowledge workers from both White and Black groups are retained.

In the mid-term (within 18 months), it is recommended that the companies must develop a strategy for managing diversity, which must be aligned to the business strategy and well resourced. Again, the use of Consultants is recommended.

In order to retain their talented employees, it is recommended that SAAn organisations in general must conduct regular diversity climate perceptions surveys amongst employees. Findings of these surveys should then be evaluated to find gaps, which must then be closed by the correct interventions (e.g. training managers on how to manage diverse groups in cases where the surveys reveal management incapacity). The scale for diversity climate perceptions used in this research can be used for that, as it turned out to be very reliable.

In general, diversity climate is an important factor to both Black and White knowledge workers. Therefore, it is recommended that when companies develop their diversity management strategies, they need to take interests of both Black and White groups into account. This will ensure that they create a workplace diversity climate which is conducive to retain employees from both the White and Black groups that they want to retain.

7.2 Recommendations to knowledge workers

In the light of the literature review and findings of this research, it is recommended that knowledge workers must develop a capability of creating a pro-diversity workplace in organisations, as some of them are middle managers
and are likely to end up in influential positions in companies in future. That capability can help them retain knowledge workers if they use it to create a climate conducive for retention in their organisations.

7.2 Recommendations for future research

Future research in the area of knowledge worker retention in SA must focus on identifying various groups of knowledge workers with a common set of important retention factors. This research has set the scene by identifying racial differences in the relationship between diversity climate perceptions and turnover intention.

Future research must aim at identifying other moderators of relevance to the SAn context, e.g. gender, tribe, industry, province. This will help companies develop more customised retention strategies aimed at retaining specific groups (e.g. female managers).

The importance of diversity climate perceptions emerged as an important factor among knowledge workers in the SAn nuclear industry. More research is needed to test the extension of this research’s findings regarding diversity climate perceptions to the national population.

7.3 Recommendations to Line Managers

Line Managers need to ensure that they embrace the companies’ diversity initiatives. In order to retain the knowledge workers reporting directly to them, it is recommended that knowledge workers attend workshops and training on how to manage diversity in their departments.
7.4 **Recommendations to the CEE**

The CEE must help companies develop a better understanding of diversity than just meeting targets. Workshops are recommended, at which other benefits of diversity other than compliance can be highlighted. Those workshops should also focus on helping companies retain their staff bringing relevant experts to such workshops in order to share knowledge.

7.5 **Concluding remarks**

The challenge facing SAn companies regarding knowledge workers is very serious and is supported by empirical evidence. Globalisation and the skills shortage are not making things easier SAn companies.

This research aimed to help develop a better understanding of what really drives this high mobility rate among this very important group of workers.

Findings of this research indicate that it is inappropriate to talk about knowledge workers as a group in SA, given the changes in workplaces due to a plethora of EE legislation. The key insight is that even though there are many common factors about knowledge workers, they can be grouped into clusters which have differing views on certain key issues. For example, White and Black knowledge workers in the South African industry differed on turnover intentions. Also, organisational commitment was found to mediate the link between diversity climate perceptions and turnover intention among the White group only.

Diversity climate emerged as a predictor of turnover, and the current drive to achieve workplace diversity in SA increases its importance and relevance. It needs to be tracked as it is important to both Black and White knowledge workers. Lastly, researchers need to do more research this area in future studies.
While this research did not set out to build a business case for diversity, the writing is on the wall for SAn organisation. In order to retain their most valuable human capital, their knowledge workers, they need to recruit for diversity, manage diversity effectively and create workplace climate that is conducive to employee retention. In addition to retaining knowledge workers, companies will gain from the improved business performance associated with workplace diversity and savings on staff replacement. Even more importantly, companies will then comply with the law and reap the rewards associated with a good BBBEE rating.
8. REFERENCE LIST


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Bravura Economic Empowerment Consulting, The DTI's generic Scorecard for broad-based black economic empowerment, Summary of the final version of the BEE Codes
of Good Practice

Broad – Based Black Economic Empowerment Act No. 53 (2003), Government Gazette. RSA, Cape Town.


8. APPENDICES

Appendix 1: Comparative changes at knowledge worker level

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Race</td>
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<td>Race</td>
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<td>Race</td>
<td>Race</td>
</tr>
<tr>
<td>Blacks accounted for 44.1%</td>
<td>Blacks accounted for 31.4%</td>
<td>Blacks accounted for 51.2%</td>
<td>Blacks accounted for 36.5%</td>
<td>-14.7%</td>
<td>-7.6%</td>
</tr>
<tr>
<td>Whites accounted for 56.1%</td>
<td>Whites accounted for 68.5%</td>
<td>Whites accounted for 48.9%</td>
<td>Whites accounted for 62.2%</td>
<td>13.3%</td>
<td>6.1%</td>
</tr>
<tr>
<td>Africans accounted for 32.6%</td>
<td>Africans accounted for 16.2%</td>
<td>Africans accounted for 38.8%</td>
<td>Africans accounted for 20.2%</td>
<td>-18.6%</td>
<td>-12.6%</td>
</tr>
<tr>
<td>Coloureds accounted for 5.5%</td>
<td>Coloureds accounted for 8.2%</td>
<td>Coloureds accounted for 6.5%</td>
<td>Coloureds accounted for 8%</td>
<td>1.5%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Indians accounted for 5.8%</td>
<td>Indians accounted for 7%</td>
<td>Indians accounted for 5.9%</td>
<td>Indians accounted for 8.3%</td>
<td>2.4%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Foreign nationals accounted for 1.4%</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>Gender</th>
<th>Gender</th>
<th>Gender</th>
<th>Gender</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Females accounted for 43.2%</td>
<td>Females accounted for 30.9%</td>
<td>Females accounted for 38.4%</td>
<td>Females accounted for 36.3%</td>
<td>-2.1%</td>
<td>-6.9%</td>
</tr>
<tr>
<td>Males accounted for 57%</td>
<td>Males accounted for 69%</td>
<td>Males accounted for 61.7%</td>
<td>Males accounted for 63.9%</td>
<td>2.1%</td>
<td>6.8%</td>
</tr>
<tr>
<td>Black females accounted for 24.9%</td>
<td>Black females accounted for 9.8%</td>
<td>Black females accounted for 22.2%</td>
<td>Black females accounted for 13.8%</td>
<td>-8.4%</td>
<td>-11.1%</td>
</tr>
<tr>
<td>African females accounted for 20.5%</td>
<td>African females accounted for 4.9%</td>
<td>African females accounted for 18%</td>
<td>African females accounted for 7.2%</td>
<td>-10.8%</td>
<td>-13.3%</td>
</tr>
<tr>
<td>Coloured females accounted for 2.2%</td>
<td>Coloured females accounted for 2.8%</td>
<td>Coloured females accounted for 2.5%</td>
<td>Coloured females accounted for 3.4%</td>
<td>1.1%</td>
<td>1.2%</td>
</tr>
<tr>
<td>Indian females accounted for 2.2%</td>
<td>Indian females accounted for 2.1%</td>
<td>Indian females accounted for 1.9%</td>
<td>Indian females accounted for 3.2%</td>
<td>1.3%</td>
<td>1%</td>
</tr>
<tr>
<td>White females accounted for 18.3%</td>
<td>White females accounted for 21.1%</td>
<td>White females accounted for 16.2%</td>
<td>White females accounted for 22.1%</td>
<td>5.9%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Black males accounted for 19.2%</td>
<td>Black males accounted for 21.6%</td>
<td>Black males accounted for 29%</td>
<td>Black males accounted for 22.7%</td>
<td>-6.3%</td>
<td>3.5%</td>
</tr>
<tr>
<td>African males accounted for 12.3%</td>
<td>African males accounted for 11.3%</td>
<td>African males accounted for 20.8%</td>
<td>African males accounted for 13%</td>
<td>-7.8%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Coloured males accounted for 3.3%</td>
<td>Coloured males accounted for 5.4%</td>
<td>Coloured males accounted for 4.2%</td>
<td>Coloured males accounted for 4.6%</td>
<td>0.4%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Indian males accounted for 3.6%</td>
<td>Indian males accounted for 4.9%</td>
<td>Indian males accounted for 4%</td>
<td>Indian males accounted for 6.1%</td>
<td>1.1%</td>
<td>1.5%</td>
</tr>
<tr>
<td>White males accounted for 37.8%</td>
<td>White males accounted for 47.4%</td>
<td>White males accounted for 32.7%</td>
<td>White males accounted for 40.1%</td>
<td>7.4%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Foreign males accounted for 0.4%</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

Table 12: Comparative changes at the professionally qualified level from 2000 to 2006
Appendix 2: Questionnaire

Respondents’ Informed Consent

I am doing research on the relationship between diversity climate perceptions and turnover intentions. To that end, you are requested to respond to the questionnaire given below. This will help us better understand the role of workplace diversity climate in the retention of knowledge workers like you, and will not take more than 30 minutes of your precious time.

NB: Your participation is voluntary and you can withdraw at any time without penalty. Of course, all data will be kept confidential. By 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 contact me or my supervisor. Our details are provided below.

Researcher: Jackson Selome  Research  Supervisor: Dr. Caren Scheepers  
E-mail: Selome_jackson@yahoo.com  E-mail: caren.scheepers@irodo.com  
Phone: 0836459675  0829227072

Please choose the most applicable rating to you on a scale of 1 to 6, where 1 = Disagree strongly, 2 = Disagree, 3 = Disagree somewhat, 4 = Agree somewhat, 5 = Agree and 6 = Agree strongly with the statements below.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I find that my values and organisation’s values are very similar</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>2</td>
<td>I really care about the success of this company</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>3</td>
<td>Often, I find it difficult to agree with this company’s policies on important matters relating to its employees</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>4</td>
<td>I am willing to put a great deal of effort beyond that normally expected in order to help this company be successful</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>5</td>
<td>My company offers training on managing people from diverse races</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>6</td>
<td>I talk positively about this company to my friends as a great company to work for</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>7</td>
<td>I feel very little loyalty to this company</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>My company respects perspectives of people of a race like mine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>I am proud to tell others that I am part of this company</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>My company offers equal access to training</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>I hardly ever think about leaving my current employer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>My company maintains a diversity-friendly work environment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>There is open communication on diversity/transformation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>My department has a climate that embraces diverse perspectives</td>
<td></td>
<td></td>
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<tr>
<td></td>
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<td>This organisation really inspires the very best in me in the way of job performance</td>
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<td>My company’s diversity/transformation principles and/or policies are publicised</td>
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<td>I am extremely glad that I chose this organisation to work for over others that I was considering at the time I joined</td>
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<td>Top leaders are visibly committed to diversity/transformation</td>
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<td>It would take a lot to make me leave the company I currently work for</td>
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<td>My company recruits from diverse sources</td>
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### Appendix 3: Observations (Data Collected)

#### COLLECTED RESEARCH DATA

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